

Project Report

“ONLINE ADMINISTRATIVE SUPPORT SYSTEM FOR MEDICAL INSTITUTION”

Under Supervision of

.....

SUBMITTED BY

NAME:

ENROLMENT NO:.....

Submitted in partial fulfillment of the requirements of the degree of

MCA

“ONLINE ADMINISTRATIVE SUPPORT SYSTEM FOR MEDICAL INSTITUTION”

Under Supervision of :

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I am grateful to my project guide for the guidance, inspiration and constructive suggestions that helped me in the preparation of this project.

I am also thankful to my colleagues who have helped me in successful completion of the project.

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DECLARATION

I hereby declare that this project work titled “**Online Administrative Support System for Medical Institution**” is my original work and no part of it has been submitted for any other degree purpose or published in any other form till date.

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INDEX

Acknowledgement	
Declaration	
CHAPTER 1. INTRODUCTION & OBJECTIVES OF THE PROJECT	
1.1. Introduction	8
1.2. Objectives of the Project	10
1.3. Project Category	11
1.4 Drawbacks of Current Manul System	12
1.5 Establish the need of New System	12
1.6 Proposed System	13
CHAPTER 2. PROJECT SELECTION	
2.1 Software & Hardware Requirements	15
2.2 Introduction To .Net	16
2.3 Feasibility Study	25
2.4 Economic Feasibility	26
2.5 Technical Feasibility	30
2.6 Operational Feasibility	34
2.7 Feasibility Report	35
CHAPTER 3. SYSTEM ANALYSIS	
3.1. Important of Compuerized	37
3.2. Principles of System Analysis	38
3.3. System Analysis Phase	40
3.4 Methods Used for Gathering Information	42
3.5 Interviews and Questionnaires	44
CHAPTER 4. SYSTEM DESIGN	

4.1. Design Objectives and Constraints	53
4.2 Physical Design	54
4.2.1 Design Methodology	54
4.2.2. Design Overview	54
4.2.3. Process Modeling	55
4.3 Data Flow Diagram	56
4.4 Data Modeling	71
4.5 ER Diagram	76
4.6 Modules of the Project	77
4.7 Process Logic	80
4.8 Type of Report Generation	80
CHAPTER 5. SYSTEM DEVELOPMENT	
5.1 Coding	83
5.2 Code Efficiency	116
5.3 Optimization of Code	116
CHAPTER 6. TESTING	
6.1 Testing Phase	118
6.2 Levels of Testing	119
6.3 Test Cases	121
6.4 Verification and Validation	127
CHAPTER 7. SYSTEM IMPLEMENTATION	
7.1. Hardware Evaluation Factors	128
7.2. Hardware Evaluation Factors	129
7.3. Conversion and Training	130
7.4. Training Needs	131
7.5. Limitations of the Project	132
CHAPTER 8. SCOPE OF FUTURE APPLICATION	
	133

CHAPTER 9. GANNT & PERT CHART	134
CHAPTER 10. SECURITY AND VALIDATION CHECKS	136
CHAPTER 11. CONCLUSION	137
CHAPTER 12. BIBLIOGRAPHY	138

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1.INTRODUCTION & OBJECTIVES OF THE PROJECT

1.1 INTRODUCTION

Human Body is a very complex and sophisticated structure and comprises of millions of functions. All these complicated functions have been understood by man him, part-by-part their research and experiments. As science and technology progressed, medicine became an integral part of the research. Gradually, medical science became an entirely new branch of science. As of today, the Health Sector comprises of Online Administrative Support System for Medical Institutions i.e. Hospitals, Clinics etc. research and development institutions and medical colleges. Thus the Health sector aims at providing the best medical facilities to the common man.

Online Administrative Support System for Medical Institutions in India still being a developing nation India has seen a tremendous growth of the Health sector in the field of research as well as in the field of development of numerous large and small scale clinical institutions still lacking in inter-structure facilities. Government of India has still aimed at providing medical facilities by establishing hospital. The basic working of various hospitals in India is still on paper as compared to hospitals in European countries where computers have been put in to assist the hospital personals their work. The concept of automation of the administration and management of hospital is now being implemented in India also, with large hospitals like APPOLO and AIIMS in Delhi, ESCORTS in Chennai, having automated their existing system.

Our project is based on the above concept i.e. automation of Administration and Management of Hospital. The project has been developed keeping in-view the following aspects: -

- Working environment of the Hospital.
- The thought-process and attitude of Indian people.
- The Existing system, being used in the majority of Hospitals.
- The availability of Infra-structural facilities likes finance, skilled personals, and working environment.
- On Line Appointments for the Patients

- a) Admission of New Patient
 - Free Medical Advice For the Patients
 - Discharge Patient Detail Functions
 - Doctor Assigning related to Patient's Disease
 - Training Courses Provided by the Hospital
 - Statement of Patient Details
 - a. Admitted Patient
 - b. Discharged Patient
 - c. Doctor Details
 - Number of Patients admitted in the Hospital
 - Doctors available in the Hospital
 - Preventive Health Checkups
 - Administrator Links
 - a. Login Form
 - b. To add new doctors in the site
 - c. List of patients
 - d. List of Doctors
 - Searching or Enquiry about
 - Doctors
 - Patients
 - Rooms
 - Discharged Patients
 - Password facility for multiple users and Administrator.
 - Crystal Reports to print all the details of Patients, doctors, Online users (for free medical advice etc.) so that administrator can work.
 - Business services
 - a. Food suppliers
 - b. Medical suppliers

- c. Other items suppliers
- d. Placement services
- e. Near by hotel accommodation for relatives of patients

1.2 OBJECTIVES OF THE PROJECT

As we know that today web is growing day by day people are aware of internet its technology there is no. of sites who provides no. of services to the no. of customer as online market, online share trading online banking, online book shop etc so that my project guide advise me to develop a site to provide Institute service in the medical related field there are some objectives of the sites. The main objective is to bring all the medical services on one platform now a day's web is growing day by day. People are aware of web .It is easily accessible by many user so that I decided to design a site where user can find desired medical information.

- ✚ To bring all the medical facility on one platform.
- ✚ Medical service seeker can search for no. of medical services.
- ✚ Medical service provider can reach to no. of service seeker.
- ✚ User can search for desired service.
- ✚ Medical service seeker and provider can communicate through email.

1.3 PROJECT CATEGORY

- ***We have several alternative suggestions about the project category like:*** desktop application, web-based application, OOPs application, Networking, RDBMS etc. Out of available one we have opted Web based application based on client server architecture. The proposed system falls into the category of Multimedia. A web based system has two types of pages one is static web pages and another are dynamic web pages, which are saved on web server and can be seen by sending request to web server through HTTP protocol.
- ***Static web pages:*** - Static web pages are easy to spot sometimes we can pick them out by just looking at the content of the page. The content (text, images, hyperlinks, and so on) and appearance of static web pages is always the same regardless of who visits the page, or how and when they arrive at the page, or any other factors.
- ***Dynamic web pages:*** - The dynamic web pages are web pages, which we can interact like a time is shown on the page or we are sending information through web form, online chat, sending mail on net etc all the action this action performed with the help of dynamic web pages.
- ***Web Server:*** - Web server are software that manage web pages and make them available to client browser via local network or over the internet. In the case of the internet, the web server and browser are usually on two different machines, possibly many miles apart. However, in a local situation you can set up machine that runs the web server software, and then use a browser on the same machine to look at its web pages.

1.4 DRAWBACKS OF CURRENT MANUAL- SYSTEM

1. The current manual system has a lot of paper work and it does not exact work.
2. To maintain the records of sale and service manually, is a Time-consuming job.
3. With the increase in database, it will become a massive job to maintain the database.
4. Requires large quantities of file cabinets, which are huge and require quite a bit of space in the office, which can be used for storing records of previous patients.
5. The retrieval of records of previous users will be a tedious job.
6. Lack of security for the records, anyone disarrange the records of your system.

1.5 ESTABLISH THE NEED OF NEW SYSTEM

1. ***Problem of Reliability:*** Current system is not reliable. It seems to vary in from one month to the, next. Some times it gives quality good output, but some times the output is worst.
2. ***Problem of Accuracy:*** There are too many mistakes in reports.
3. ***Problem of timeliness:*** In the current system the reports and output produced is mostly late and in most of the cases it is useless because it is not on time.
4. ***Problem of Validity:*** The output and reports mostly contains misleading information. The customer's information is sometimes not valid.
5. ***Problem of Economy:*** The current system is very costly. We have to spend lots of money to keep the system up and going, but still not get the desired results.
6. ***Problem of Capacity:*** The current system is suffering from problem of capacity also. The staff for organization is very less and the workload is too much. Few peoples cannot handle all the work

1.6 PROPOSED SYSTEM

1. **Details:** The new proposed system stores and maintains all the details of the patients, seekers, doctors etc..
2. **Registers:** There is no need of keeping and maintaining database manually. It remembers each and every record and we can get any report related to doctors and seekers at any time.
3. **Speed:** The new proposed system is very fast with 100% accuracy and saves time.
4. **Manpower:** The new proposed system needs less manpower. Less people can do the large work.
5. **Efficiency:** The new proposed systems complete the work of many persons in less time.
6. **Past details:** The new proposed system contains the details of every past user for future assistance.
7. **Reduces redundancy:** The most important benefit of this system is that it reduces the redundancy of data within the data.
8. **Work load:** Reduces the work load of the data store by helping in easy updates of the records and providing them with the necessary details together with database management system.

PROJECT SELECTION

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2.1 SOFTWARE & HARDWARE REQUIREMENTS

The need of today's software development is competence in a GUI based front-end tool, which can connect to Relational Database engines. This gives the programmer the opportunity to develop client server based commercial applications.

FRONT END

.NET programming tools are complete programming environments. It allows programmers to build a GUI program using the various on-screen controls such as buttons, text, menus, boxes etc. These controls are placed on a form and then the processing details related with each control are filled in.

In the business world, competitive strategies have become the order of the day to improve quality, cut costs and provide a high response customer service base. Most organizations today need to be market driven and do a lot of value addition to their products and services. This naturally calls for rational decision making, which requires information. Information Technology or IT provides that effective channel to support and implement this strategy. Client/Server is the technology that empowers the desktop, thus setting a trend for the way successful organizations will use technology in the next decade.

2.2 INTRODUCTION TO .NET

What is .NET?

- A vision of how information technology will evolve
- A platform that supports the vision
- A business model of software as a service

1. A Vision.

- Web sites will be joined by Web services
- New smart devices will join the PC
- User interfaces will become more adaptable and customizable
- Enabled by Web standards

2. A Platform.

- The .NET Framework
- ASP.NET
- .NET Enterprise Servers
 - Database, Messaging, Integration, Commerce, Proxy, Security, Mobility, Content Management
- .NET Building Block Services
 - Passport
 - .NET My Services (“Appin”)
- Goal: make it incredibly easy to build powerful Web applications and Web services

3. A business model.

- Software as a service
- Subscription-based services
- Application hosting, e.g. bCentral

Interoperability: Web languages and protocols must be compatible with one another independent of hardware and software.

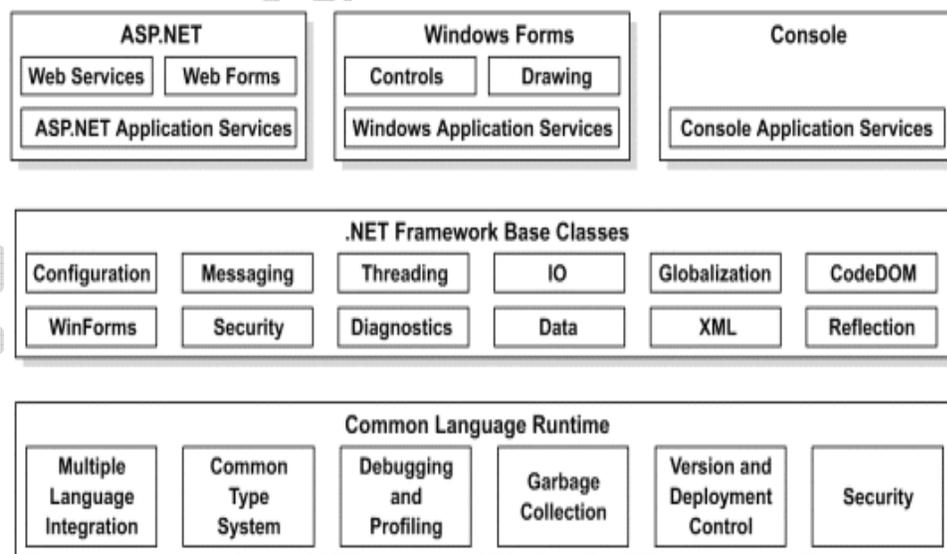
Evolution: The Web must be able to accommodate future technologies. Encourages simplicity, modularity and extensibility.

Decentralization: Facilitates Scalability and Robustness.

Web Services

- A programmable application component accessible via standard Web protocols
- The center of the .NET architecture
- Exposes functionality over the Web
- Built on existing and emerging standards are HTTP, XML, SOAP, UDDI, WSDL,.

The .NET Framework



What is the .NET Framework?

- A set of technologies for developing and using components to create:
 - Web Forms
 - Web Services
 - Windows Applications
- Supports the software lifecycle
 - Development
 - Debugging
 - Deployment
 - Maintenance

Application Architectures

- The Different types of Applications may vary from single-tier desktop applications (applications that follow the single-tier architecture) to multi-tier applications (applications that follow the two-, three, or n-tier architecture)
- Single-tier architecture
 - A single executable file handles all functions relating to the user, business, and data service layers.
- Two-tier architecture
 - Divides an application into the following two components:
 - ❖ Client
 - ❖ Server
- Three-tier architecture
 - All the three service layers reside separately, either on the same machine or on different machines.
- n-tier architecture
 - Uses business objects for handling business rules and data access.
 - Has multiple servers handling business services.

The .NET Initiative

- The introduction of the Internet and its rapid growth in the recent past has led to the development of a number of new Technologies.
- One of the most important requirements of such applications is the ability to interchange information across platforms and to benefit from the functionality provided by other applications.
- In the current scenario, although applications serve organization-specific requirements, they are not interoperable. Microsoft has introduced the .NET initiative with the intention of bridging the gap in interoperability between applications.
- The .NET initiative offers a complete suite for developing and deploying applications, which consists of the following:
 - NET products: Microsoft has already introduced Visual Studio .NET, which is a tool for developing NET applications by using programming languages such as ASP.Net, C#, and Visual C++.
 - NET services: Microsoft is coming up with its own set of Web services, known as My Services. These services are based on the Microsoft Passport Authentication service, the same service that is used in Hotmail.

Explanation of the .NET Framework

- Is a collection of services and classes?
- Exists as a layer between .NET applications and the underlying operating system.
- Encapsulates much of the functionality, such as debugging and security services.
- The following figure depicts the components of the .NET Framework:

The .NET Framework Base Classes or the .NET Class Framework

- Consists of a class library that works with any .NET language, such as ASP .NET and C#.
- Provides classes that can be used in the code to accomplish a range of common programming tasks.

- Comprises
 - Namespaces: Namespaces help you to create logical groups of related classes and interfaces that can be used by any language targeting the .NET Framework.
 - Assembly: An assembly is a single deployable unit that contains all the information about the implementation of classes, structures, and interfaces.
- The Common Language Runtime
 - Provides functionality such as exception handling, security, debugging, and versioning support to any language that targets it.
 - Can host a variety of languages and offer a common set of tools across these languages, ensuring interoperability between the codes.
- The following diagram depicts the process of compilation and execution of a .NET application:
- Provides the following features:
 - Automatic memory management
 - Standard type system
 - Language interoperability
 - Platform independence
 - Security management
 - Type safety

Advantages of the .NET Framework

- Some advantages of the .NET Framework are:
 - Consistent programming model
 - Multi-platform applications
 - Multi-language integration
 - Automatic resource management
 - Ease of deployment

ADO.NET

- Is a model used by ASP .NET applications to communicate with a database for retrieving, accessing, and updating data?
- Uses a structured process flow to interact with a database.

ADO .NET Data Access

Most applications need data access at one point of time making it a crucial component when working with applications. Data access is making the application interact with a database, where all the data is stored. Different applications have different requirements for database access. ASP.NET uses ADO.NET (Active X Data Object) as it's data access and manipulation protocol, which also enables us to work with data on the Internet. Let's take a look why ADO.NET came into picture replacing ADO.

Evolution of ADO.NET

The first data access model, DAO (data access model) was created for local databases with the built-in Jet engine which had performance and functionality issues. Next came RDO (Remote Data Object) and ADO (Active Data Object) which were designed for Client Server architectures but soon ADO took over RDO. ADO was a good architecture but as the language changes so is the technology within it. With ADO, all the data is contained in a record set object which had problems when implemented on the network (Internet) and penetrating firewalls. ADO was a connected data access which means that when a connection to the database is established the connection remains open until the application is closed, which raises concerns about database security and network traffic. And also as databases are becoming increasingly important and as they are serving more people a connected data access model makes us think about its use. For example, an application with connected data access may do well when connected to two clients, the same may do poorly when connected to 10 and might be unusable when connected to 100 or more. Also, open database connections use system resources to a maximum extent making the system performance less effective.

Why ADO.NET?

To cope up with some of the problems mentioned above, ADO.NET came into existence. ADO.NET addresses the above mentioned problems by maintaining a disconnected database access model which means that when an application interacts with the database the connection is opened to serve the request of the application and is closed as soon as the request is completed. Likewise if a database is updated, the connection is opened long enough to complete the Update operation and is closed. By keeping connections open for only a minimum period of time ADO.NET conserves system resources and provides maximum security for databases and also has less impact on system performance. Also, ADO.NET when interacting with database uses XML by converting all the data into XML and using it for database related operations making them more efficient.

Features of ADO.NET

- Disconnected data architecture — Applications connect to the database only while retrieving and updating data.
- Data cached in datasets — ADO.NET is based on a disconnected data structure. Therefore, the data is retrieved and stored in datasets.
- Data transfer in XML format — ADO.NET uses XML for transferring information from a database into a dataset and from the dataset to another component.
- Interaction with the database is done through data commands.

ADO.NET Object Model Key Components of the ADO.NET Model

- **Data Provider**
 - Is used for connecting to a database, retrieving data, and storing the data.
- **Is of two types:**
 - OLE DB data provider
 - SQL Server data provider

Components of a Data Provider

- **Connection**
 - Used to establish a connection with a data source
 - Some commonly used properties and methods:
 - ❖ ConnectionString property
 - ❖ Open()method
 - ❖ Close()method
 - ❖ State property
- **Data adapter**
 - Creates a dataset and updates the database.
 - Handles data transfer between the database and the dataset through its properties and methods.
 - Displays the data through the process of table mapping.
 - Are of two types:
 - ❖ SqlDataAdapter
 - ❖ OleDbDataAdapter
- **Data command**
 - Is a SQL statement or a stored procedure that is used to retrieve, insert, delete, or modify data from a data source.
 - Is an object of the OleDbCommand or SqlCommand class.
- **Data reader**
 - Is used to retrieve data from a data source in a read-only and forward-only mode.
 - Stores a single row at a time in the memory.
 - Commonly used methods:
 - ❖ Read()
 - ❖ Close()
 - ❖ NextResult()

- **Dataset**
 - Is a disconnected, cached set of records that are retrieved from a database?
 - Is present as a DataSet class in the System. Data namespace.
 - Has its own object model.

