ONLINE CLINIC SYSTEM

A PROJECT REPORT

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

Under the Guidance of

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JULY 2017

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6. Project Version Control History

Version	Primary Authors	Description of Version	Date Completed
Final	Saharsh Modi, Piyush Bhutoria, Arya Saumitra	Project Report	7th July 2017

1.

2.

3.

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Date:

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Approved	**Not Approved**

PROJECT RESPONSIBILITY FORM

Online Clinic System

GROUP NO.	SL.NO.	NAME OF MEMBER	RESPONSIBILITY
1	1	Saharsh Modi	Documentation & Coding
	2	Piyush Bhutoria	Coding & Designing
	3	Arya Saumitra	Bug Finding, Testing, Coding, Implementation & Maintenance

Each group member must participate in project development and developing the ideas for the required elements. Individual group members will be responsible for completing tasks which help to finalize the project and the performance. All group members must be assigned a task.

Date:

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2. Piyushh Bhutoria
3. Arya Saumitra

Signatures of the students

a.

b.

c.

DECLARATION

We hereby declare that the project work being presented in the project proposal entitled **"ONLINE CLINIC SYSTEM (OCS)"** in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** at **HEWLETT-PACKARD COMPANY, SALTLAKE, KOLKATA, WEST BENGAL,** is an authentic work carried out under the guidance of **MR. JOYJIT GUHA BISWAS**. The matter embodied in this project work has not been submitted elsewhere for the award of any degree of our knowledge and belief.

Date:

Name of the Students

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3. Arya Saumitra

Signature of the students

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b.

c.

CERTIFICATE

This is to certify that this proposal of minor project entitled **"ONLINE CLINIC SYSTEM"** is a record of bona fide work, carried out by **1. SAHARSH MODI 2. PIYUSHH BHUTORIA** and **3. ARYA SAUMITRA** under my guidance **HEWLETT-PACKARD COMPANY**. In my opinion, the report in its present form is in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** and as per regulations of the **HP®.** To the best of my knowledge, the results embodied in this report, are original in nature and worthy of incorporation in the present version of the report.

Guide / Supervisor

Mr. JOYJIT GUHA BISWAS

Subject Matter Expert & Assistant Technical Head (.NET Domain)

ACKNOWLEDGEMENT

Success of any project depends largely on the encouragement and guidelines of many others. We take this sincere opportunity to express our gratitude to the people who have been instrumental in the successful completion of this project work.

We would like to show our greatest appreciation to Mr. Joyjit Guha Biswas, Project Manager at Hewlett-Packard, Kolkata. We always feel motivated and encouraged every time by his valuable advice and constant inspiration; without his encouragement and guidance this project would not have materialized.

Words are inadequate in offering our thanks to the other trainees, project assistants and other members at Hewlett-Packard Company. for their encouragement and cooperation in carrying out this project work. The guidance and support received from all the members and who are contributing to this project, was vital for the success of this project.

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OCS

(ONLINE CLINIC SYSTEM)

1. INTRODUCTION

What is Online Clinic System?

Onine Clinic System is a state-of-the-art, fully integrated comprehensive solution from the real work flows of clinic based physicians that offers a full suite for Clinical Management Activities.

A web- based Online Clinic System(or E-clinic) covers every facet of your practice that enables you to effectively manage your practice, providing standards based integration points to schedule an appointment, Online Follow-ups, complete reports, Laboratory Information Systems.

Simple Flexible Reliable and Powerful E-clinic helps you boost revenues, reduce costs and further streamline business processes!

E-Clinic is designed and developed as a powerful, flexible and easy to use web application to deliver real conceivable benefits to clinics, assisting user to administer a huge data in clinic and it can be accessed via PC, laptop, ipad, iphone or other smart phones. On the client point of view, this is a faster and easeful way to link to the healthcare service by using the system.

E-Clinic Application follows security standards to ensure data should always be securely transmitted and backed up. In addition, patient data should be never shared with any 3rd parties

1.1 OBJECTIVE

- **Appointment Scheduler**
- **Electronic Medical Report**
- **Lab Management**

Appointment Scheduler

Online Clinic System allows you to create new online appointment based on availability of Doctor using the appropriate form, enables you to streamline your clinic's workflow and manage each patient's schedule efficiently. Securely access appointment calendars from anywhere to accept/decline appointments request.

