**NEEDS OF HOSPITAL MANAGEMENT SYSTEM:-**

* **Increase Patient Satisfaction:** HMS considerably reduces the time taken for processes and procedures at every stage of patient interaction, such as registration, billing and discharge, thus marking your customers happy.
* **Paperless operation:** A happy outcome of the advent of HMS is the increasing use of electronic records over physical files. There might come a day when hospitals become completely paperless with further advances in hospital management system.
* **Run Your Hospital Efficiently:** The amount of time and effort you will save by setting up an HMS for your hospital can be astounding. These invaluable savings make for the efficient and smooth operation of your hospital.
* **Secure Your Data:** MS makes it impossible for unauthorized personnel from accessing sensitive and private information, especially concerning patient records. It considerably reduces the possibility of data theft.

**SYSTEM DOMAIN**

There is only one admin who can perform any changes in time slot. Only admin have authority to select, delete or release appointments.

It can manage appointment system in very short time.

**PROBLEM DOMAIN**

* **Lack of immediate retrievals: -**

The information is very difficult to retrieve and to find particular information like- E.g. – To find out about the patient’s history, the user has to go through various registers. This result in inconvenience and wastage of time.

* **Lack of immediate information storage:**

The information generated by various transaction takes time and effort to be stored at right place.

* **Preparation of accurate and prompt reports:**

This becomes a difficult task as information is difficult to collect from various register.

* **Lack of prompt updating:**

Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

**OBJECTIVE:**

The main objective of the system is to computerized the maintenance of the patient details and doctor detail in the hospital.

* Recording information about the patient that come.
* Recording information related to diagnosis given to patient.
* Maintain records and details about the hospital staff and doctors.
* Book Online Appointment.

**MODULES OF PROJECT:**

The entire project mainly consists of 3 modules, which are

* Admin module
* User module
* Doctor module

**Admin module:**

1. **Dashboard:** In this section, admin can view the Patient, Doctor, Appointments and New queries.
2. **Doctor:** In this section, admin can add doctor’s specialization and manage doctor (add/update).
3. **User:** In this section, admin can view user details (who take online appointment) and also have right to delete irrelevant user.
4. **Patient:** In this section, admin can view patient’s details.
5. **Appointment History:** In this section, admin can view appointment history.
6. **Contact us queries:** In this section, admin can view queries which are send by users.
7. **Reports:** In this section, admin can view report of patients in particular periods.
8. **Patient Search:** In this section, admin can search patient with the help of patient name and mobile number.

Admin can also change his/her own password.

**User module (patient):**

1. **Dashboard:** In this section, patients can view the his/her profile, appointments and book appointment.
2. **Book Appointment:** In this section, patient can book his/her appointment.
3. **Appointment history:** In this section, patient can see his/her own appointment history.
4. **Medical History:** In this section, patient can see his\ her own appointment history.

User can update his /her profile, change the password and recover the password.

**Doctor module:**

1. **Dashboard:** In this section, doctor can view queries which are send by user.
2. **Appointment History:** In this section, doctor can see patient’s appointment history.
3. **Patient:** In this section, doctor can manage patient (Add/Update).
4. **Search:** In this section, doctor can search patient with the help of patient name and mobile number.

TOOLS / ENVIRONMENT USED

PHP:

PHP is an open-source server-side scripting language we can create dynamic web pages with the PHP scripting language. A dynamic Web page interacts with the user, so that each user visiting the page sees customized information. PHP can also be used to create dynamic web pages that are generated from information accessed from a MySQL database. We can embed PHP commands within a standard HTML page. PHP's syntax is similar to that of C and Perl, making it easy to learn for anyone with basic programming skills.

* 1. PHP is a server side scripting language designed for web development
* 2. PHP designed by  RasmusLerdorf in 1995.
* 3. PHP developed by PHP group.

HTML:

**HTML** stands for Hyper Text Markup Language. It is used to design web pages using markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. Markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most of markup (e.g. HTML) languages are human readable. Language uses tags to define what manipulation has to be done on the text.  
HTML is a markup language which is used by the browser to manipulate text, images and other content to display it in required format. HTML was created by Tim Berners-Lee in 1991. The first ever version of HTML was HTML 1.0 but the first standard version was HTML 2.0 which was published in 1999.

**MYSQLi:**

MySQLi is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQLi Extension is developed, marketed, and supported by MySQL. MySQL is becoming so popular because of many good reasons −

* MySQLi is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
* MySQLi uses a standard form of the well-known SQL data language.
* MySQLi works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
* MySQLi works very quickly and works well even with large data sets.
* MySQLi is very friendly to PHP, the most appreciated language for web development.
* MySQLi supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
* MySQLi is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments

**REQUIREMENT SPECIFICATION:-**

A requirements specification is comprehensive. It collects all relevant, substantial information that defines the purpose and inner workings of your system. By having a requirements specification in place, you can better explain what a software application is for, what it’s supposed to do and how it should perform.