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2.3 FEASIBILITY STUDY

The basic premise of system analysis is being done here. The primary goal of the system analysis stage is to identify problems and determine how they can be solved with the computer system. In formal SDLC methodologies, the first step in system analysis is feasibility study. A feasibility study is the quick examination of the problems, goals, expected cost of the system. The objective is to determine whether the problem can reasonably be solved with a computer system. In some cases, there may be a better alternative, or perhaps it is simply a short-term annoyance and will gradually disappear. In other cases, the problem may turn out to be more complex than was thought and involves users across the company. Also, some problems may not be solvable with today's technology. It might be better to wait for better technology. In any case, you need to determine the scope of the project to gain a better idea of cost, benefits, and objectives.

The feasibility study is typically written so that non-programmers can easily understand it. It is used to "sell" the project to the upper management and as a starting point for the next step. Additionally, it is used as a reference to keep the project on track, and to evaluate the progress of the project team. Is the project cost-effective or is there a cheaper solution? Will the proposed system improve the operation of the bank; will complicating factors prevent it from achieving its goals? Does the technology exist and does the firm have the staff to make the technology work?

When the proposal is determined to be feasible, the team leaders are appointed and a plan and schedule are created. The schedule contains a detailed listing of what parts of the project are completed at each time. Of course, it is extremely difficult to estimate the true cost and completion dates. Nonetheless, the schedule is an important tool to evaluate the status of the project and the progress of the team.

Steps in feasibility Analysis are:

1. Identify deficiency by pinpointing, Missing functions, unsatisfactory performance, Excessive cost of operations.
2. Set goals to remove these deficiencies.
3. Goals must be quantified, realizable within the constraints of an organization, broken down into sub goals agreeable to all concerned.
4. Set goals not only to remove deficiencies but also to effectively meet competition. For instance, goals must be based on what competitors do.

2.4 ECONOMIC FEASIBILITY

Economic analysis is the most frequently used technique for evaluating the effectiveness of a proposed system. More commonly known as cost / benefit analysis; in this procedure we determine the benefits and savings that are expected from a proposed system and compare them with costs. We found the benefits outweigh the costs; we take a decision to design and implement the new proposed system.

During the feasibility phase, broad alternatives solutions are examined . For each alternate solution the cost and benefits have to be examined before designing one of the alternative.

Broad solutions will consist of:

1. Specifications of information to be made available by the system.
2. Description of what will be done manually and what the computer will do.
3. Specification of new computing equipment needed or specification of expansion of an existing computer.

➤ COST AND BENEFIT ANALYSIS

Developing an IT application is an investment. Since after developing that application it provided the organization with profits. Profits can be monetary or in the form of an improved working environment. However, it carries risks because in some cases an estimate can be wrong and the project might not actually turn out to be beneficial.

Cost benefit analysis helps to give management a picture of the cost, benefits and risks. It usually involves comparing alternate investments.

Cost benefit determines the benefits and savings that are expected from the system and compares them with the expected cost.

In performing cost and benefit analysis it is important to identify cost and benefits factors. Cost and benefits can be categorized into the following categories:

- i. **Development cost** - Development costs is the cost that are incurred during the development of the system. It is one time investment.
- ii. **Operating cost** - Operating cost are the expenses required for the day to-day running of the system. As, operating cost are wages, supplies and overheads.
- iii. **Hardware/Software cost** - It includes the cost of purchasing or leasing of computes and it's peripherals. Software costs involves required software cost.
- iv. **Personnel cost** - It is the money spent on the people involved in the development of the system.
- v. **Facility cost** - Expenses that are incurred during the preparation of the physical site where the system will be operational. These can be wiring, flooring, acoustics, lighting, and air-conditioning.
- vi. **Supply cost** - These are variable costs that are very proportionately with the amount of use of paper, ribbons, disks, and others.

➤ **BENEFITS**

We can define benefits as

$$\text{Profit or Benefit} = \text{Income} - \text{Cost}$$

Benefits can be accrued by:

- Increasing income or
- Decreasing costs or
- Both

My proposed project to Online Administrative Support System for Medical Institution does everything those 3 - 4 employees or accountants are currently doing on paperwork except on a computer. Due to this factor, if the clinic goes ahead with my project, they would not need any personnel, and their costs of sustaining the organization go down radically, the software itself requires minimal memory to run as files are stored in a very defragmented manner and can easily be moved around as well a zipped, to preserve even more space. Hence, funds spent on storage, are almost trifling, will not pose a problem in the future while operating my project.

All of this comes at a very low price of a computer and my software, which, if we consider all the benefits hospital will be getting out of it, is completely woo* it.

Let's take the costs required to assemble and run my project

ITEM	COST (Rs.)
Computer	40,000 (depend upon the configuration)
Laser Printer	7,000
Scanner	4,000
Project cost Total	4,000 (approx.) 55,000

We should know that we need a person who can work with these software's and so his training will cost around Rs 4,000. Here we see that the total price to get one computer up and running with the database management system is close to Rs.50, 000 as we don't really need a very high performance computer as this project is entirely text based and requires only minimal processor speeds for computing. If the medical consultant or hospital wants to have around 2 computers then we have the total costs being:

$$55,000 * 2 = \text{Rs.} 1, 10,000$$

This would mean that the Medical Institutions would need around 1 lakh to run my system successfully and resourcefully. Medical Institutions authorities are planning to reduce the staff, suppose if they remove one employee. Salary of one employee being around Rs.5,000. In one year annual salary of employee is equal to Rs. 60,000 and salary to three employees is Rs. 1, 80,000 for one year. From this analysis it can be seen that whatever money the consultants or hospitals will invest on making their system a computerized system will be recovered and half years of time (approx.). This analysis shows that how management is benefited by computerized system.

BENEFITS:

1. Fast and easy access to all Online Administrative Support System for Medical Institution related procedures and functions.
2. No need for large storage spaces sized of rooms for storing the cabinets because all the information about the members and other details is saved in the computer's hard disks.
3. High level of security and authentication of each and every user.
4. Reliability is increased, as backups of files, and records can be made and saved in various different locations and information will be highly secure, unlike in file cabinets where entries can easily be ripped or tampered with by users.
5. The reception/front office will look much more neater and cleaner the environment they need, as there Won't be any cupboards or drawers which make the organization overcrowded.
6. There will be no longer the need for all the paper work required to make timely reports lists or other lists as the program generates them at anytime at a very quick pace.

2.5 TECHNICAL FEASIBILITY

Today, very little is technically impossible. Consequently, technical feasibility looks at what is practical and reasonable. Technical feasibility addresses three major issues:

1. Is the proposed technology or solution practical?
2. Do we currently possess the necessary technology?
3. Do we possess the necessary technical expertise, and is the schedule reasonable?

Is the Proposed Technology or Solution Practical?

The technology for any defined solution is normally available. The question whether that technology is mature enough to be easily applied to our problems. Some firms like to use state-of-the-art technology, but most firms prefer to use mature and proven technology. A mature technology has a larger customer base for obtaining advice concerning problems and improvements.

Do We Currently Possess the Necessary Technology?

Assuming the solution's required technology is practical, we must next ask ourselves, is the technology available in our information systems shop? If the technology is available, we must ask if we have the capacity. For instance, will our current printer be able to handle the new reports and forms required of a new system?

If the answer to any of these questions is no, then we must ask ourselves, Can we get this technology? The technology may be practical and available,

and, yes, we need it. But we simply may not be able to afford it at this time. Although this argument borders on economic feasibility, it is truly technical feasibility. If we can't afford the technology, then the alternative that requires the technology is not practical and is technically infeasible!

We Possess the Necessary Technical Expertise, and Is the Schedule Reasonable?

This consideration of technical feasibility is often forgotten during feasibility analysis. We may have the technology, but that doesn't mean we have the skills required to properly apply that technology. For instance, we may have a database management systems (DBMS). However, the analysis and programmers available for the project may not know that DBMS well enough to properly apply it. True, all information systems professionals can learn new technologies. However, that learning curve will impact the technical feasibility of the project; specifically, it will impact the schedule.

As mentioned earlier, the current operational state of consultants or hospitals is very primitive as all storage is done on hand written database. These files are then placed in drawers or cabinets and tagged in a sorted order. The offices contains over a large number of drawers and cabinets. Each cabinet takes a large space. Other than this it uses many kind of papers to calculate and maintain different account works.

The software & hardware to run my project, and is it's usage is given in the table below:

TOOLS/PLATFORMS, HARDWARE & SOFTWARE

REQUIREMENTS

Tools/Platform used is:

- ❖ FRAMEWORK:- ASP.NET version 2 .0 with C#
- ❖ DATABASE:- SQL Server
- ❖ PLATFORM USED:- Windows XP

S/w Requirement specification:

- ❖ .NET framework 2.0
- ❖ Visual Studio.NET 2005
- ❖ ASP.NET
- ❖ ADO.NET
- ❖ SQL Server 2005
- ❖ Visual C#.NET
- ❖ HTML
- ❖ XML
- ❖ Internet Information Services (IIS) v 5.1

H/w Requirement specification:

- ❖ Pentium 3, 1.5 GHz and above
- ❖ 256 MB DDRAM or more
- ❖ 20 GB HDD
- ❖ Pen Drive 2Gb

FRONT END:

- ASP .NET is one of the platforms that are directed towards meeting the objectives of the .NET initiative of creating distributed applications.
- ASP .NET is a powerful object-oriented language that provides features such as abstraction, encapsulation, inheritance, and polymorphism.

Features of ASP.NET

- Some of the key features of Visual Basic .NET are as follows:
 - Inheritance
 - Constructors and destructors
 - Overloading
 - Overriding
 - Structured exception handling
 - Multithreading

BACK END**SQL SERVER**

Microsoft SQL Server is an application used to create computer databases for the Microsoft Windows family of server operating systems. It provides an environment used to generate databases that can be accessed from workstations, the web, or other media such as a personal digital assistant (PDA). Microsoft SQL Server is probably the most accessible and the most documented enterprise database environment right now. This also means that you can learn it a little quicker than most other database environments on the market.

2.6 OPERATIONAL FEASIBILITY

It is mainly related to human organizational and political aspects. The points to be considered are:

- o What changes will be brought with the system?
- o What organizational structures are disturbed?
- o What new skills will be required? Do the existing staff members have these skills?
- o If not, can they be trained in due course of time?

Generally project will not be rejected simply because of operational infeasibility but such considerations are likely to critically affect the nature and scope of the eventual recommendations.

For operational feasibility study we appointed a small group of people who are familiar with information system techniques, who understand the parts of the business that are relevant to the project and are skilled in system analysis and design process.

2.7 FEASIBILITY REPORT

After studying the feasibility of the project we came to the following points, these results may change according to further analysis and design.

PROJECT NAME: ONLINE ADMINISTRATIVE SUPPORT SYSTEM FOR MEDICAL INSTITUTION

DEFINITION OF PROBLEM OR OPPORTUNITY: We have to make a computerized system (software) to make the working of HOSPITAL easy and efficient so that software will replace the manual work with automated computerized process.

EXPECTED BENEFITS:

- Reduce the number of employee.
- Save money.
- Increase the efficiency of workers.
- Reduce the response time.
- Improve the service quality.
- Reduce the bulk of paper work.
- Reduce the chance of error by human.
- Increase the accuracy in result.

SYSTEM ANALYSIS

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3.1 IMPORTANCE OF COMPUTERIZED ONLINE ADMINISTRATIVE SUPPORT SYSTEM FOR MEDICAL INSTITUTION

There are several attributes in which the computer based information works. Broadly the working of computer system is divided into two main groups:

- ◆ Transaction System
- ◆ Decision Support System

Transaction System:

A transaction is a record of some well-defined single and usually small occurrence in a system. Transactions are input into the computer to update the database files. It checks the entering data for its accuracy. This means that numeric data appears in numeric field and character data in character field. Once all the checks are made, transaction is used to update the database. Transaction can be inputted in on-line mode or batch mode. In on-line mode, transactions are entered and updated into the database almost instantaneously. In batch mode, transactions are collected into batches, which may be held for a while and inputted later.

Decision Support System:

It assists the user to make analytical decision. It shows the various data in organized way called analysis. This analysis can be made to syrdy preferences and help in making decisions.

Computer system works out best with record maintenance. It will tell you which customer would get how much pending/reports statements. It will also help to search the information about a particular person by simply entering his telephone number. User can store information as per requirement, which can be used for comparison with other reports.

3.2 PRINCIPLES OF SYSTEM ANALYSIS

Principles:

1. Understand the problem before you begin to create the analysis model.
2. Develop prototypes that enable a user to understand how human machine interaction will occur.
3. Record the origin of and the reason for every requirement.
4. Use multiple views of requirements like building data, function and behavioral models.
5. Work to eliminate ambiguity.

A Complete Structure:

The limited time and resources have restricted us to incorporate, in this project, only the main activities that are performed in news sites, but utmost care has been taken to make the system efficient and user friendly.

For the optimum use of practical time it is necessary that every session is planned. Planning of this project will include the following things:

- Topic Understanding.
- Modular Break – Up of the Syst
- Processor Logic for Each Module.
- Database Requirements.

Topic Understanding:

It is vital that the field of application as introduced in the project may be totally a new field. So as soon as the project was allocated to me, I carefully went through the project to identify the requirements of the project.

Modular Break –Up of the System:

- Identify The Various Modules In The System.
- List Them In The Right Hierarchy.
- Identify Their Priority Of Development
- Description Of The Modules:

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3.3 SYSTEM ANALYSIS PHASE

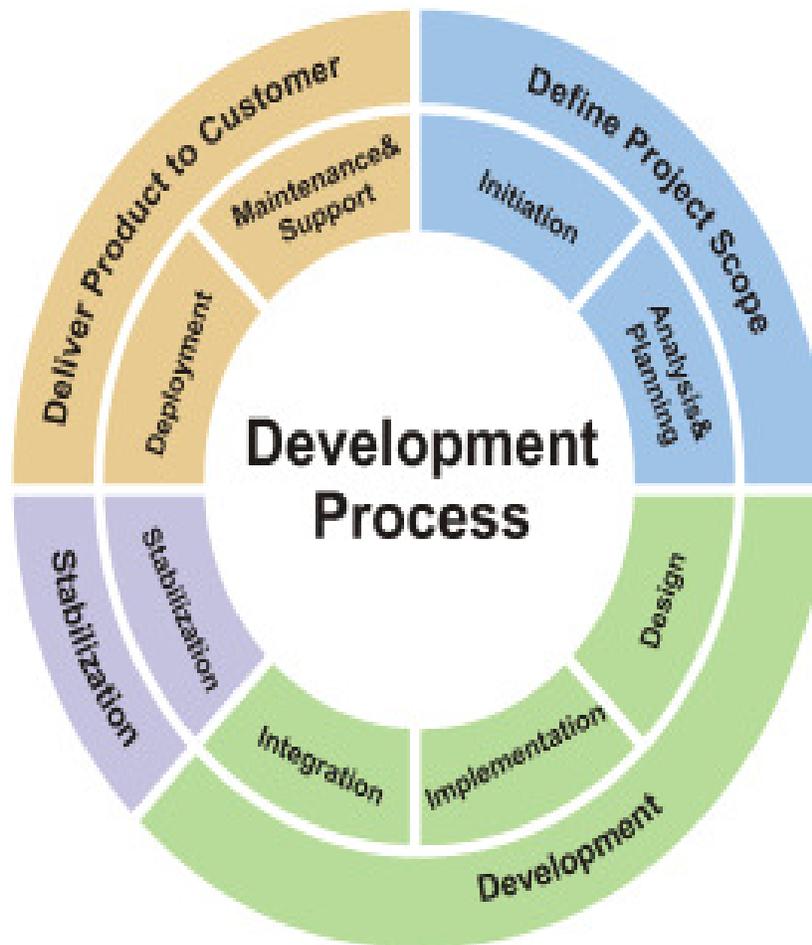


FIG: SHOWING GENERAL LIFE CYCLE PROCESS AND PERCENTAGE OF TIME DEVOTED

A system analysis is a separation of a substance into parts for study and their implementation and detailed examination.

Before designing any system it is important that the nature of the business and the way it currently operates are clearly understood. The detailed examination provides the specific data required during designing in order to ensure that all the client's requirements are fulfilled. The investigation or the study conducted during the

analysis phase is largely based on the feasibility study. Rather it would not be wrong to say that the analysis and feasibility phases overlap. High-level analysis begins during the feasibility study. Though analysis is represented as one phase of the system development life cycle (SDLC), this is not true. Analysis begins with system initialization and continues until its maintenance. Even after successful implementation of the system, analysis may play its role for periodic maintenance and up gradation of the system.

One of the main causes of project failures is inadequate understanding, and one of the main causes of inadequate understanding of the requirements is the poor planning of system analysis.

Analysis requires us to recall the objectives of the project and consider following three questions:

- What type of information is required?
- What are the constraints on the investigation?
- What are the potential problems that may make the task more difficult?

Keeping the above questions in mind and considering the survey conducted to determine the need of the system, the total system was designed and can be described as under:

The three major parts of the system are:

Alert when available: Through the survey it was clearly that there is a need to device an alternative way for providing alert facility to the user.

Constraints: After the objectives were clear during the analysis phase, it was essential to understand the constraints in order to plan and avoid problems arising during detailed analysis.

3.4 METHODS USED FOR GATHERING INFORMATION

The methods used for gathering information about the existing information system are as follows: -

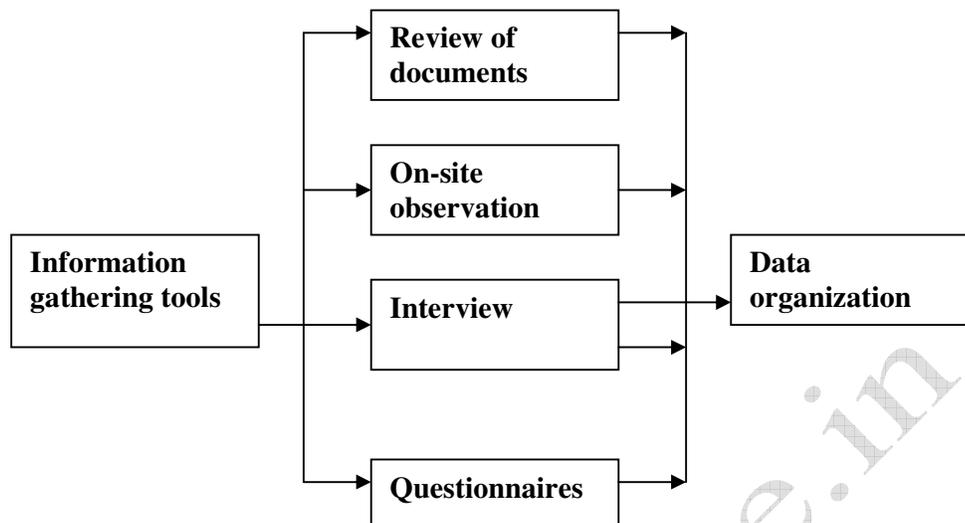
- (a) Review of records.
- (b) Observation of the functioning system.
- (c) Interviews.
- (d) Questionnaires.