E-Clinic also supports Online Queue that makes the process of patients consulting with the doctor easy and comfortable by reducing wait time, enhanced patient satisfaction and also booking different test online. This unique feature lets your patients enter a virtual queue from anywhere so that they do not need to come to your clinic to get a queue number.

Electronic Medical Report

This central repository for all medically related documentation consolidates the medical history of each patient into a single medical record. With a few mouse clicks, clinicians can quickly and simultaneously view medical examinations, diagnoses, treatment histories, test results, medication histories and can take the printout.

Lab Management

Handles storing information generated by medical laboratory processes, Staff can browse and upload the scanned reports as images to store the

Benefits of E-Clinic

- Access to accurate information about all the patients in the clinic
- Spend less time spent in tracking down records and test results
- Physicians can check their appointment schedules from their mobile devices
- Faster access to relevant information makes you take better clinical decisions.
- Simple to use and operate.

If you are looking for a powerful feature-packed solution for your clinic to get online, online clinic system is an excellent choice.

1.2 SCOPE

The purpose of Online Clinic System is specifically designed to delineate the boundaries of the Healthcare Information System design and functionality. It maintains 3 types of users

- Admin
- Doctors
- Patients

This Project provides security for the users with the use of Login-id and Password, so that unauthorized users cannot use anyone else's account. The only authorized will have proper access authority can access the software.

SYSTEM ANALYSIS

2.1 IDENTIFICATION OF NEED

System analysis is a process of gathering and interpreting facts, diagnosing problems and the information to recommend improvements on the system. It is a problem-solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The system is studies to the minutest detail and analyzed. The system analyst plays the role of the interrogator and dwells deep into the working of the present system. The System is viewed as a whole and the input to the system are identified. The outputs from the organization are traced to the various processes. System analysis is concerned with becoming aware of the problem, identifying the relevant and Decisional variables, analysis and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action.

A detailed study of the process must be made by various techniques like interviews, questionnaires etc. The data collected by these sources must be 9scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now the existing system is subjected to close study and problem area are identified. The designer now function as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as proposals. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal.

2.2 FEASIBILITY STUDY

Feasibility study is made to see if the project on completion will serve the purpose the organization for the amount of work.

Effort and the time that spend on it. Feasibility study lets the developer foresee the future of the project and the usefulness. A feasibility study of a system proposal is according to its workability, which is the impact on the organization, ability to meet their user needs and effective use of resources. Thus, when a new application is proposed it normally goes through a feasibility study before it is approved for development.

The document provides the feasibility of the project that is being designed and lists various area that were considered very carefully during the feasibility study of this project such as Technical, Economic and operational feasibilities.

2.3 WORK FLOW

This Document plays a vital role in the development life cycle (SDLC) as it describes the complete requirement of the system. It is meant for use by the developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

WATER FALL MODEL was being chosen because all requirements were known beforehand and the objective of our software development is the computerization/automation of an already existing manual working system.