**Software Resources:**

* Database:- MYSQL
* Language:- PHP

ANALYSIS:

**Introduction**

After analyzing the requirement of the task to be performed. The next step is to analyze the and understand its context. The first activity in the phases is the existing system and other is to understand the requirement and domain of the new system. Both the activities are equality important but the first activity serves as a basis of giving the functional specification and then successful design of the proposed system. Understand the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution.

SDLC (**Software Development Life Cycle**)

SDLC is the abbreviation used for Software Development Life Cycle. It is also Known as Software Development Process.

SDLC is a description of phases in the life cycle of a software application. It consists of a detailed plan as how to develop, build and enhance a specific software. Each phase of the SDLC lifecycle has its own process and deliverables that feed into the next phase.

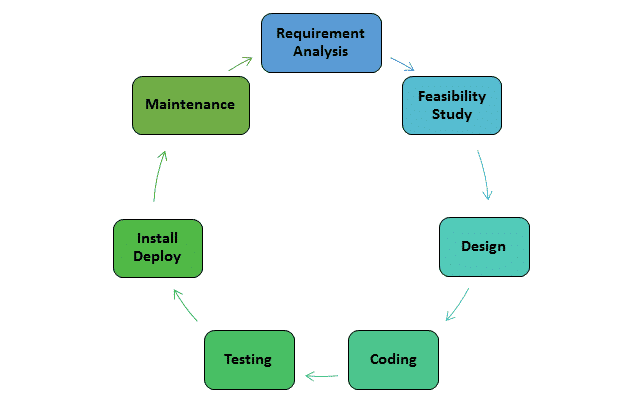
**Importance of SDLC**

* It acts as a guide to the project and meet client’s objectives.
* It helps in evaluating, scheduling and estimating deliverables.
* It provides a framework for a standard set of activities.
* It ensures correct and timely delivery to the client.

**SDLC Phases**

Various phases of Software Development Life Cycle (SDLC) are:

* Requirement Analysis
* Feasibility Study
* Design
* Coding
* Testing
* Install/Deploy
* Maintenance



1. REQUIREMENT ANALYSIS:

It is the most important phase in Software Development Life Cycle (SDLC) in which all the information is gathered from customers , users and other stakeholders . This phase gives the clear picture of the scope of the project and all the minute details (Planning , risk factors ) are collected in this phase which helps to finalize the timeline boundary of the project.

1. **FEASIBILILTY STUDY:**

The process followed in making a determination is called Feasibility Study. This type of study clearly specific that, the project should be taken up or not.

Feasibility Study has to follow 8 steps, they are

1. Form a project term and appoint a PL
2. Prepare system flowchart
3. Enumerate potential proposed system
4. Define and identify characteristic of proposed system
5. Weight system performance & cost data.
6. Select the best proposed system.
7. Prepare & report final project directive to management.

* **ECONOIMIC FEASIBILITY**:

Economic analysis is the most frequently used for evaluation the effectiveness of a new system. More currently knows as cost/benefit analysis. The procedure is to determine the and saving that are expected from a candidate system and compare them with cost saving cost. Than the decision is made to design and implement the system.

* **TECHNICAL:**

The assessment is based on an outline design of system requirement in term of input. Processes, Output, Fields, Procedures. This can be quantified in term of volumes of data. Trends frequently of updating etc. in order to estimate whether the new system will perform adequately or not this mean that feasibility is the study of the based in outline.

* **RESOURCE:**

This involves questions such as how much time is available to build the new system, when it can be built. Whether it interferes with normal business operation. Type and amount of required dependencies etc.

1. **DESIGN:**

SRS (Software Requirement Specification ) is the reference document used in this phase for the product to be developed . System and software design documents are prepared as per the specification document.

1. **CODIGN:**

In this phase , tasks are divided into the units or modules and it is assigned to the developer . And developers start building / writing the code as per the chosen programming language .

1. **TESTING:**

Testing is a process of executing a program with the aim of finding error. To make our software perform well it should be error free. If testing is done successfully it will remove all the errors from the software. This process continues till the software tested is defect-free , stable and working according to the business needs of the system.

1. **INSTALLATION / DEPLOYEMENT:**

The main phase of deployment stage is to put the solution in the production environment . Sometimes product deployment happens in stages as per the business strategy of the company.

1. **MAINTENANCE:**

The user starts using the development system, once the system is deployed . In this phase , some issues are discovered and it is important to remove them to ensure smooth functioning of the software.

**E-R DIAGRAM**

**Appointment**

**Email**

**Password**

**Gender**

**City**

**Address**

**P\_Name**

**Patient ID**

**Fees**

**Address**

**Contact no**

**Dr.Name**

**Specialities**

**Doctor ID**

**Password**

**Username**

**Login**

**Admin**

**User/patient**

**Doctor**

HMS