In order to create an informative and practical system, a system analyst would have to have some kind of way to view the current system. Receiving feed back on what can be done to improve the current system, and how much the current system is acceptable to the users.

Fact finding tools:

After obtaining the background knowledge, I began to collect data on the existing system's output, input, and costs. The tools used in data collection / information gathering are:

1. Review of the written Documents
2. On-site Observation
3. Interviews
4. Questionnaires



Review of the written documents:

In this phase we analyzed all the documents like the day books, supply report, order generating forms, supply forms, account etc. All these things describe the format and functions of the current system included in most manuals are system requirement that help determine how III various objectives are met.

The form is one of the most important source through which ! draw some conclusion like:

1. Who use the form(s)? How important are they to the user?
2. Do the forms include all the necessary information? What item should be added or deleted?
3. How readable and easy to follow is the form?
4. How does the information in the form help other user make better decision?
5. What other uses does the form offer the user area?

By analyzing all the details we draw a conclusion that what are the merit and De-merit of the current phase. Will the company contain all the back up of all the important document of not. Sales person contains all the information about the available vehicles or not.

But above all there are some problems with the on site observations that one analyst must face during analysis like:

1. Take long time and get inefficient result
2. Attitude and motivation of subject cannot be readily observed
3. Observation are subject to error
4. In a complex situation it can be very time consuming

So for this we switched towards the other fact finding tools like interviews and questionnaires.

3.5 INTERVIEWS AND QUESTIONNAIRES

The interviews is a face to face interpersonal role situation in which a person called the interview asks a person being interview questions designed to gather information about a problem area. The interview is the oldest and most often used device for gathering information in systems work. It has qualities that behavioral and on-site observation do not possess .it can be used for two main purposes:

- (a) as an exploratory device to identify relations or verify Information
- (b) to capture information as it exists

1. On site observation: It is not the easy task to do. In the on site observation the main objective is to get close as possible to the real system that are being studied. There are some questions that can serve as a guide for the on site observations:

1. What kind of the system is it? What does it do?
2. Who runs the system? Who are the important people in it?
3. What is the history of the system? How it get to its present stage of the development

First in this phase we more likely listened than talk and to and to listen with a sympathetic and genuine interest when information is conveyed. We have not to give any advice or passing moral judgment on what is observed. Not to argue with anyone or not to show any hostility towards one person and undue friendliness towards another.

So in the on site observation we first visited to the entire organization watched all the transactions, watched the way of taking orders by the sales executive. What types of forms are used in the entire place? Are all forms are written, printed or not.

There are four primary advantage of the interviews:

1. its flexibility
2. easy to validate the information gathered
3. effective technique for elicit information about complex subject
4. provide enjoyment to the both interviewed and interviewer

But there is a major drawback of the interview, it take long preparation time. It also takes long time to conduct, which means time and money. So whenever a more economical alternative captures the same information, the interview is generally not used.

Before conducting the interview I have to arrange the interview like place, timing, duration and other formalities. After that there are some defined guidelines to a successful interview like:

- (a) Set a stage for the interview
- (b) Establish rapport; put the interviewer at ease.
- (c) Phrase question clearly and succinctly.
- (d) Be a good listener, avoid arguments
- (e) Evaluate the outcome of the interview

In this project, we first set a stage for each department like with the salespersons. After this we collected the views about the current system like its merits and demerits is computerization is necessary, if so then why?

Like an interviewer ask the question to the manager of the store:

Q. What is the main problem?

Q. How you deal with current situation?

Q. What are the other alternatives?

Such type of question is asked at each stage. One most important thing here is be a good listener. Don't interfere with the answers given by the entities. So at last collect all views and prepare an overall report.

Questionnaires:

It is usually associated with the self-administrated tools with items of the closed or fixed alternative type. By this nature a questionnaires offer the following advantages:

- (a) It is economical and requires less skill to administer than the interview
- (b) Unlike the interview which generally questions one subject at time questionnaire can be administrated to large number of individuals simultaneously.
- (c) The questionnaires place less pressure on the subjects for immediate responses. Respondents have to think the question over and do calculations to provide more accurate data.

Mainly interviews and questionnaires are divided into two categories.

1. The unstructured alternative
2. The structured alternative

The unstructured interview is a relatively nondirective information technique. The role of the analyst as an interviewer is to encourage the respondent to talk freely and serve as a catalyst to the expression of feeling and opinions.

In the structured alternative approach the questions are presented with exactly the same wording and in the same order to all subjects. Questions may be closed or open ended. An open-ended question requires no response direction or the specific response.

An analyst asks the questions at each level of management either it is top level, middle level or bottom level and at each department in the client's site and at the manufacturer.

Following are the sample questions which we asked in the form of questionnaires and interviews:

Samples Questions asked to Computer Operators

(of similar kind of Centers with automated billing systems)

1.) Are you satisfied with the current system?

i. YES ii. NO iii. Partially Satisfied

2.) On an average how much Users do you get daily?

i. >100 ii. <100 iii. Can't say

3.) Are you satisfied with the facilities available to you?

i. Yes ii. NO iii. Partially Satisfied

4.) What type of crowd is there mostly?

i. Patients ii. Working Personals iii. General (both)

5.) What type of patients coming?

i. Ladies ii. Gents iii. Not specific

7.) Are you satisfied with the number of customers coming here?

- i. Yes ii. NO iii. Can't say.

8.) Which Platform do you work on?

- i. GUI Based ii. Non-GUI Based iii. Don't Know

9.) Which Database is implemented for the Billing System?

- i. MS ACCESS ii. SQL SERVER iii. ORACLE
iv. Others (Please Specify)

10.) How much security is needed for the implementation of atomization?

- i. Very High ii. Average iii. Can't Specify

11.) Any Suggestions for further improvement?

Sample Questions asked to consumers (Center's customers)

Personal Information:

- i. NAME.
ii. Pateint Type ->

1.) How do you like the facilities provided by the Center?

- i. Good ii. Better than others iii. Best

2.) Are you satisfied with the Quality of service?

- i. Yes ii. No iii. Partially Satisfied.

3.) What do you think about the discount offered?

- i. Too Less ii. Appropriate iii. Should be increased

4.) Is the Price of auto items adequate?

- i. Yes ii. No iii. Can't Say

5.) Does the organization need further improvements?

i. Yes ii. No iii. Can't say

Answers we got from various computer operators

(i) 45% answered

(ii) 35% answered

(iii) 20% answered

Answers we got from various administrators

(i) 42% answered

(ii) 34% answered

(iii) 26% answered

i - positive answers

ii - Average answers

iii - Negative Answers

Answers we got from various consumers

(i) 34% answered

(ii) 36% answered

(iii) 30% answered

Identifying Current System Requirements (Software and Hardware specifications)

Software and Hardware Specifications for implementation of the system

(These specifications have been verified by the manager, Deft Infosystems (P) Ltd.,

New Delhi, as far as the cost is concerned)

SYSTEM DESIGN

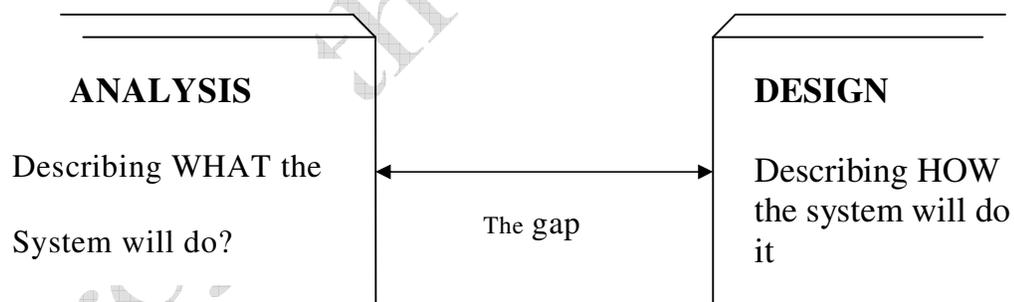
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SYSTEM DESIGN

The final deliverable from system analysis is a document containing an unambiguous statement of the client's requirements from the new system and what the development project will have to deliver in order to be considered a success.

The functional specification is the starting point for designing, which depends to a large extent on the accuracy and thoroughness with which the analysis has been carried out. Understanding of the business, appreciation of the client's problems and documentation of requirements provide the foundation on which the designing is based.

A key factor in this approach is the use of the structured techniques. Analysis ends with a description of what the new system must do to fulfill the requirements of the organization, while design specifies how this will be done by selecting one of the many ways of doing it.



The structured techniques used during the analysis which provide this logical view are:

- Data flow diagrams - representing the process, which manipulate the data as it passes through the system.
- Entity model - showing the relationship within the data items held within the system.
- A data dictionary - providing an overall consistent definition of the data used during the system development. This definition includes the content of the data stores, data

flows and the process shown on the data flow diagrams, and the entities that make up the entity model.

4.1 DESIGN OBJECTIVES AND CONSTRAINTS

- **Flexible –**

The design would enable future requirements of the organization to be incorporated without much difficulty. Often the organizational needs and objectives change over time and hence such a design enables the system to reflect these changes.

- **Maintainable -**

A good design is easy to maintain and this reduces the client's maintenance cost, which usually represents a proportion of the lifetime of the system.

- **Portable -**

A client for whom the software was developed may wish to change the hardware on which the system run. A good design is portable - in other words it is capable of being transferred from one machine environment to another with minimum amount of effort.

- **Easy to use -**

With increasing number of general users having exposure to computers and access to web sites, expectations of computer applications in term of their ease of use are also increasing. A good design will result in a system which is 'user - friendly' - easy to understand, not difficult to learn how to use and straightforward to operate.

- **Reliable -**

The system designed must be secure against human error, deliberate misuse or machine failure, and which the data will be stored without corruption.

4.2 PHYSICAL DESIGN

The design phase focuses on the detailed implementation of the system recommended in the feasibility. Emphasis is on translating performance specifications into design specifications. The design phase is a transition from user-oriented document to a programmer-oriented document.

4.2.1 Design Methodology:

Design Methodology is a way to transform the "art" of system analysis and design into an "engineering - type" discipline. It explains the relationship amongst various modules and programs within the system. It standardizes the approach to analysis and design, simplifies design by segmentation, improves documentation and subsequent maintenance and enhancements.

The following structured diagram can appropriately represent the relationship between various modules .

4.2.2. Design Overview:

In analyzing the present system a great deal of information was collected during the investigation and feasibility phases through list of problems and requirements, interview reports, questionnaires, onsite observations, manuals and determining potential solutions.

It is important to record this information in an unambiguous, concise manner which will be clear and accessible to others, and which can be used by other analysts and designers involved in developing the system. Structured techniques help us to record the information in this way, using diagrams and minimum amount of the text.

Structured analysis is a set of techniques and graphical tools that allow the analyst to develop a new kind of system specification that are easily understandable to the user. The traditional approach of organizing data through

flowcharts support future developments and simplify communication with the user but focus on the cost/benefit and feasibility analysis, project management, hardware and software selection, and personal considerations. In contrast, structured analysis considers new goals and structured tools for analysis, which provide the basis for design and implementation.

4.2.3 Process Modeling:

System design goes through two phases of development: *logical and physical*. Logical implementation represented by Data Flow Diagram shows the logical flow of a system and defines the boundaries of the system it describes the input (source), outputs (destinations), data bases (data stores), and procedures (data flows) - all in the format that meets the user's requirements. The logical implementation of the whole project can be represented as under through Data Flow Diagrams (DFD).

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4.3 DATA FLOW DIAGRAM

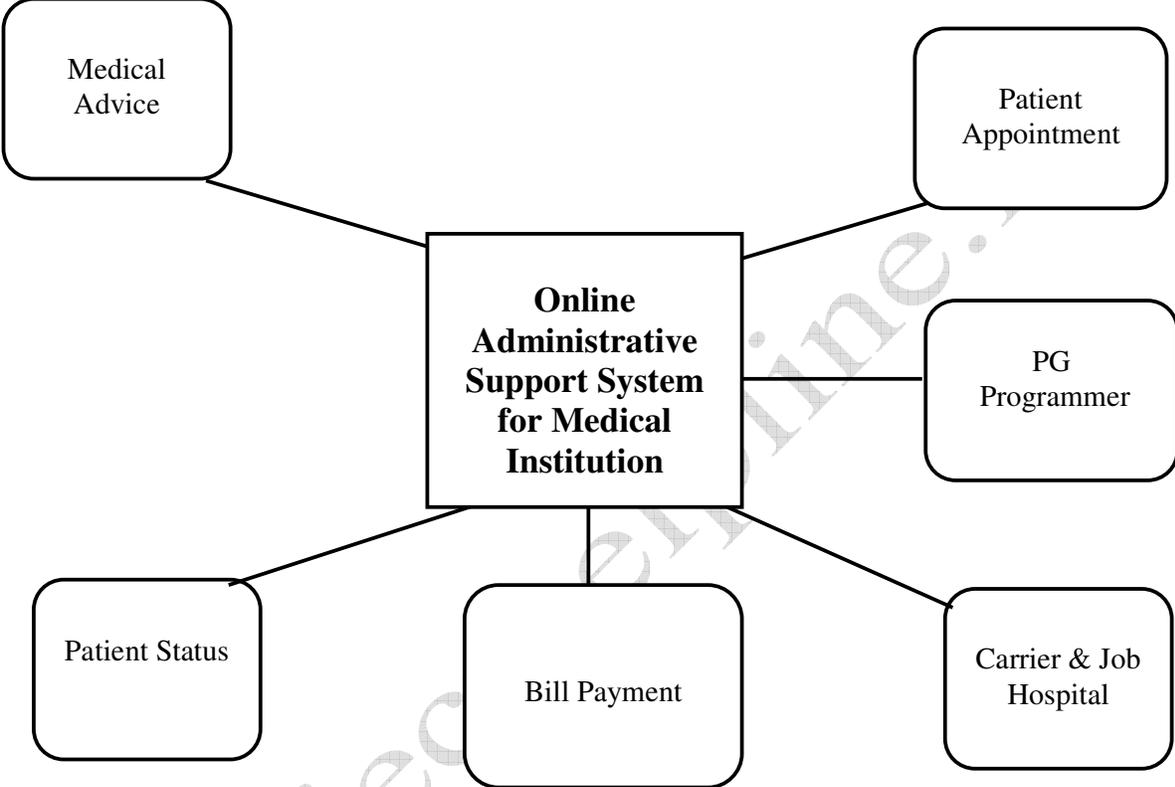
A data-flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. DFDs can also be used for the visualization of data processing (structured design).

On a DFD, data items flow *from* an external data source or an internal data store *to* an internal data store or an external data sink, *via* an internal *process*.

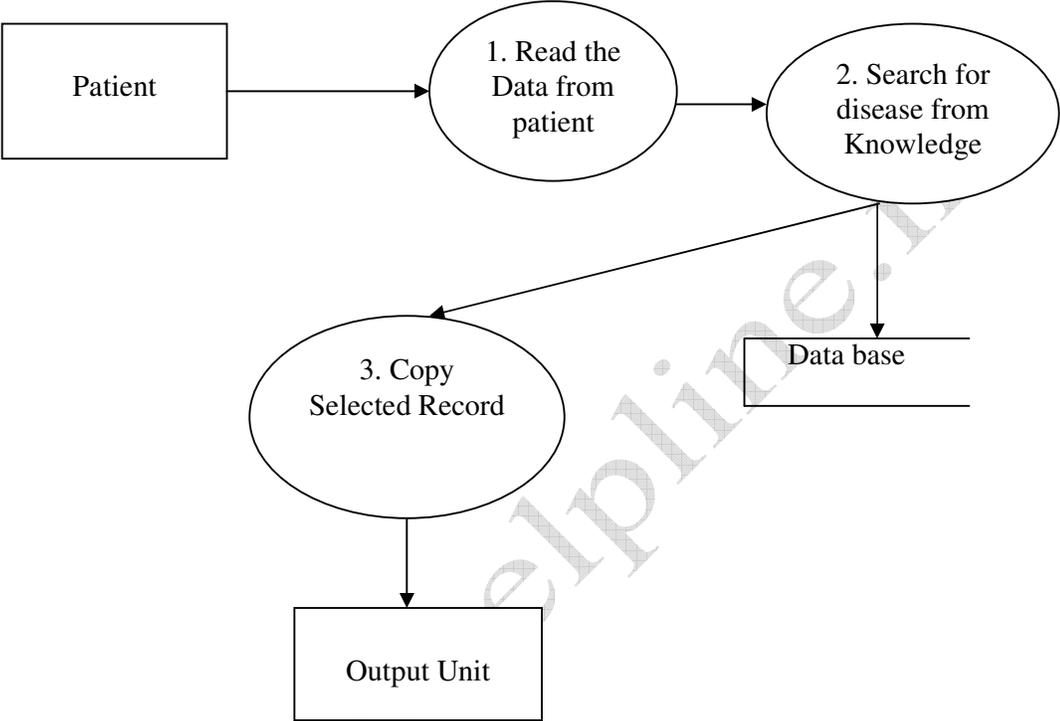
A DFD provides no information about the timing or ordering of processes, or about whether processes will operate in sequence or in parallel. It is therefore quite different from a flowchart, which shows the *flow of control* through an algorithm, allowing a reader to determine what operations will be performed, in what order, and under what circumstances, but *not* what kinds of data will be input to and output from the system, *nor* where the data will come from and go to, *nor* where the data will be stored (all of which are shown on a DFD).