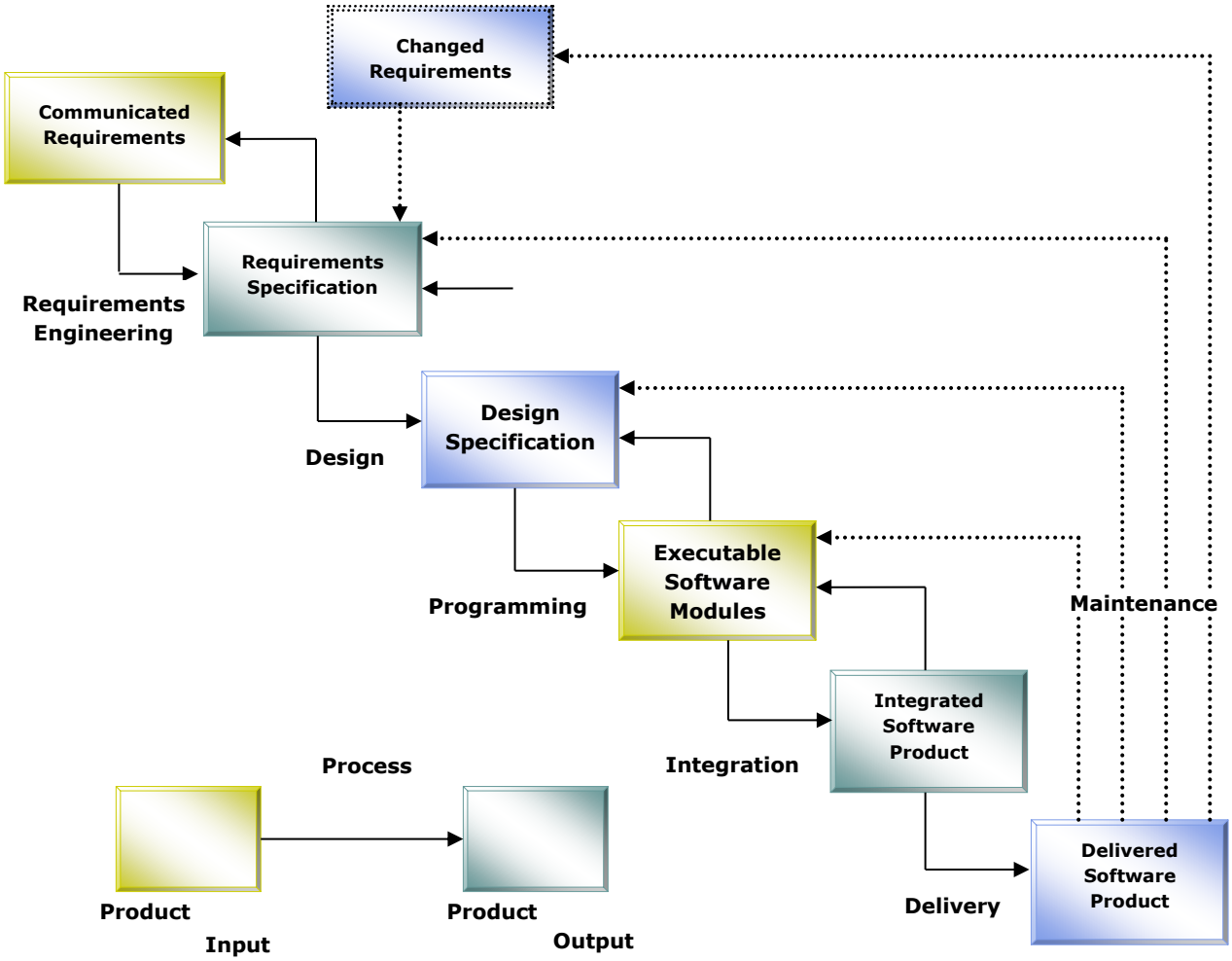


Fig: Water Fall Model

The developer is responsible for:

- Developing the system, which meets the OCS and solving all the requirements of the system?
- Demonstrating the system and installing the system at client's location after the acceptance testing is successful.
- Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- Conducting any user training that might be needed for using the system.
- Maintaining the system for a period of one year after installation.

2.4 FUNCTIONAL REQUIREMENTS

Modules:

The modules used in this software are as follows:

- **Registration:** This page contains the name, email id, contact number, address, password, date of birth, gender.

- **Login:** This module is for registered users, doctors to login. The **ADMIN** has the authority to Add, Delete, and Update etc. The **USER** can only view profile, edit profile, book appointments, view appointments. The **DOCTOR** has the authority to view appointments, view and edit profile.

- **Home:** This page contains an overview of highlights from other pages and helps u sign in, register and book appointments.

- **Features**: This page contains all the details of our services and how do we work.

- **About Us:** This page provides details of our doctors.

- **Service:** This page displays the user the various types of tests they can avail with their required fees and also the doctors.

- **Gallery:** In this page, the user can view and download photos.

- **Contact:** In this page, the user can view our location, contact details and can even leave feedbacks as well as queries.

2.5 NON-FUNCTIONAL REQUIREMENTS

- **Usability Requirement**: The system shall allow the users to access the system from any browsers, no special training is required. The system user friendly and

- **Availability Requirement**: The system is available 100% for the user and is used by 24 hours a day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

- **Accuracy**: The system should accurately provide real time information taking into consideration various issues. The system shall provide 100% access reliability.

- **Performance Requirement**: The information is refreshed at regular intervals depending upon whether some updates have occurred or not. The system shall respond the member in less than 2 seconds.

- **Security Requirement**: System will use a secured database and the system will have different users and each user has different types of constraints. Only admins have the rights to update database information of other users.

- **Reliability Requirement**: The system has to be 100% reliable due to the importance of data and the damages that can be caused by incorrect data. The system will run 7 days a week and 24 hours a day.