In DFD's following symbols are used:

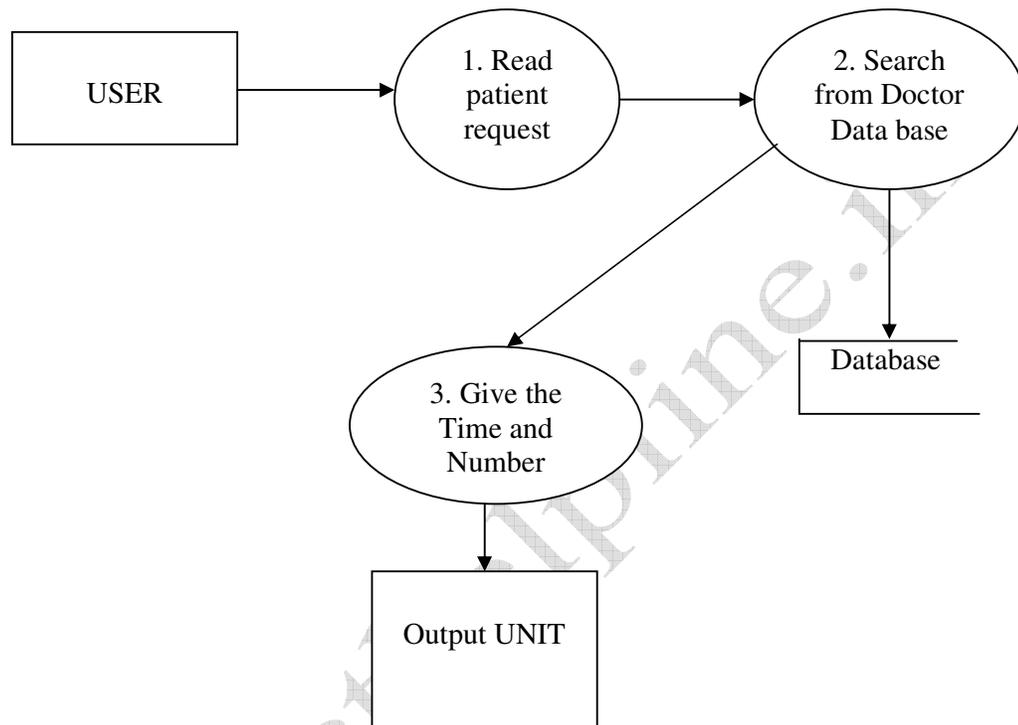
CONTEXT LEVEL DFD



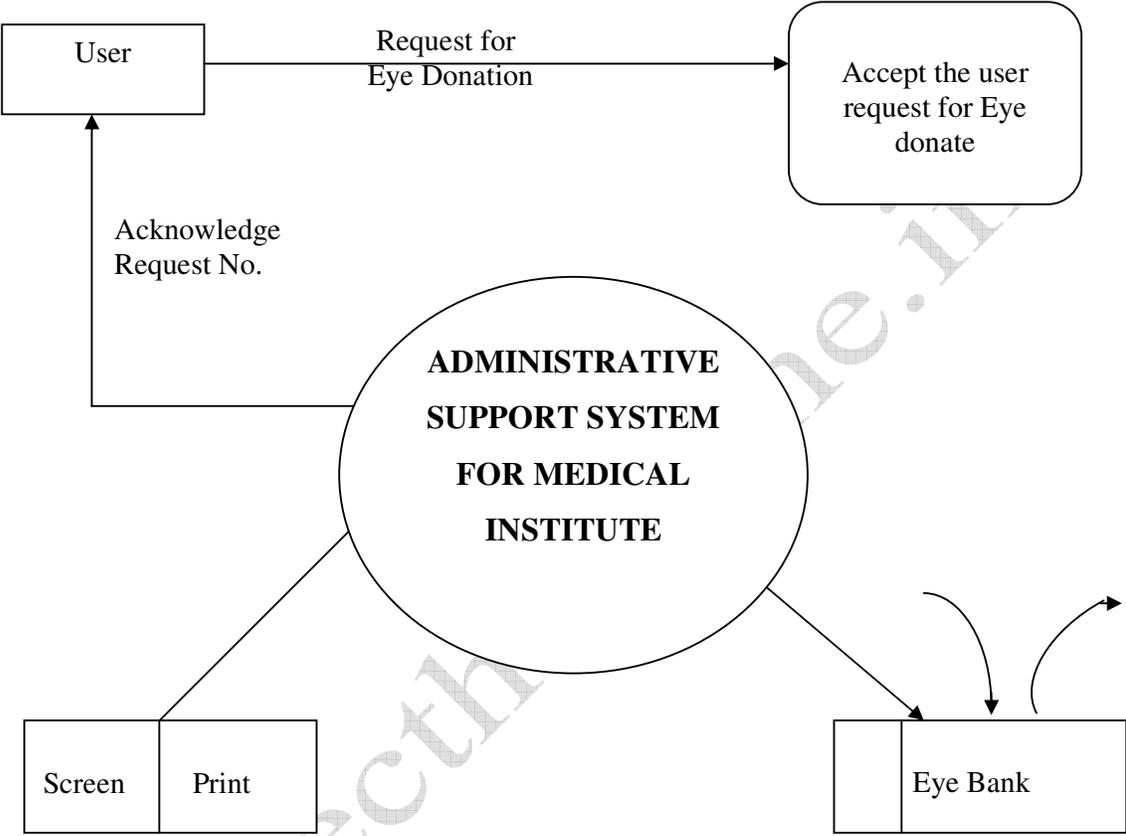
DFD FOR MEDICAL ADVICE



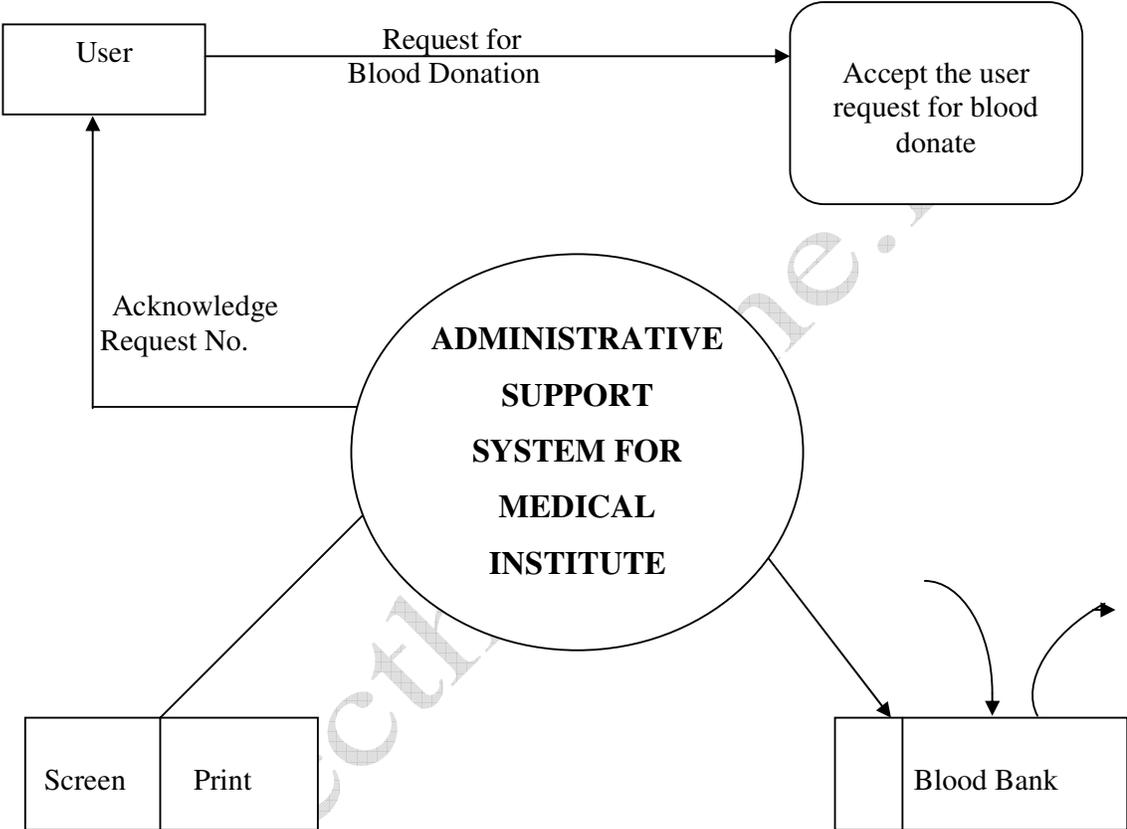
DFD FOR PATIENT APPOINTMENT



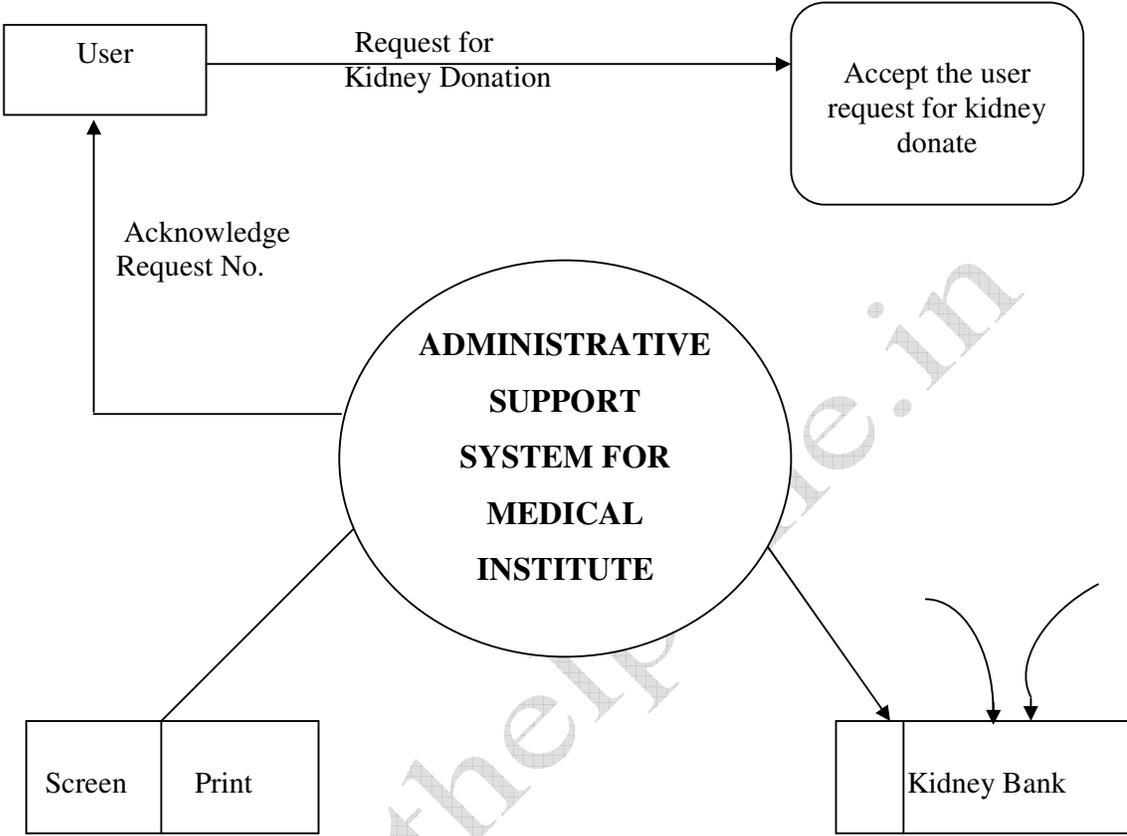
DFD FOR EYE DONATOR



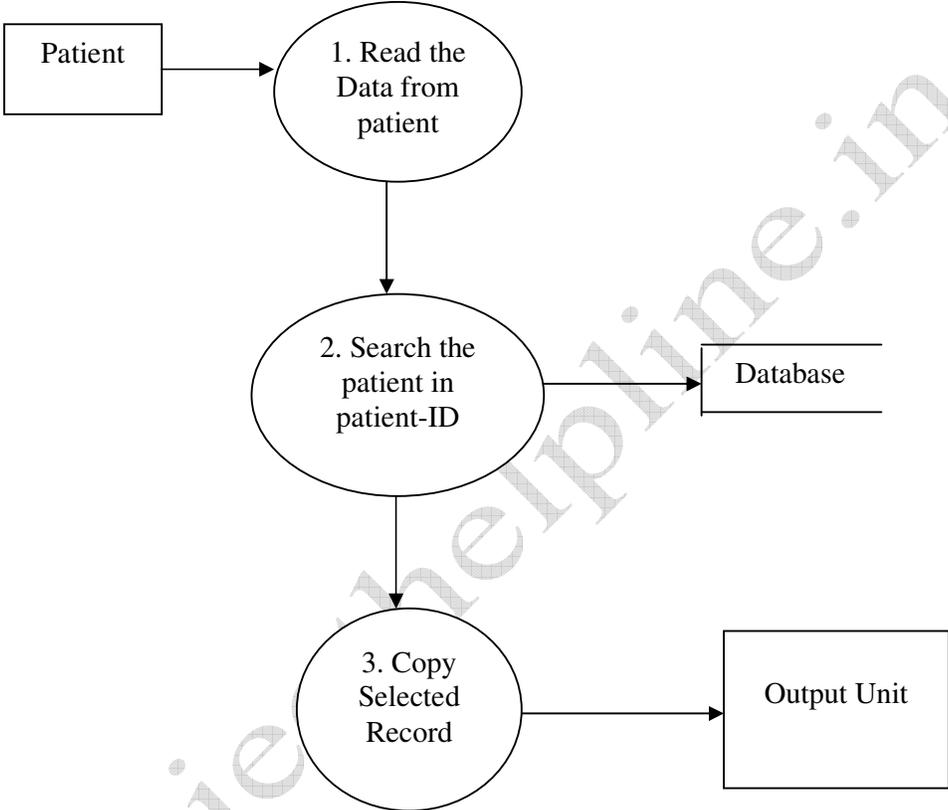
DFD FOR BLOOD DONATOR



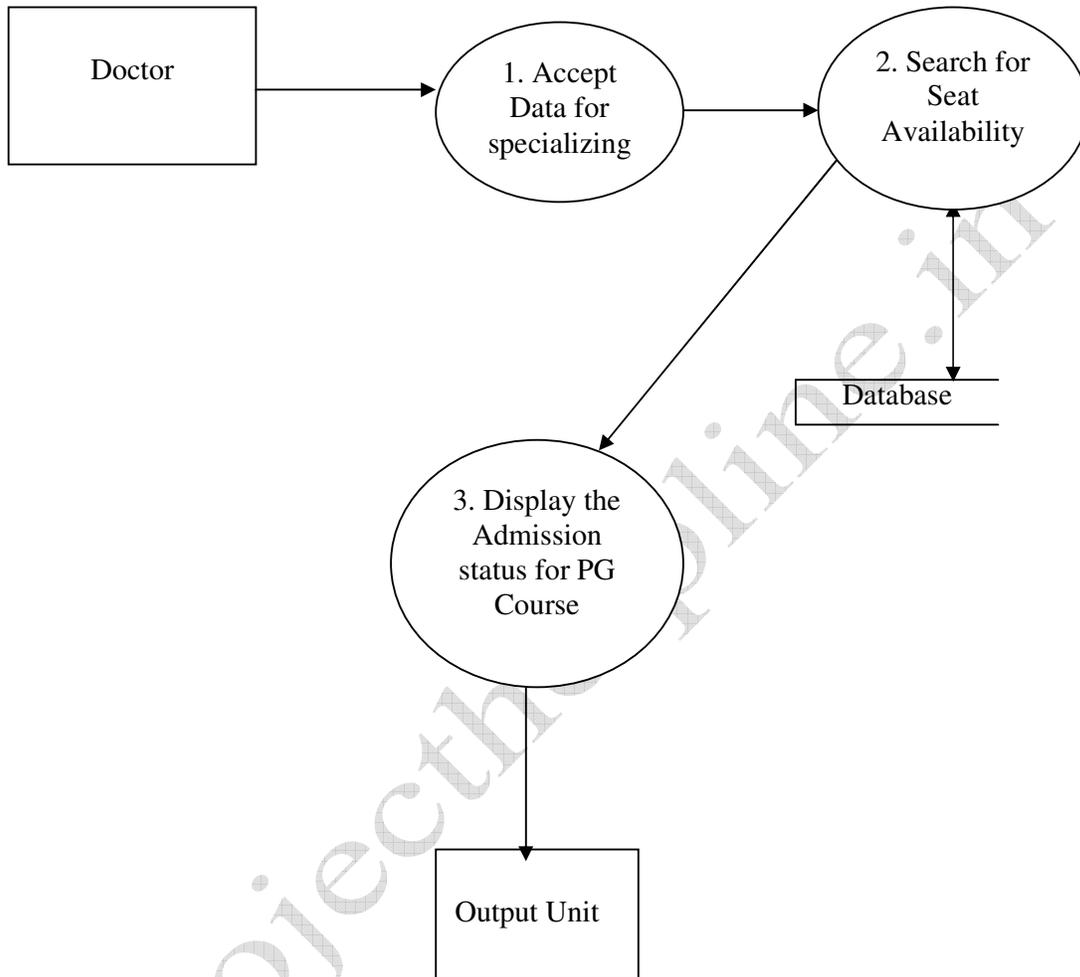
DFD FOR KIDNEY DONATOR



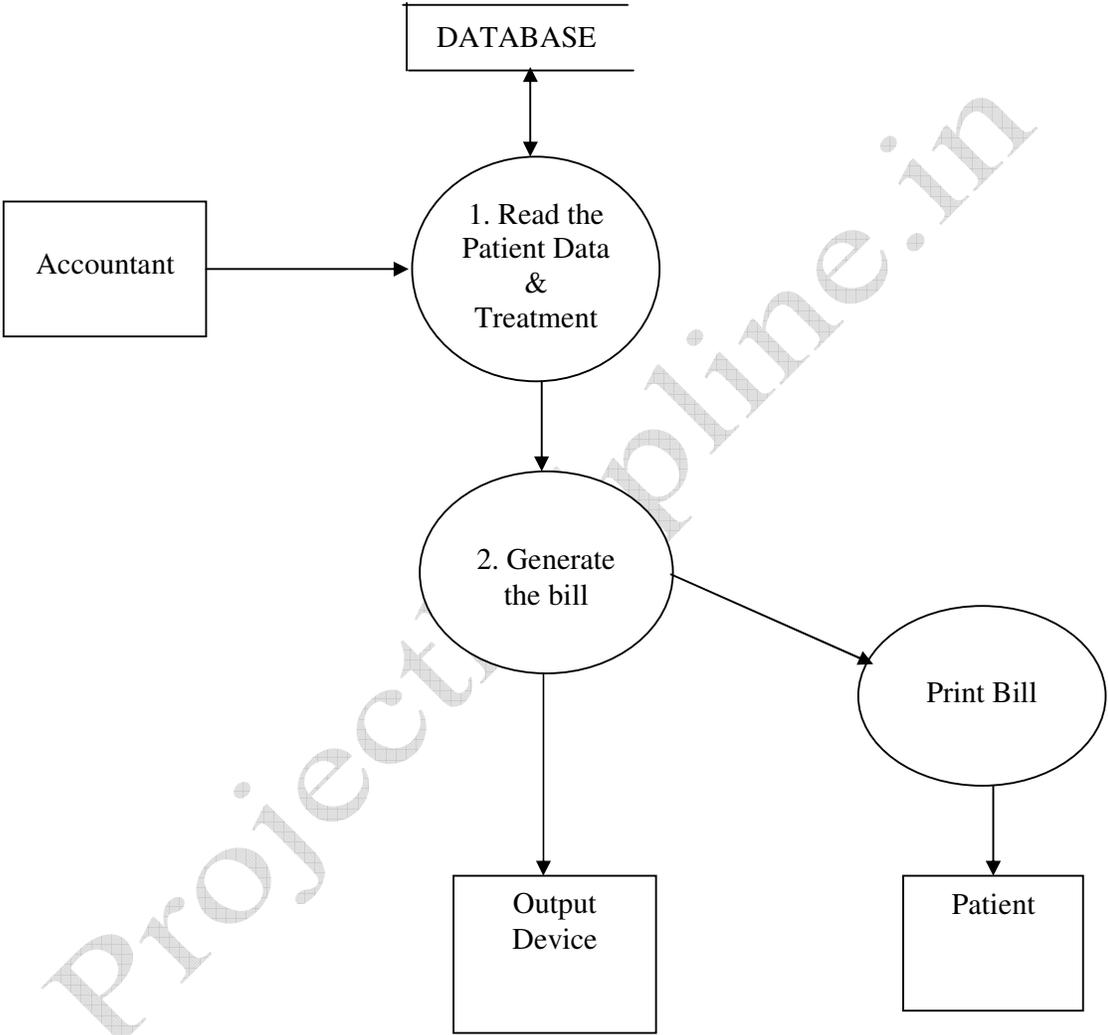
DFD FOR PATIENT SEARCH



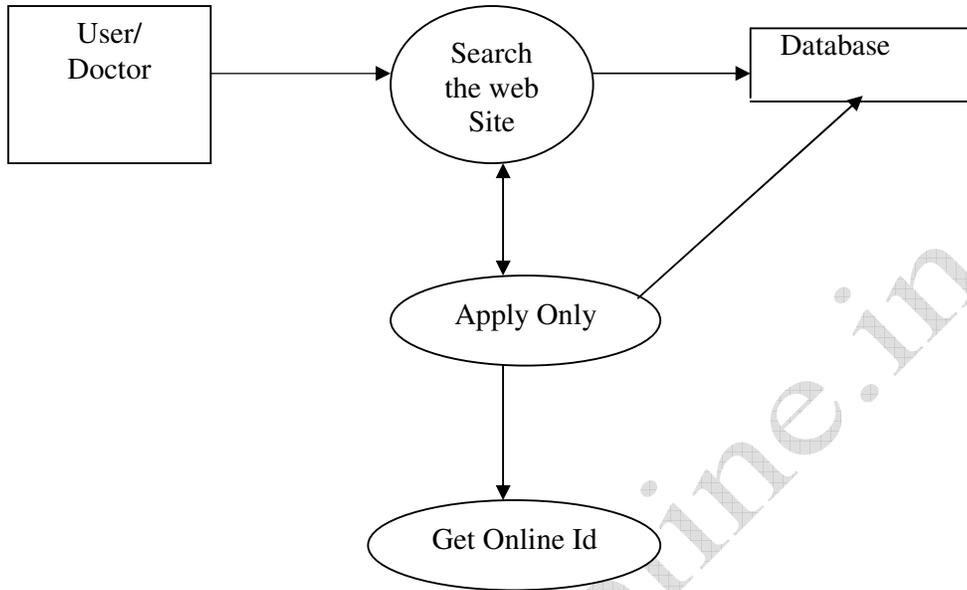
DFD FOR PG COURSE



DFD FOR BILL PAYMENT

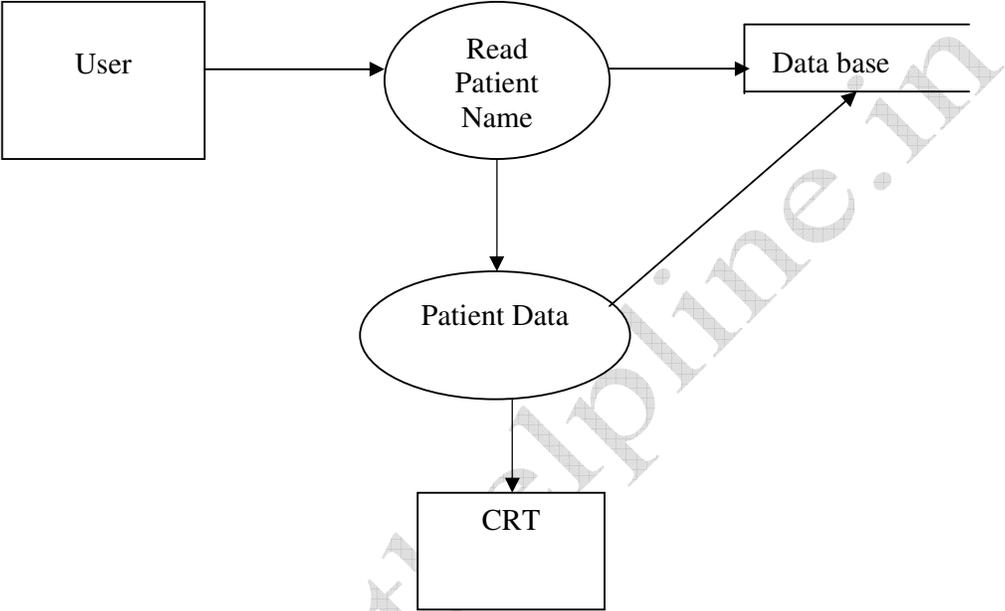


DFD FOR JOB OPPORTUNITY IN HOSPITAL

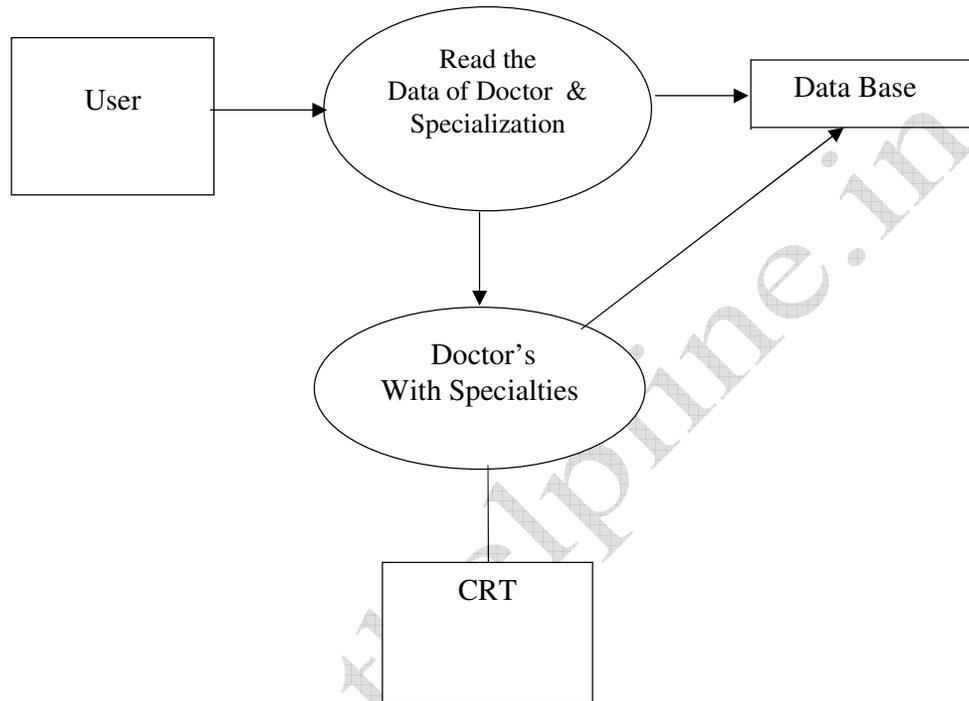


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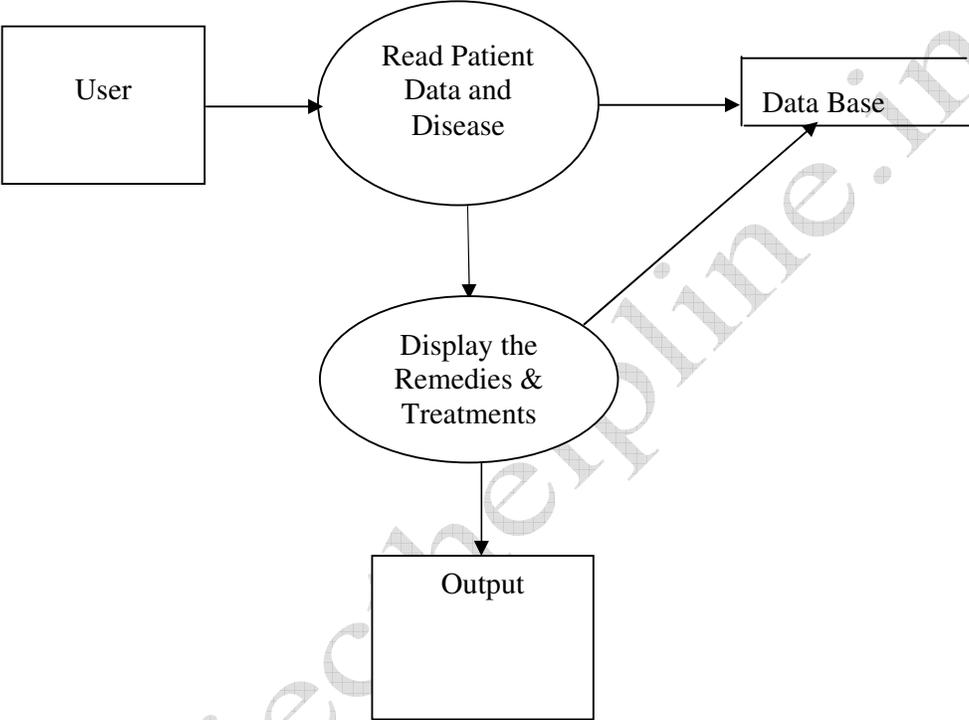
DFD FOR ONLINE SEARCHING FOR PATIENT



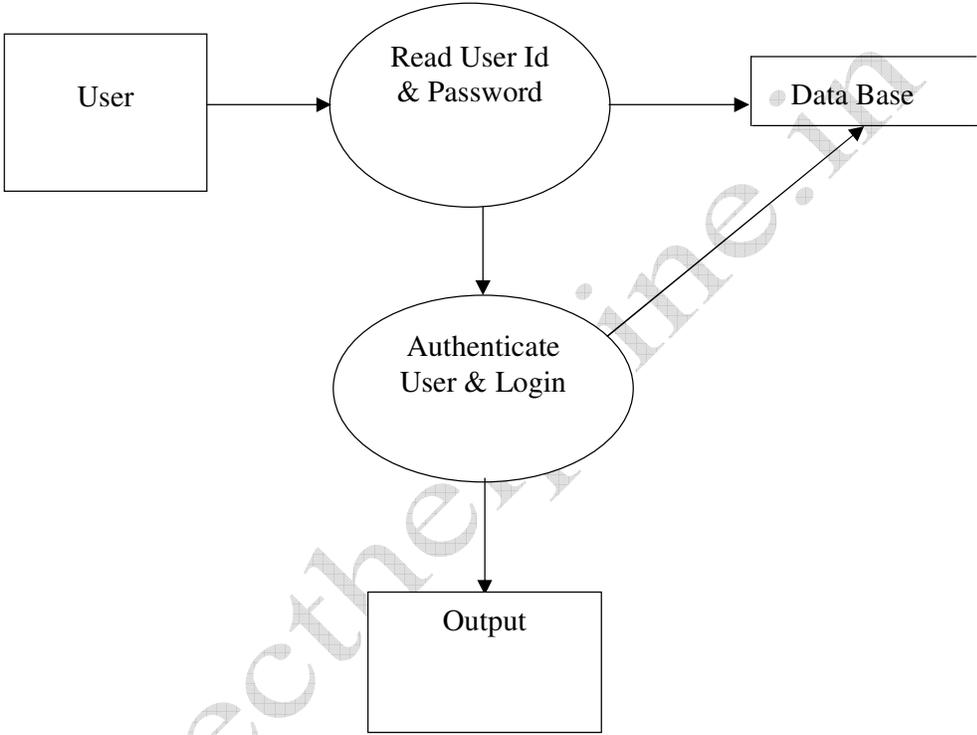
DFD FOR SEARCHING A DOCTORS



DFD ONLINE MEDICAL ADVICE



DFD FOR LOGIN OF USER



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4.4 DATA MODELING

The entity - relationship data model or an E-R diagram is based on the collection of basic objects, called entities, and of relationship among those objects. An entities model represents the network of relationships between classes of things, which need to have data recorded about them in the system. The term entity is a "thing" or an "object" Entities are described in a database by a set of attributes. And a relationship is an association among several entities. Having drawn an entity model, it is possible to show how the system can use these relationships by following them as a path for obtaining related pieces of data either for update or for reporting and enquiry purpose. The set of all entities of the same type and of all relationships of the same type are known as entity set and relationship set respectively.

Login Table

Attributes	Data Type	Constraints
UserID	Varchar(10)	Primary key
Password	Varchar(10)	Not null
Clerk_id	Varchar(6)	Foreign key

Administrator_Login Table

Attributes	Data Type	Constraints
Username	Char	Not null
Password	Char	Not null

Job_for_Doctors Table

Attributes	Data Type	Constraints
Name	Char	Not null
Address	Char	Not null
Phone no	Number	Not null
Email	Char	Not null
City	Char	Not null

Pin	Number	Not null
Gender	Char	Not null
Degree	Char	Not null
Specialty	Char	Not null
Availability	Char	Not null
States	Char	Not null

Patient Table

Attributes	Data Type	Constraints
Patient_ID	Char	Primary Key
Name	Char	Not null
Address	Char	Not null
City	Char	Not null
State	Char	Not null
Phone no	Number	Not null
Email	Char	Not null
Disease	Char	Not null
Age	Number	Not null
Remark	Char	Not null

Patient Appointment Table

Attributes	Data Type	Constraints
Name	Char	Not Null
Address	Char	Not null
City	Char	Not null
State	Char	Not null
Phone no	Number	Not null
Email	Char	Not null
Disease	Char	Not null

Age	Number	Not null
Remark	Char	Not null

Donators Table

Attributes	Data Type	Constraints
Donator_ID	Char	Primary Key
Name	Char	Not null
Address	Char	Not null
Phone no	Number	Not null
Email	Char	Not null
Donating	Char	Not null
Stats	Char	Not null

Bill Table

Attributes	Data Type	Constraints
Transaction_ID	Char	Primary Key
Patient Name	Char	Not null
Disease	Char	Not null
Bill Amount	Number	Not null
Room no	Number	Not null
Bed no	Number	Not null

Online_Medical_Advice Table

Attributes	Data Type	Constraints
Name	Char	Not Null
Phone no	Number	Not null
Email	Char	Not null
Discuses	Char	Not null

Doctor_Available Table

Attributes	Data Type	Constraints
Name	Char	Not Null
Specialty	Char	Not null
Timings	Char	Not null
Days	Char	Not null

Training_Courses_Available Table

Attributes	Data Type	Constraints
Course_ID	Char(30)	Not Null
Course	Char	Not null
Duration	Char	Not null
Fees	Char	Not null

Dischage_Patients Table

Attributes	Data Type	Constraints
Name	Char	Not null
Address	Char	Not null
Phone no	Number	Not null
Email	Char	Not null
Disease	Char	Not null
Stats	Char	Not null
Room No	Number	Not null
Bed No	Number	Not null
Charges Paid	Number	Not null

Room_Available Table

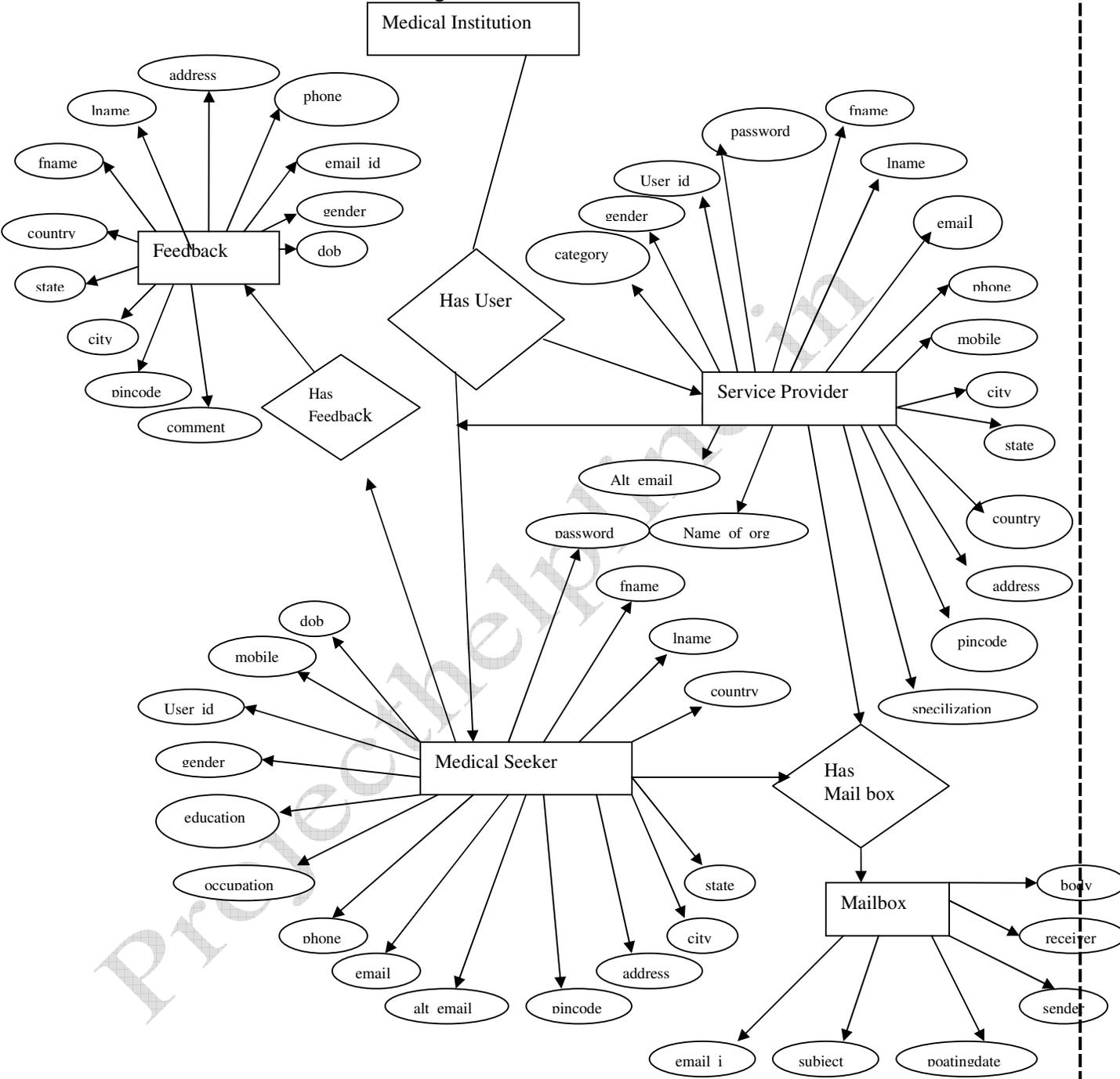
Attributes	Data Type	Constraints
Room No.	Number	Not Null
Room Status	Char	Not null
Size	Char	Not null
Charges	Number	Not null

Payment Package Table

Attributes	Data Type	Constraints
Package_Id	Char(50)	Primery Key
Charges	Number	Not null
Disease	Char	Not null
Remark	Char	Not null

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4.5 ER Diagram



4.6 MODULE DESCRIPTION

The basic objective of **ONLINE ADMINISTRATIVE SUPPORT SYSTEM FOR MEDICAL INSTITUTES** is a website to generalize and simplify the monthly or day to day activities of Hospital like Admission of New Patient, Discharge of Patient, and Doctor Assigning related to particular disease of patient, Reports of Number of Patients and Discharged Patients etc. which has to be performed repeatedly on regular basis. To provide efficient, fast, reliable and user-friendly system is the basic motto behind this exercise.

Let us now discuss how different modules handle the structure and data files:

1. Password Module

This module is used to login existed users. New users can also become members .Existed user can change the password. Any user can check login status, change his/her password and recover his password.

2. Admission_Patient Module

This module is used to admit a patient in our Hospital after entering his all personal details like Name, Address, Phone, Sex including his/her Disease .Patient can take online appointment

3. Discharge_Patient Module

This module is used to discharge the patient details from database. When the user inputs his bed number, the same patient id will be checked in the database, if the bed number is matched in the database, then the patient will be discharged from the database and transferred the record of the discharged patient to another table of database so that the Hospital Management has the record of discharged patients to fulfill his legal liabilities.

4. Doctors_Available Module

Using this Module we can get on line informations about the doctors available in our hospital.

5. Preeventive_Checkup Module

Sagar Apollo Hospital helps you in that right direction- a comprehensive and complete health check-up from the best available hands that will guide you to living a healthier life.

6. Display_Record Module

This module is used to display all the transaction including the patient name, address, phone, bed number, and doctor assigned to him/her in the screen. This is a global report to display all the transaction records in the screen.

7. Administrator Module

This module is for administrator. To generate

- a. List of Patients.
- b. List of Doctors.
- c. To add New doctors in the site.
- d. List of Patients interested in Free Medical Advice.

8. Training Courses Available

This module is for the information of the courses provided by the Hospitals, Mode of Payment for Courses.

9. Business Services

Tenders are collected for food supplier, Medicine suppliers and other items suppliers which was then finalized by the management

10. Donations

This module is related to Blood donation, Eye donation, Kidneys donation and donation of their body parts. The eye donators can pledge online for their eye donations before their death.

11. Placement Agency

This module deals with placement agencies for the placement of nurses, and other staff.

12. Near by Hotels

In this Module Hotel information are provided for the accommodation of relatives of the patients.

13. Report Generation

This module is important for management or administrator to generate report of patients who want free medical advice, appointments, doctors who want to work in this hospital, Patients in the Hospital etc.

14. Validations & Checks

This module is important for applying validations to the fields in each form.

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4.7 PROCESS LOGIC

Process Logic of Module is a tool that may be useful in planning and evaluating projects.

Our logic model contains four components with Inputs-Outputs-Outcomes being central to the built in response to the model:

- **Situation:** The context and need that gives rise to a project or initiative; logic modules are built in response to an existing situation.
- **Inputs:** The resources, contributions, and investments that are made in response to the situation. Inputs lead to Outputs.
- **Outputs:** The activities, products, methods, and services that reach people and users. Outputs lead to outcomes.
- **Outcomes:** The results and benefits for individuals, groups, agencies, communities and/or systems.

4.8 REPORTS GENERATION

From above modules different reports are generated. 'Crystal Reports' is a popular third party package that is included with Visual Basic.NET, which allows you to create reports for your application. The package consists of a designer - where you can design and test the reports, Crystal Reports API calls and CrystalReportViewer control. Crystal Report generated in this website are about:

- Discharge Patient Detail
 - Doctor Assigning related to Patient's Disease
 - Training Courses Provided by the Hospital
 - Statement of Patient Details
 - a. Admitted Patient
 - b. Discharged Patient
 - c. Doctor Details

- Patients admitted in the Hospital
- Doctors available in the Hospital
- Preventive Health Checkups
- List of Doctors

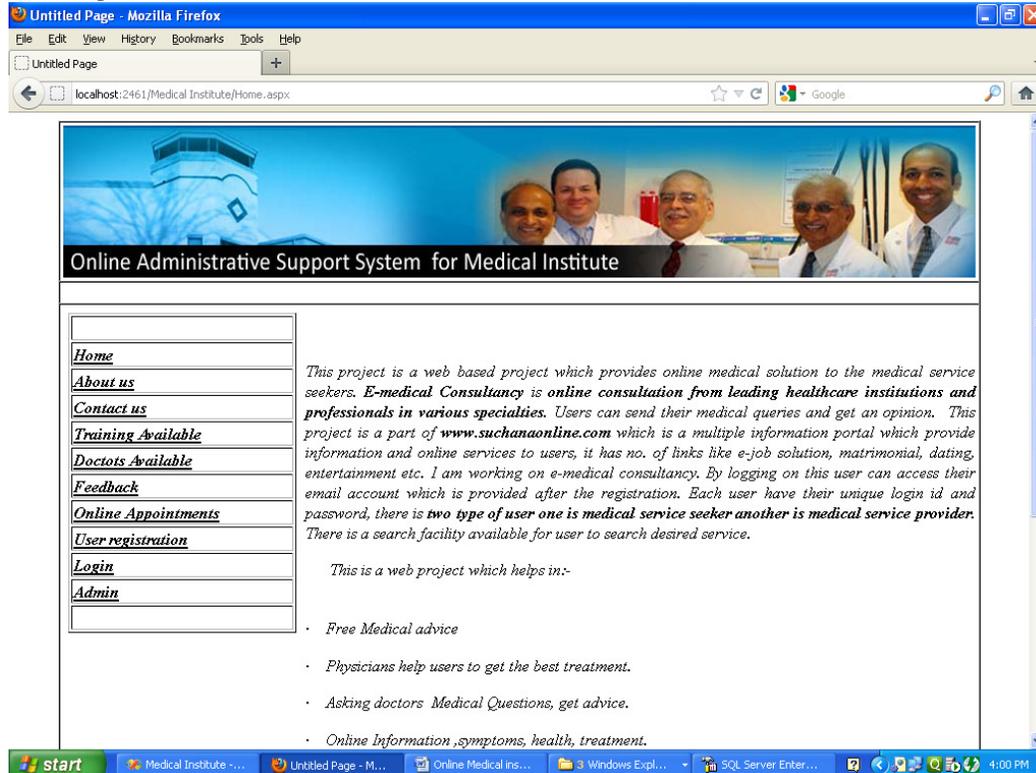
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SYSTEM DEVELOPMENT

Projecthelpline.com

5.1 CODING

Home.aspx



```
<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="Home.aspx.cs" Inherits="Home"
Title="Untitled Page" %>
```

```
<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">
  <style type="text/css">
    .style7
    {
      text-decoration: underline;
      font-weight: bold;
      color: #FFFFFF;
    }
    span.largeblue1
    {font-family:Arial;
      color:#0000CC;
      font-weight:bold;
    }
    .style8
    {
      font-style: italic;
    }
    .style9
    {
      font-style: italic;
      color: #99CCFF;
    }
    .style10
    {
```

```

        color: #99CCFF;
    }
    .style11
    {
        font-style: italic;
        font-size: 4.0pt;
        color: #000000;
        text-align: justify;
    }
    .style12
    {
        text-align: justify;
    }
    .style13
    {
        font-style: italic;
        color: #000000;
    }
    .style14
    {
        color: #000000;
    }
</style>
</asp:Content>

<asp:Content ID="Content3" ContentPlaceHolderID="ContentPlaceHolder2"
Runat="Server">
    <p class="style7">
    Introduction</p>
<p class="style12">
    <span class="style9">T</span><span class="style13">his project is
a web based
    project which provides online medical solution to the medical
service seekers.
    <b style="mso-bidi-font-weight:
normal">E-medical Consultancy</b> is <b style="mso-bidi-font-
weight:normal">online
    consultation from leading healthcare institutions and
professionals in various
    specialties</b>. Users can send their medical queries and get an
opinion.</span><span class="style10"><span
    class="style8" style="mso-spacerun:yes">&nbsp; </span></span>
    <span class="style13">This project is a
part of <b style="mso-bidi-font-
weight:normal">www.suchanaonline.com</b> which
    is a multiple information portal which
    provide information and online services to users, it has no. of
links like e-job
    solution, matrimonial, dating, entertainment etc. I am working on
e-medical
    consultancy. By logging on this user can access their email
account which is
    provided after the registration. Each user have their unique
login id and
    password, there is <b style="mso-bidi-font-weight:normal">two
type of user one
    is medical service seeker another is medical service
provider</b>. There is a
    search facility available for user to search desired service.
</span>
</p>

```


Aboutus.aspx

Home
About us
Contact us
Training Available
Doctors Available
Feedback
Online Appointments
User registration
Login
Admin

OBJECTIVE

As we know that today web is growing day by day people are aware of internet its technology there is no. of sites who provides no. of services to the no. of customer as online market, online share trading online banking, online book shop etc so that my project guide advise me to develop a site to provide consultancy service in the medical related field there are some objectives of the sites. The main objective is to bring all the medical services on one platform now a day's web is growing day by day. People are aware of web .It is easily accessible by many user so that I decided to design a site where user can find desired medical information.

To bring all the medical facility on one platform

Medical service seeker can search for no. of medical services.

Medical service provider can reach to no. of service seeker.

User can search for desired service.

```

<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="AboutUs.aspx.cs" Inherits="AboutUs"
Title="Untitled Page" %>

```

```

<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">

```

```

<style type="text/css">
.style7
{
    color: #FFFFFF;
    font-weight: bold;
    text-decoration: underline;
}

```

```

p.MsoNormal
{margin-bottom:.0001pt;
font-size:12.0pt;
font-family:"Times New Roman";
margin-left: 0in;
margin-right: 0in;
margin-top: 0in;
}

```

```

h1
{margin-top:12.0pt;
margin-right:0in;
margin-bottom:3.0pt;
margin-left:0in;
page-break-after:avoid;
font-size:16.0pt;
font-family:Cambria;
}

```

```

.style8
{

```



```

line-height:150%;font-family:Symbol;mso-fareast-font-
family:Symbol;mso-bidi-font-family:
Symbol;font-weight:normal;mso-bidi-font-weight:bold"><span
style="mso-list:
Ignore"><span class="style8"
        style="font-variant: normal; font-weight: normal;
font-size: 7.0pt; line-height: normal; font-family: 'Times New
Roman';">&nbsp;</span></span></span><![endif]><span
        class="style8" style="font-size:12.0pt;line-
height:150%;
font-family:&quot;Times New Roman&quot;;font-weight:normal;mso-bidi-
font-weight:bold">To bring
        all the medical facility on one platform</span><![if
!supportLists]><![endif]></h1>
        <h1 style="margin-left:.5in;text-align:justify;text-
indent:-.25in;line-height:
150%;mso-list:l0 levell lfo1">
        <![if !supportLists]>
        <span style="font-size:12.0pt;
line-height:150%;font-family:Symbol;mso-fareast-font-
family:Symbol;mso-bidi-font-family:
Symbol;font-weight:normal;mso-bidi-font-weight:bold"><span
style="mso-list:
Ignore"><span class="style8"
        style="font-variant: normal; font-weight: normal;
font-size: 7.0pt; line-height: normal; font-family: 'Times New
Roman';">&nbsp;</span></span></span><![endif]>
        <span class="style8" style="font-size:12.0pt;line-
height:150%;
font-family:&quot;Times New Roman&quot;;font-weight:normal;mso-bidi-
font-weight:bold">Medical
        service seeker can search for no. of medical
services.</span><![if !supportLists]><![endif]></h1>
        <h1 style="margin-left:.5in;text-align:justify;text-
indent:-.25in;line-height:
150%;mso-list:l0 levell lfo1">
        <![if !supportLists]>
        <span style="font-size:12.0pt;
line-height:150%;font-family:Symbol;mso-fareast-font-
family:Symbol;mso-bidi-font-family:
Symbol;font-weight:normal;mso-bidi-font-weight:bold"><span
style="mso-list:
Ignore"><span class="style8"
        style="font-variant: normal; font-weight: normal;
font-size: 7.0pt; line-height: normal; font-family: 'Times New
Roman';">&nbsp;&nbsp;</span></span></span><![endif]>
        <span class="style8" style="font-size:12.0pt;line-
height:150%;
font-family:&quot;Times New Roman&quot;;font-weight:normal;mso-bidi-
font-weight:bold">Medical
        service provider can reach to no. of service
seeker.</span><![if !supportLists]><![endif]></h1>
        <h1 style="margin-left:.5in;text-align:justify;text-
indent:-.25in;line-height:
150%;mso-list:l0 levell lfo1">
        <![if !supportLists]>
        <span style="font-size:12.0pt;
line-height:150%;font-family:Symbol;mso-fareast-font-
family:Symbol;mso-bidi-font-family:

```


Onlineappointmentnet.aspx

ONLINE APPOINTMENT:

Please fill up the form below carefully. We always maintain privacy of any medical problem of our patients. Try to make your appointment in advance to get your date of choice confirmed. Please remember to always mention your correct email address so we can reply you promptly. Thank you!

Please fill up the online Laparoscopic query form carefully. We always maintain your privacy. Please remember to mention your correct email address so we can reply you promptly. Thank you!

Full Name:

Address:

Phone No:
(incl. country code)

Fax No:
(incl. country code)

Email Address:

Date of Birth:

Patient location within facility:

```

<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="Online Appontment.aspx.cs"
Inherits="Online_Appointment" Title="Untitled Page" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1"
Runat="Server">
</asp:Content>
<asp:Content ID="Content3" ContentPlaceHolderID="ContentPlaceHolder2"
Runat="Server">
    <span style="color: #993300; font-variant: small-caps"><b><font
size="5">Online
Appointment:</font></b></span><p align="right" style="margin-top:
0px;
                margin-bottom: 0px">
</p>
<p>
    <font face="Arial" size="2"><span style="color: #0000ff">Please
fill up the form
    below carefully. We always maintain privacy of any medical
problem of our
    patients. Try to make your appointment in advance to get your
date of choice
    confirmed. Please remember to always mention your correct email
address so we
    can reply you promptly. Thank you!</span></font></p>
<font face="Arial" size="2"><span style="color: #0000ff">
<p style="margin-top: 0px; margin-bottom: 0px">
    <i><font color="#000080" size="2">Please fill up the online
Laparoscopic query
  
```



```
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Data.SqlClient;
public partial class Doctors_Available : System.Web.UI.Page
{
    protected void Page_Load(object sender, EventArgs e)
    {
        SqlConnection con = new
SqlConnection(ConfigurationManager.AppSettings["obj"]);

        SqlDataAdapter da = new SqlDataAdapter("Select * from
doctor", con);
        DataSet ds = new DataSet();
        da.Fill(ds);
        GridView1.DataSource = ds;
        GridView1.DataBind();
    }
}
```

Feedback/asp

Online Administrative Support System for Medical Institute

[Home](#)
[About us](#)
[Contact us](#)
[Training Available](#)
[Doctors Available](#)
[Feedback](#)
[Online Appointments](#)
[User registration](#)
[Login](#)
[Admin](#)

Name :-

Email :-

Address :-

Mobile no. :-

Comment :-

All right reserved Appolo Medical Institute

http://localhost:2461/Medical Institute/Feedback.aspx

```

<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="Feedback.aspx.cs"
Inherits="Feedback" Title="Untitled Page" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">
  <style type="text/css">
    .style7
    {
      font-weight: bold;
      text-decoration: underline;
      color: #FFFFFF;
    }
    .style8
    {
      color: #99CCFF;
      font-weight: bold;
      font-style: italic;
    }
  </style>
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1"
Runat="Server">
</asp:Content>
<asp:Content ID="Content3" ContentPlaceHolderID="ContentPlaceHolder2"
Runat="Server">
  <p class="style7">
  &nbsp; Submit your feedback</p>
  <table class="style2">
    <tr>
      <td class="style8" style="text-align: right">
        Name :-</td>

```

```

        <td>
            <asp:TextBox ID="TextBox1" runat="server"
Width="200px"></asp:TextBox>
        </td>
    </tr>
    <tr>
        <td class="style8">
            &nbsp;   </td>
        <td>
            <asp:RequiredFieldValidator ID="RequiredFieldValidator1"
runat="server"
            ControlToValidate="TextBox1" Display="Dynamic"
ErrorMessage="Required field"
            ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
        </td>
    </tr>
    <tr>
        <td class="style8" style="text-align: right">
            Email :-</td>
        <td>
            <asp:TextBox ID="TextBox2" runat="server"
Width="200px"></asp:TextBox>
        </td>
    </tr>
    <tr>
        <td class="style8">
            &nbsp;   </td>
        <td>
            <asp:RequiredFieldValidator ID="RequiredFieldValidator2"
runat="server"
            ControlToValidate="TextBox2" Display="Dynamic"
ErrorMessage="Required field"
            ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
            <asp:RegularExpressionValidator
ID="RegularExpressionValidator1" runat="server"
            ControlToValidate="TextBox2" Display="Dynamic"
ErrorMessage="Invalid email id"
            ForeColor="White" SetFocusOnError="True"
            ValidationExpression="\w+([-+.']\w+)*@\w+([-.
.\w+)*\.\w+([-.\w+)*"></asp:RegularExpressionValidator>
        </td>
    </tr>
    <tr>
        <td class="style8" style="text-align: right">
            Address :-</td>
        <td>
            <asp:TextBox ID="TextBox3" runat="server"
TextMode="MultiLine" Width="200px"
            MaxLength="200"></asp:TextBox>
        </td>
    </tr>
    <tr>
        <td class="style8">
            &nbsp;   </td>
        <td>
            <asp:RequiredFieldValidator ID="RequiredFieldValidator3"
runat="server"
            ControlToValidate="TextBox3" Display="Dynamic"
ErrorMessage="Required field"

```

```

                ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
            </td>
        </tr>
        <tr>
            <td class="style8" style="text-align: right">
                Mobile no. :-</td>
            <td>
                <asp:TextBox ID="TextBox4" runat="server"
Width="200px"></asp:TextBox>
            </td>
        </tr>
        <tr>
            <td class="style8">
                &nbsp;   </td>
            <td>
                <asp:RequiredFieldValidator ID="RequiredFieldValidator4"
runat="server"
                ControlToValidate="TextBox4" Display="Dynamic"
ErrorMessage="Required field"
                ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
                <asp:RegularExpressionValidator
ID="RegularExpressionValidator2" runat="server"
                ControlToValidate="TextBox4" Display="Dynamic"
ErrorMessage="Invalid mobile no"
                ForeColor="White" SetFocusOnError="True"
ValidationExpression="\d{10}"></asp:RegularExpressionValidator>
            </td>
        </tr>
        <tr>
            <td class="style8" style="text-align: right">
                Comment :-</td>
            <td>
                <asp:TextBox ID="TextBox5" runat="server"
TextMode="MultiLine" Width="200px"
                MaxLength="500"></asp:TextBox>
            </td>
        </tr>
        <tr>
            <td>
                &nbsp;   </td>
            <td>
                <asp:RequiredFieldValidator ID="RequiredFieldValidator5"
runat="server"
                ControlToValidate="TextBox5" Display="Dynamic"
ErrorMessage="Required field"
                ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
            </td>
        </tr>
        <tr>
            <td>
                &nbsp;   </td>
            <td>
                <asp:Button ID="Button1" runat="server"
onclick="Button1_Click" Text="Submit" />
                <asp:Label ID="Label1" runat="server"
ForeColor="#99CCFF"></asp:Label>
            </td>
        </tr>
    </tr>

```

```
</table>
</asp:Content>
```

Feedback.aspx.cs

```
using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Data.SqlClient;
public partial class Feedback : System.Web.UI.Page
{
    SqlConnection con = new
SqlConnection(ConfigurationManager.AppSettings["obj"]);
    protected void Page_Load(object sender, EventArgs e)
    {
    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlCommand cmd = new SqlCommand("Insert into Feedback
values('" + TextBox1.Text + "','" + TextBox2.Text + "','" +
TextBox3.Text + "','" + TextBox4.Text + "','" + TextBox5.Text + "')",
con);
        try
        {
            con.Open();
            cmd.ExecuteNonQuery();
            con.Close();
            Response.Redirect("Submit.aspx");
        }
        catch (Exception ex)
        {
            Label1.Text = ex.Message;
        }
    }
}
```



```

        <asp:TextBox ID="TextBox1" runat="server"
Width="200px"></asp:TextBox>
    </td>
</tr>
<tr>
    <td class="style8">
        &nbsp;   </td>
    <td>
        &nbsp;   </td>
</tr>
<tr>
    <td class="style8" style="text-align: right">
        Name :-</td>
    <td>
        <asp:TextBox ID="TextBox2" runat="server"
Width="200px"></asp:TextBox>
    </td>
</tr>
<tr>
    <td class="style8">
        &nbsp;   </td>
    <td>
        <asp:RequiredFieldValidator ID="RequiredFieldValidator1"
runat="server"
            ControlToValidate="TextBox2" Display="Dynamic"
ErrorMessage="Required field"
            ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
    </td>
</tr>
<tr>
    <td class="style8" style="text-align: right">
        Email :-</td>
    <td>
        <asp:TextBox ID="TextBox3" runat="server"
Width="200px"></asp:TextBox>
    </td>
</tr>
<tr>
    <td class="style8">
        &nbsp;   </td>
    <td>
        <asp:RequiredFieldValidator ID="RequiredFieldValidator2"
runat="server"
            ControlToValidate="TextBox3" Display="Dynamic"
ErrorMessage="Required field"
            ForeColor="White"
SetFocusOnError="True"></asp:RequiredFieldValidator>
    </td>
</tr>
<tr>
    <td class="style8" style="text-align: right">
        Password :-</td>
    <td>
        <asp:TextBox ID="TextBox4" runat="server"
Width="200px"></asp:TextBox>
    </td>
</tr>
<tr>
    <td class="style8">
        &nbsp;   </td>

```


User.aspx.cs

```

using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Data.SqlClient;
public partial class User : System.Web.UI.Page
{
    SqlConnection con = new
SqlConnection(ConfigurationManager.AppSettings["obj"]);
    protected void Page_Load(object sender, EventArgs e)
    {

        SqlDataAdapter da = new SqlDataAdapter("Select Id from
User1", con);
        DataSet ds = new DataSet();
        da.Fill(ds);
        int a = Int32.Parse((ds.Tables[0].Rows.Count).ToString ());
        a++;
        TextBox1 .Text =a.ToString ();
    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlCommand cmd = new SqlCommand("Insert into user1
values('"+TextBox1.Text + "','"+ TextBox2.Text + "','"+
TextBox3.Text + "','"+ TextBox4.Text + "','"+ TextBox5.Text + "','"+
+ TextBox6.Text + "')", con);
        try
        {

            con.Open();
            cmd.ExecuteNonQuery ();
            con.Close();
            Response.Redirect ("Submit.aspx");
        }
        catch (Exception ex)
        {
            Label1.Text = ex.Message;
        }
    }
}

```



```

        <td>
            <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
        </td>
    </tr>
    <tr>
        <td>
            &nbsp;   </td>
        <td>
            &nbsp;   </td>
    </tr>
    <tr>
        <td class="style9" style="text-align: right">
            Password :-</td>
        <td>
            <asp:TextBox ID="TextBox2" runat="server"
            TextMode="Password"></asp:TextBox>
        </td>
    </tr>
    <tr>
        <td class="style9" style="text-align: right">
            &nbsp;   </td>
        <td>
            <asp:Label ID="Label1" runat="server"
            ForeColor="White"></asp:Label>
        </td>
    </tr>
    <tr>
        <td class="style9" style="text-align: right">
            &nbsp;   </td>
        <td>
            <asp:Button ID="Button1" runat="server"
            onclick="Button1_Click" Text="Login" />
        </td>
    </tr>
</table>
</asp:Content>

```

Login.aspx.cs

```

using System;
using System.Collections;
using System.Configuration;
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Data.SqlClient;
public partial class Login : System.Web.UI.Page
{
    SqlConnection con = new
    SqlConnection(ConfigurationManager.AppSettings["obj"]);
    protected void Page_Load(object sender, EventArgs e)
    {
    }
    protected void Button1_Click(object sender, EventArgs e)
    {

```

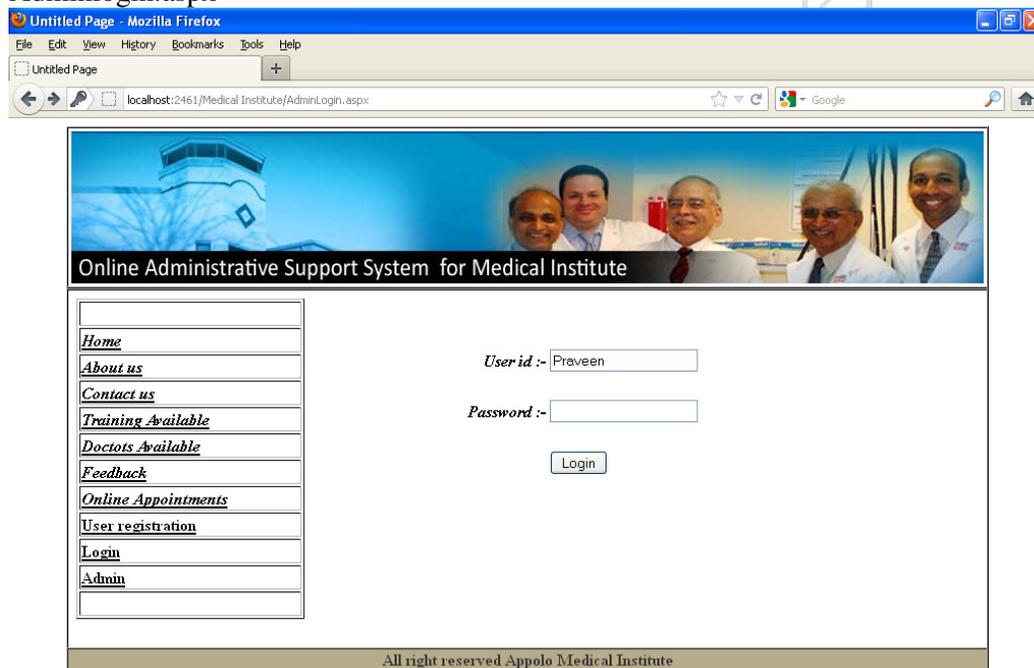
```

        SqlDataAdapter da=new SqlDataAdapter ("Select * from User1
where Email='" + TextBox1.Text + "' and Password='" + TextBox2.Text +
"'", con);
        DataSet ds = new DataSet();
        da.Fill(ds);
        if (ds.Tables[0].Rows.Count == 0)
        {
            Labell.Text = "Invalid email or password";
        }

        else
        {
            Session["Login1"] = "Yes";
            Session["U"] = TextBox1.Text;
            Response.Redirect("Welcome.aspx");
        }
    }
}

```

Adminlogin.aspx



```

start
Medical Institute - ...
Untitled Page - M...
Online Medical ins...
3 Windows Expl...
SQL Server Enter...
4:08 PM

<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="AdminLogin.aspx.cs" Inherits="Login"
Title="Untitled Page" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">
    <style type="text/css">
        .style7
        {
            font-weight: bold;
            text-decoration: underline;
            color: #FFFFFF;
        }
    </style>

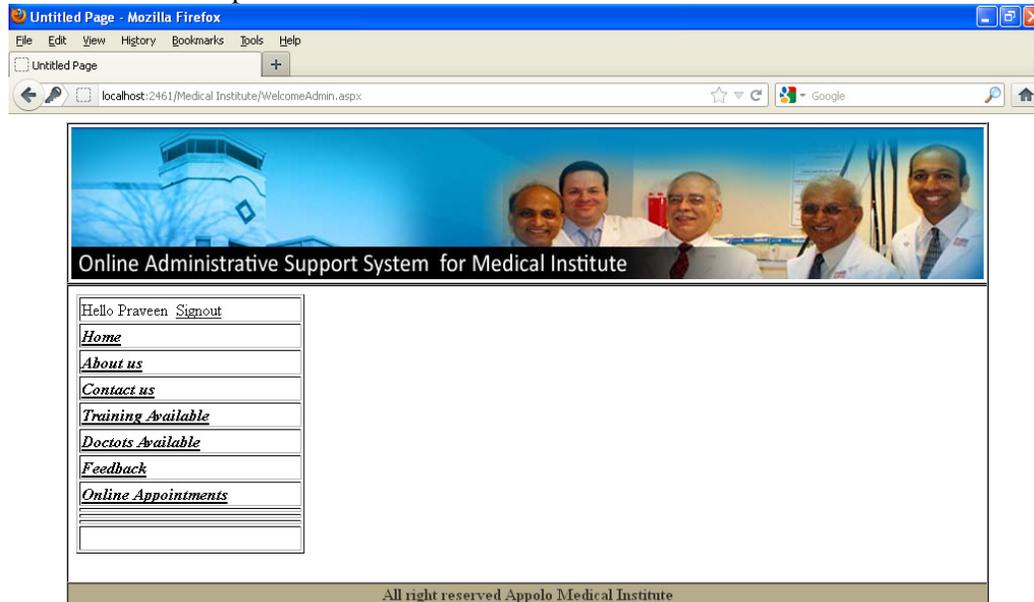
```



```
using System.Data;
using System.Linq;
using System.Web;
using System.Web.Security;
using System.Web.UI;
using System.Web.UI.HtmlControls;
using System.Web.UI.WebControls;
using System.Web.UI.WebControls.WebParts;
using System.Xml.Linq;
using System.Data.SqlClient;
public partial class Login : System.Web.UI.Page
{
    SqlConnection con = new
SqlConnection(ConfigurationManager.AppSettings["obj"]);
    protected void Page_Load(object sender, EventArgs e)
    {

    }
    protected void Button1_Click(object sender, EventArgs e)
    {
        SqlDataAdapter da=new SqlDataAdapter ("Select * from Admin
where UserId='" + TextBox1.Text + "' and Password='" + TextBox2.Text
+ "'", con);
        DataSet ds = new DataSet();
        da.Fill(ds);
        if (ds.Tables[0].Rows.Count == 0)
        {
            Label1.Text = "Invalid user id or password";
        }
        else
        {
            Session["Login"] = "Yes";
            Session["User"] = TextBox1.Text;
            Response.Redirect("WelcomeAdmin.aspx");
        }
    }
}
```

Welcomeadmin.aspx



```

start
Medical Institute - ...
Untitled Page - M...
Online Medical ins...
3 Windows Expl...
SQL Server Enter...
4:08 PM

<%@ Page Language="C#" MasterPageFile="~/MasterPage.master"
AutoEventWireup="true" CodeFile="WelcomeAdmin.aspx.cs"
Inherits="WelcomeAdmin" Title="Untitled Page" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head"
Runat="Server">
  <style type="text/css">
    .style7
    {
      color: #FFFFFF;
      font-weight: bold;
    }
    .style8
    {
      width: 400px;
    }
  </style>
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1"
Runat="Server">
</asp:Content>
<asp:Content ID="Content3" ContentPlaceHolderID="ContentPlaceHolder2"
Runat="Server">
  <p class="style7">
    Welcome admin</p>
  <table align="center" class="style8">
    <tr>
      <td>
        <asp:HyperLink ID="HyperLink11" runat="server" Font-
Bold="True"
          ForeColor="White"
          NavigateUrl="~/BloodgroupReport.aspx">Blood receiver

```

```

        report</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink12" runat="server" Font-
Bold="True"
                ForeColor="White"
NavigateUrl="~/DoctorDetailsReport.aspx">Doctor details
report</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink13" runat="server" Font-
Bold="True"
                ForeColor="White" NavigateUrl="~/Test.aspx">Add test
details</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink14" runat="server" Font-
Bold="True"
                ForeColor="White" NavigateUrl="~/Doctor.aspx">Add
doctor details</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink15" runat="server" Font-
Bold="True"
                ForeColor="White"
NavigateUrl="~/Seeker.aspx">Seeker</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink17" runat="server" Font-
Bold="True"
                ForeColor="White" NavigateUrl="~/Patients.aspx">Add
Patient Details</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink16" runat="server" Font-
Bold="True"
                ForeColor="White"
NavigateUrl="~/BloodReceiver.aspx">Add blood receiver
details</asp:HyperLink>
    </td>
</tr>
<tr>
    <td>
        <asp:HyperLink ID="HyperLink18" runat="server" Font-
Bold="True"
                ForeColor="White" NavigateUrl="~/patient
report.aspx">Patient details report</asp:HyperLink>
    </td>
</tr>

```

```
<tr>
  <td>
    <asp:HyperLink ID="HyperLink19" runat="server" Font-
    Bold="True"
      ForeColor="White" NavigateUrl="~/business
    repo.aspx">Business details report</asp:HyperLink>
  </td>
</tr>
</table>
</asp:Content>
```

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5.2 CODE EFFICIENCY

Reviewing of Code efficiency for a module is carried out after the module is successfully compiled and all the syntax errors eliminated. Code efficiency review is extremely cost-effective strategies for reduction in coding errors in order to produce high quality code. Normally, two types of efficiency are carried out on the code of a module - code optimization and code inspection. The procedure and final objective of these two efficiency techniques are very different as discussed below.

5.3 OPTIMIZATION OF CODE

Code optimization is an informal code analysis technique. In this technique, after a module has been coded, it is successfully compiled and all syntax errors are eliminated. Some members of the development team are given the code a few days before the optimization meeting to read and understand the code. Each member selects some test cases and simulates execution of the code by hand (i.e. trace execution through each statement and function execution). The main objectives of the optimization are to discover the algorithmic and logical errors in the code. The members note down their findings to discuss these in a optimization meeting where the coder of the module is also present.

Even though a code optimization is an informal analysis technique, several guidelines have evolved over the years for making this naïve technique more effective and useful. Of course, these guidelines are based on personal experience, common sense, and several subjective factors. Therefore are based on personal experience, common sense, and several subjective factors. Therefore, guidelines should be considered as examples rather than as rules to be applied dogmatically. Some of these guidelines are the following:

The team performing the code optimization should not be either too big or too small. Ideally, it should consist of three to seven members.

TESTING

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6.1 TESTING PHASE

One of the purposes of the testing is to validate and verify the system. Verification means checking the system to ensure that it is doing what the function is supposed to do and Validation means checking to ensure that system is doing what the user wants it to do.

No program or system design is perfect; communication between the user and the designer is not always complete or clear, and time is usually short. The result is errors and more errors. Theoretically, a newly designed system should have all the pieces in working order, but in reality, each piece works independently. Now is the time to put all the pieces into one system and test it to determine whether it meets the user's requirements. This is the best chance to detect and correct errors before the system is implemented. The purpose of system testing is to consider all the likely variations to which it will be subjected and then push the system to its limits. If we implement the system without proper testing then it might cause the problems.

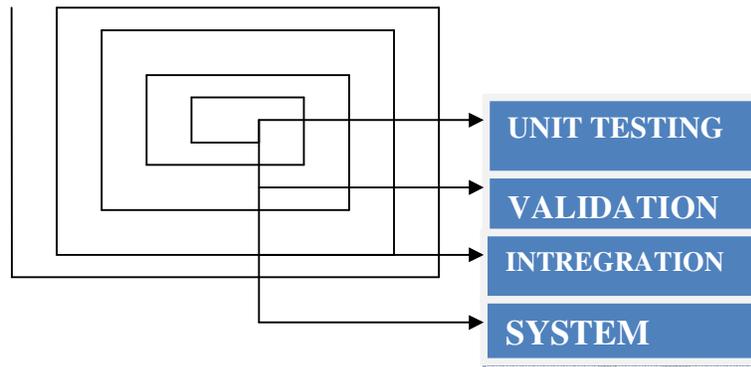
1. Communication between the user and the designer.
2. The programmer's ability to generate a code that reflects exactly the system specification.
3. The time frame for the design.

Theoretically, a new designed system should have all the pieces in working order, but in reality, each piece works independently. Now is the time to put all the pieces into one system and test it to determine whether it meets the requirements of the user.

The process of system testing and the steps taken to validate and prepare a system for final implementation are:

6.2 LEVELS OF TESTING

The different types of testing are as follows:



1. Unit Testing:

This is the smallest testable unit of a computer system and is normally tested using the white box testing. The author of the programs usually carries out unit tests.

2. Integration Testing:

In integration testing, the different units of the system are integrated together to form the complete system and this type of testing checks the system as whole to ensure that it is doing what is supposed to do. The testing of an integrated system can be carried out top-down, bottom-up, or big-bang. In this type of testing, some parts will be tested with white box testing and some with black box testing techniques. This type of testing plays very important role in increasing the systems productivity. We have checked our system by using the integration testing techniques.

3. System Testing:

A part from testing the system to validate the functionality of software against the requirements, it is also necessary to test the non-functional aspect of the system. Some examples of non-functional tools include tests to check performance, data security, usability/user friendliness, volume, load/stress that we have used in our project to test the various modules.

System testing consists of the following steps:

1. Program(s) testing.
2. String testing.
3. System testing.
4. System documentation.
5. User acceptance testing.

4. Field Testing:

This is a special type of testing that may be very important in some projects. Here the system is tested in the actual operational surroundings. The interfaces with other systems and the real world are checked. This type of testing is very rarely used. So far our project is concerned, we haven't tested our project using the field testing.

5. Acceptance Testing:

After the developer has completed all rounds of testing and he is satisfied with the system, then the user takes over and re-tests the system from his point of view to judge whether it is acceptable according to some previously identified criteria. This is almost always a tricky situation in the project because of the inherent conflict between the developer and the user. In this project, it is the job of the bookstores to check the system that whether the made system fulfills the goals or not.

6.3 TEST CASES

	TEST DATA Specifications for : Online Administrative Support System for Medical Institution user form1			
Test Date		Programmer name:	Online Administrative Support System for Medical Institution	
Tested By:		Project ID:		
User Name	<input type="text"/>	First Name	<input type="text"/>	Last Name
				the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)
Address	<input type="text"/>			the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 132 characters)
Age	<input type="text"/>			only 3 You may use numbers
phone	<input type="text"/>			only 8 or 10 digit You may use numbers
Country	<input type="text"/>	Select here		the fields are required.Can enter only letters, spaces, allowed(Length upto 80 characters)
Password	<input type="text"/>			password length > than 6 alphanumeric Don't use your Name or ID
BirthDay	Select Month	<input type="text"/>	DD	<input type="text"/>
			YYYY	<input type="text"/>
				Select here.

Email @yahoo.com Use 4 to 32 characters and start with a letter. You may use letters, numbers, underscores, and one dot(.)

Gender Select here

Answer

CREATE MY ACCOUNT

Positive Test cases for registration form						
T.C ID	PRE-CONDITION	T.C DESCRIPTION	T.C DATA	EXPECTED	ACTUAL	RESULT
1	User should be on https://administrative supportsystem for medicalInstitution.com/registration? And is on User Name field	Check the functionality of User Name field	Anita	the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)	Ok	Pass
2	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on User Name field	Check the functionality of User Name field	A S	the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)	Ok	Pass
3	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on User Name field	Check the functionality of User Name field	A Satish	the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)	Ok	Pass
4	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on User Name field	Check the functionality of User Name field	Anita S	the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)	Ok	Pass
5	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on User Name field	Check the functionality of User Name field	Anita sharma	the fields are required.Can enter only letters, spaces, hyphens, and apostrophes. No numeric & special characters are allowed(Length upto 32 characters)	Ok	Pass
6	User should be on https://administrative supportsystem for medicalInstitution.com /registration?And is on Address Field	Check the functionality of Address field	Vasant Kunj	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 132 characters. name are required.	Ok	Pass
7	User should be on https://administrative supportsystem for medicalInstitution.com /registration?And is on Address Field	Check the functionality of Address field	a-15/20 vasantkunj	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 132 characters. name are required.	Ok	Pass

8	User should be on https://administrative supportssystemformedicalInstitution.com /registration? And is on Address Field	Check the functionality of Address field	U7-56	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 132 characters. name are required.	Ok	Pass
9	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on Age Field	Check the functionality of Age	101	Will accept only numeric upto 3 digit . Customer ID are required	Ok	Pass
9	User should be on https://administrative supportssystemformedicalInstitution.com /cusomerDetails? And is on Age Field	Check the functionality of Age	41	Will accept only numeric upto 3 digit . Customer ID are required	Ok	Pass
10	User should be on https://administrative supportssystem for medicalInstitution.com cusomerDetails? And is on Phone number field	Check the functionality of Phone number	975745675	Will accept only numeric upto 8 digit . Customer ID are required	Ok	Pass
11	User should be on https://administrative supportssystemformedicalInstitution.com /cusomerDetails? And is on Phone number field	Check the functionality of Phone number	9890457078	Will accept only numeric upto 8 digit . Customer ID are required	Ok	Pass
12	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on Country field	Check the functionality of Country field	India	Will accept only letters, spaces.Length upto 80 characters. name are required.	Ok	Pass
13	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on Country field	Check the functionality of Country field	India delta	Will accept only letters, spaces.Length upto 80 characters. name are required.	Ok	Pass
14	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	avhijklhm	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name ID.	Ok	Pass
15	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	664666	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name or ID.	Ok	Pass
16	User should be on https://administrative supportssystem for medicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	2207**	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name or ID.	Ok	Pass
17	User should be on https://administrative supportssystemformedicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	Veinee1312**	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name or ID.	Ok	Pass
18	User should be on https://administrative supportssystem for medicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	July 22 1975	Will accept all valid dates	Ok	Pass
19	User should be on https://administrative supportssystem for medicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	January 31 1986	Will accept all valid dates	Ok	Pass

20	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	february 20 1995	Will accept all valid dates	Ok	Pass
21	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	March 21 05	Will accept all valid dates	Ok	Pass
22	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Email Field	Check the functionality of ID of sign up option	anita.s10@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.)	Ok	pass
23	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Email Field	Check the functionality of ID of sign up option	100s_anita@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.)	Ok	Pass
24	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Email Field	Check the functionality of ID of sign up option	h.anita100@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.)	Ok	Pass
25	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Email Field	Check the functionality of ID of sign up option	ak.7_1345@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.)	Ok	Pass
26	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Gender field	Check the functionality of Gender option	male	Will accept one.This is required	Ok	Pass
27	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Gender field	Check the functionality of Gender option	female	Will accept one.This is required	Ok	Pass
28	User should be on https://administrative supportsystem for medicalInstitution.com /registration? And is on Answer field	Check the functionality of Answer text box	Telephone	Will accept letters and a single space only	Ok	Pass

NegativeTest cases for registration form						
T.C ID	PRE-CONDITION	T.C DESCRIPTION	T.C DATA	EXPECTED	ACTUAL	RESULT
1	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on User Name Field	Check the functionality of User Name field	B	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 32 characters. name are required.	Invalid	Fail
2	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on User Name Field	Check the functionality of User Name field	Rahul's	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 32 characters. name are required.	Invalid	Fail
3	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on User Name Field	Check the functionality of User Name field	Uma	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 32 characters.name are required.	Invalid	Fail
4	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on User Name Field	Check the functionality of User Name field		Will accept only letters, spaces, hyphens, and apostrophes.Length upto 32 characters. name are required.	Invalid	Fail
5	User should be on https:// administrative supportsystemformedicalInstitution.com /registration?And is on Address Field	Check the functionality of Address field		Will accept only letters, spaces, hyphens, and apostrophes.Length upto 132 characters. name are required.	Invalid	Fail
6	User should be on https:// administrative supportsystemformedicalInstitution.com /registration?And is on Address Field	Check the functionality of Address field	SPACE	Will accept only letters, spaces, hyphens, and apostrophes.Length upto 132 characters. name are required.	Invalid	Fail
7	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Phone number field	Check the functionality of Phone number	94 578	Will accept only numeric upto 8 digit . Customer ID are required	Invalid	Fail
8	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Phone number field	Check the functionality of Phone number		Will accept only numeric upto 8 digit . Customer ID are required	Invalid	Fail
9	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Country field	Check the functionality of Country field		Will accept only letters, spaces.Length upto 80 characters. name are required.	Invalid	Fail
10	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Country field	Check the functionality of Country field	SPACE	Will accept only letters, spaces.Length upto 80 characters. name are required.	Invalid	Fail
11	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	7##	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name or ID.	Invalid	Fail
12	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on password field	Check the functionality of password text box	a145	Will accept 6 to 32 characters.Capitalisation matters. and don't use your name or ID.	Invalid	Fail

13	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	July 32 1975	Allows to select a month and enter a valid day and year	Invalid	Fail
14	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	january 1 2011	Allows to select a month and enter a valid day and year	Invalid	Fail
15	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on Birthday Field	Check the functionality of Birthday of sign up option	february 29 1995	Allows to select a month and enter a valid day and year	Invalid	Fail
16	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Email field	Check the functionality of ID of sign up option	blank	Will accept only letters, numbers, underscores, and one dot (.).The ID must be available.	Invalid	Fail
17	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Email field	Check the functionality of ID of sign up option	rahul@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.).The ID must be available.	Invalid	Fail
18	User should be on https:// administrative supportsystemformedicalInstitution.com /cusomerDetails? And is on Email field	Check the functionality of ID of sign up option	#rahul@yahoo.com	Will accept only letters, numbers, underscores, and one dot (.).The ID must be available.	Invalid	Fail
19	User should be on https:// administrative supportsystemformedicalInstitution.com /registration? And is on Your Answer field	Check the functionality of Answer text box	blank	Will accept anything.But not blank	Invalid	Fail

6.4 VERIFICATION AND VALIDATION (V&V)

The objectives of verification, validity activities are to assess and improve the quality of the work products generated during development and modification of the software. Quality depends upon the various attributes like correctness, completeness, consistency, reliability, usefulness, usability, efficiency and conformance to standards.

The terms verification and validation are used synonymously. These are defined as under: -

Verification: “Are we building the product right?”

Validation: “Are we building the right product?”

Verification activities include proving, testing, and reviews. Validation is the process of evaluating software at the end of the software development to ensure compliance with the software requirements. Testing is a common method of validation. Clearly, for high reliability we need to perform both activities. Together, they are often called V&V activities.

The major V&V activities for software development are inspection, reviews, and testing (both static and dynamic). The V&V plan identifies the different V&V tasks for the different phases and specifies how these tasks contribute to the project V&V goals. The methods to be used for performing these V&V activities, the responsibilities and milestones for each of these activities, inputs and outputs for each V&V task, and criteria for evaluating the outputs are also specified.

The two major V&V approaches are testing and inspections. Testing is an activity that can be generally performed only on code. It is an important activity and is discussed in detail in a later chapter. Inspection is a more general activity that can be applied to any work product, including code. Many of the V&V tasks are such that for them, an inspection type of activity is the only possible way to perform the tasks (e.g. trace ability and document evaluation). Due to this, inspections play a significant role in verification.

7. SYSTEM IMPLEMENTATION MAINTENANCE AND REVIEW

As we know, creating software is one thing and the implementation of the created software is another. The process of implementing software is much difficult as compared to the task of creating the project. First we have to implement the software on a small scale for removing the bugs and other errors in the project and after removing them we can implement the software on a large scale.

Before we think in terms of implementing the Software on a large basis, we must consider the Hardware requirements.

Whenever we develop software or project a certain hardware and software is being used by the programmer for developing the project. The hardware and software to be used by the programmer for developing the project should be such that it would result in the development of a project, which would satisfy all the basic needs for which the project has been created by the programmer. The Hardware should be such that cost constraints of the Client should also be taken into account without affecting the performance.

7.1 HARDWARE EVALUATION FACTORS

When we evaluate computer hardware, we should first investigate specific *physical and performance* characteristics for each hardware component to be acquired. These specific questions must be answered concerning many important factors. These *hardware evaluation factors* questions are summarized in the below figure.

Notice that there is much more to evaluating hardware than determining the fastest and cheapest computing device. For e.g. the question of possible obsolescence must be addressed by making a technology evaluation. The factor of *ergonomics* is also very important. Ergonomics is the science and technology that tries to ensure that computer

and other technologies are "user-friendly", that is safe, comfortable and easy to use. *Connectivity* is another important evaluation factor, since so many computer systems are now interconnected within wide area or local area telecommunications networks.

Hardware Evaluation Factors

- 1) Performance
- 2) Cost
- 3) Reliability
- 4) Availability
- 5) Compatibility
- 6) Modularity
- 7) Technology
- 8) Ergonomics
- 9) Connectivity
- 10) Environmental requirements
- 11) Software
- 12) Support

7.2 SOFTWARE EVALUATION FACTORS

Software can be evaluated according to many factors similar to the hardware evaluation. Thus the factors of *performance, cost, reliability, compatibility, modularity, technology, ergonomics, and support* should be used to evaluate proposed software acquisitions. In addition, however, *the software evaluation factors* are summarized in below figure. For e.g. some software packages require too much memory capacity and are notoriously slow, hard to use, or poorly documented. They are not a good selection for most end users, even if offered at attractive prices.

Software Evaluation Factors

1. **EFFICIENCY:** is the software a well-written system of computer instructions that does not use much memory capacity or CPU time?
2. **FLEXIBILITY:** can it handle its processing assignments easily without major modifications?
3. **SECURITY:** does it provide control procedures for errors, malfunctions and improper use?
4. **LANGUAGE:** do our computer programmers and users write it in a programming language that is used?
5. **DOCUMENTATION:** is the s/w well documented? Does it include helpful user instructions?
6. **HARDWARE:** does existing hardware have the features required to best use this software?
7. Other characteristics of hardware such as its performance, what about the cost, how much is reliable and etc.

7.3 CONVERSION AND TRAINING

An important aspect of is to make sure that the new design is implemented to establish standards. The term implementation has different meanings, ranging from the conversion of a basic application to a complete replacement of a computer system. Implementation is used here to mean the process of converting a new or revise system into an operational one. Conversion is one aspect of implementation. Conversion means changing from one system to another. The objective is to put the tested system into operation while holding costs, risks, and personnel irritation to a minimum. It involves creating computer-compatible files, training the operation staff, and installing terminal and hardware. A critical aspect of conversion is not disrupting the functioning of the organization.

When a new system is used over and old, existing and running one, there are always compatibility errors. These errors are caused because of the lack of equipment or

personnel to work the new system. Running any specified system at an organization does require some or other hardware or, in this case, software requirement as well.

Conversion is one aspect of implementation review & software maintenance.

There are three types of implementation:

1. Implementation of a computer system to replace a manual system. The problems encountered are converting files, training users, creating accurate files and verifying printouts for integrity.
2. Implementation of a new computer system to replace an existing one. This is usually a difficult conversion. If not properly planned there can be many problems. Some large computer systems have taken as long as year to convert.
3. Implementation of a modified application to replace an existing one, using the same computer. This type of conversion is relatively easy to handle, provided there are no major changes in the files.

7.4 TRAINING NEEDS

Training needs refer to the gaining of knowledge required for running the system.

First of all the system is a computer based system therefore the person should have good knowledge about computer and its working.

He should know how to use software's on the computer.

For a better usage and working of the software the organization should appoint a person who has good knowledge of all the required software. The organization gets a person trained through different institutes present in the market. The training should be as per the above requirements.

7.5 LIMITATIONS OF THE PROJECT

1. The Web project is not uploaded on the server. We can upload this project making some changes in connection string given in Web.config file in the running project folder.
2. For Uploading this project we require some space on the internet server and Cute FTP Software.

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8. SCOPE OF FUTURE APPLICATION

This project can be used as Administrative support system for Medical Institutions with adding some more useful modules in the project.

Utmost care and back-up procedures must be established to ensure 100% successful implementation of the computerized system. In case of system failure, the organization should be in a position to process the transaction with another organization or if the worst comes to the worst, it should be in a position to complete it manually.

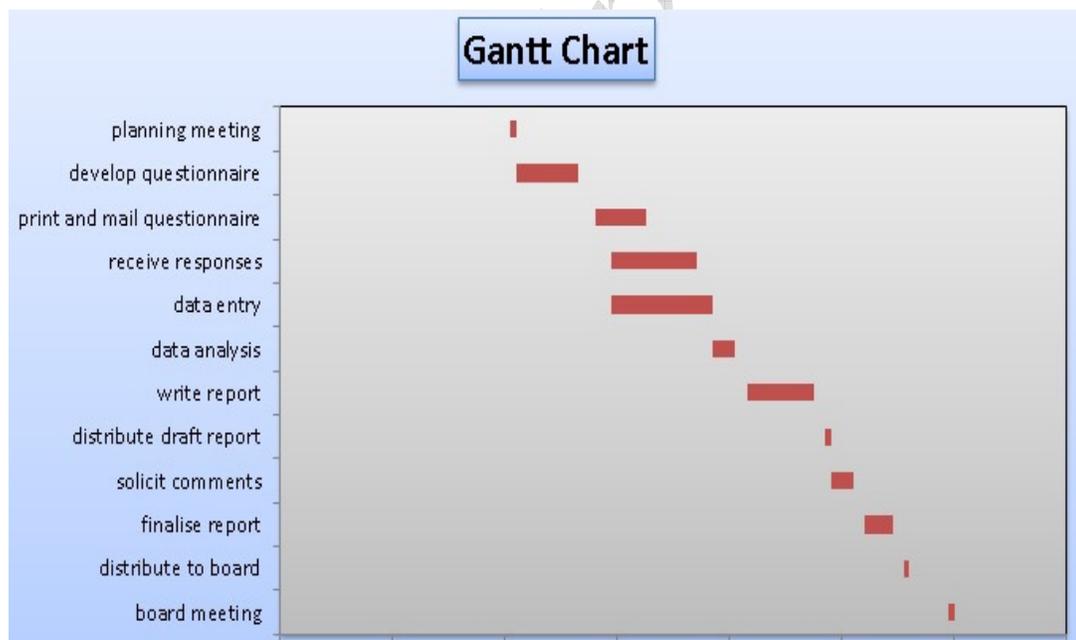
The limitations may be many and the magnitude of the influence of these limiting factors may have a bearing on the report, but it in no way alters the ultimate aim of the project and because it's highly USER FRIENDLY, it would be the choice of all kinds of personnel.

9. GANTT & PERT CHART

Gantt Chart

Gantt charts mainly used to allocate resources to activities. The resources allocated to activities include staff, hardware, and software. Gantt charts (named after its developer Henry Gantt) are useful for resource planning. A Gantt chart is special type of bar chart where each bar represents an activity. The bars are drawn along a timeline. The length of each bar is proportional to the duration of the time planned for the corresponding activity.

Gantt chart is a project scheduling technique. Progress can be represented easily in a Gantt chart, by coloring each milestone when completed. The project will start in the month of January and end after 4 months at the end of April.



Pert Chart

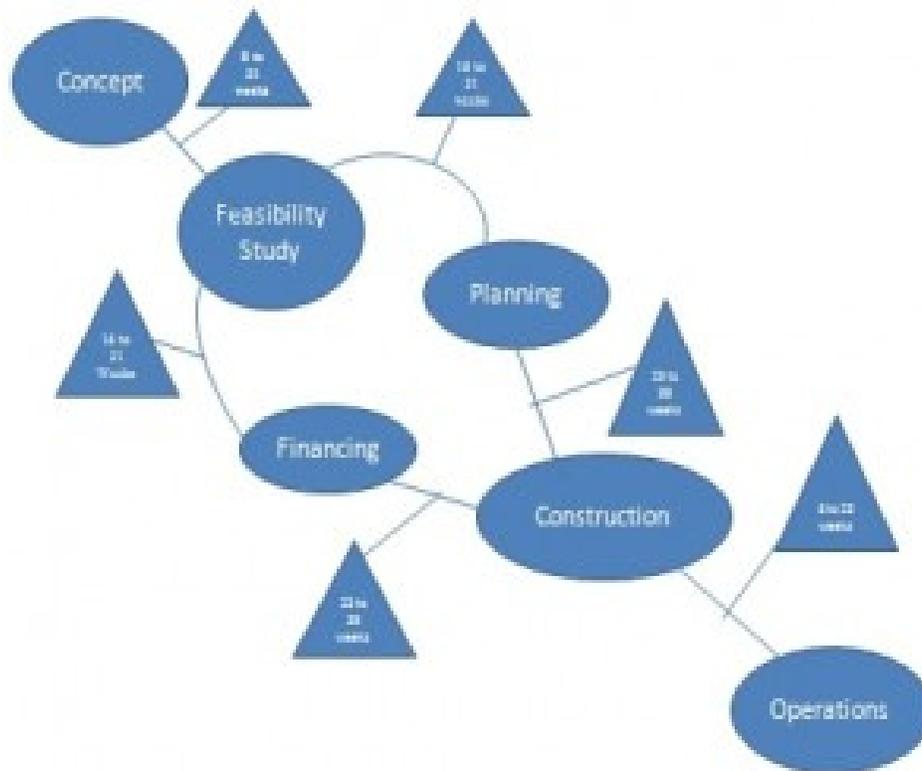


FIGURE B: PERT chart representation of the Online Administrative Support System for Medical Institution

PERT charts are a more sophisticated form of activity chart. In activity diagrams only the estimated task durations are represented. Since the actual durations might vary from the estimated durations, the utility of the activity diagrams is limited.

10 SECURITY AND VALIDATION CHECKS

In this project we have used following validation checks.

- While entering the data into the form it will check for the name of the client is properly filled & it should not be null.
- Whenever we enter the data for the new customer, company, or user will automatically check the details from the database tables and also generate the connection number automatically.
- Similarly in the complaint table complaint number will generate automatically.
- Entered text / number should not exceed the limit (width).
- Almost for all fields we have used the validation for example if name of the fields requires the text type of data then it will check for the string and if the data is numeric then it will check if the number entered is proper numeric or not.

ASP.NET Provides Security

- Evidence-based security (authentication)
- Based on user identity and code identity
- Configurable policies
- Imperative and declarative interfaces

11. CONCLUSION

This project is designed to meet the requirements of Medical Institutes. It provides the facilities for online donations of blood, eyes and kidneys, online appointments, online report collection placement agencies etc.. It has been developed in ASP.NET, keeping in mind the specifications of the system.

For designing the system we have used simple data flow diagrams.

Overall the project teaches us the essential skills like:

- ❑ Using system analysis and design techniques like data flow diagram in designing the system.
- ❑ Understanding the database handling and query processing using SQL Server.

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