2.6 HARDWARE and SOFTWARE REQUIREMENTS

HARDWARE REQUIREMENTS

- Computer that has a 1.6GHz or faster processor
- 1 GB (32 Bit) or 2 GB (64 Bit) RAM (Add 512 MB if running in a virtual machine)
- HDD 20 GB Hard Disk Space and Above Hardware Requirements 5400 RPM hard disk drive
- DirectX 9 capable video card running at 1024 x 768 or higher-resolution display
- DVD-ROM Drive

SOFTWARE REQUIREMENTS

- WINDOWS OS (XP/2000/200 Server/2003 Server/Vista or7)
- Visual Studio 2010 Edition
- Internet Information Server 8.0 (IIS)
- .Net Framework 4.0
- SQL Server Express Edition

SYSTEM DESIGN

3.1 DATA FLOW DIAGRAM

A Data Flow Diagram (DFD) is a diagram that describes the flow of data and the processes that change data throughout a system. A structured analysis and design tool that can be used for flowcharting in place of or in association with information. Oriented and process oriented system flowcharts. When analysts prepare the Data Flow Diagram, they specify the user needs at a level of detail that virtually determines the information flow into and out of the system and the required data resources. This network is constructed by using a set of symbols that do not imply physical implementations. The Data Flow Diagram reviews the current physical system, prepares input and output specification, specifies the implementation plan etc.

Four basic symbols are used to construct data flow diagrams. They are symbols that represent data source, data flows, and data transformations and data storage. The points at which data are transformed are represented by enclosed figures, usually circles, which are called nodes.

DATA FLOW DIAGRAM SYMBOLS

Source or Destination of Data

Data Flow

Process

Storage

Steps to Construct Data Flow Diagram

Four Steps are generally used to construct a DFD.

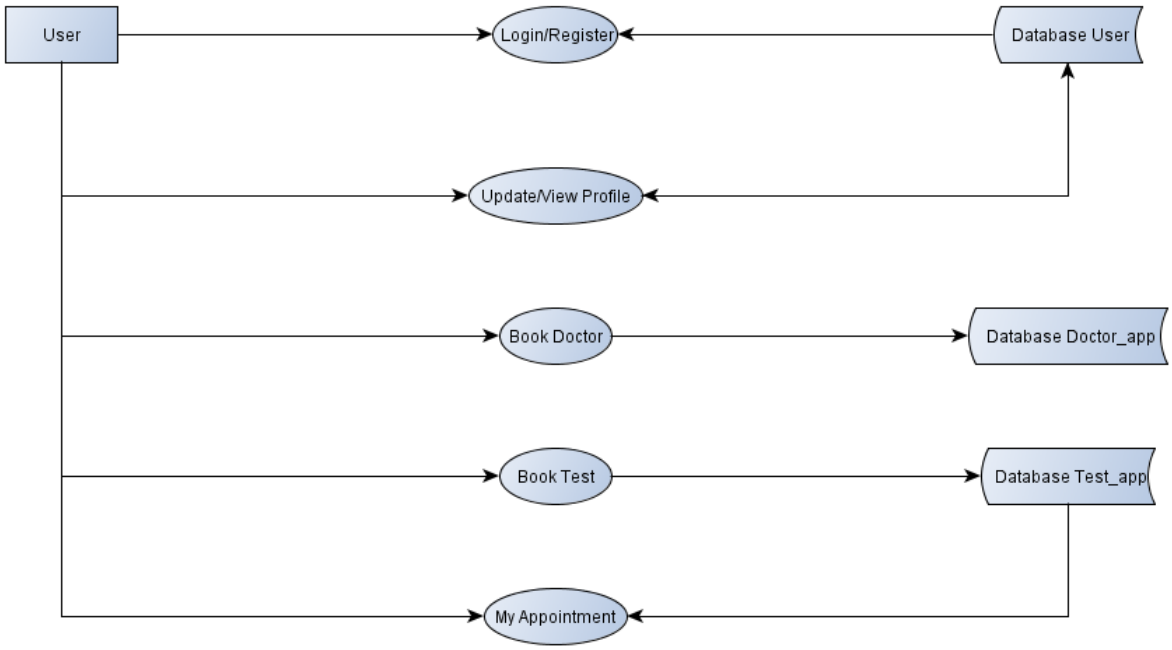
- Process should be named and referred for easy reference. Each name should be representative of the reference.
- The destination of flow is from top to bottom and from left to right.
- When a process is distributed into lower level details they are numbered.
- The names of data stores, sources and destinations are written in capital letters.

Rules for constructing a Data Flow Diagram-

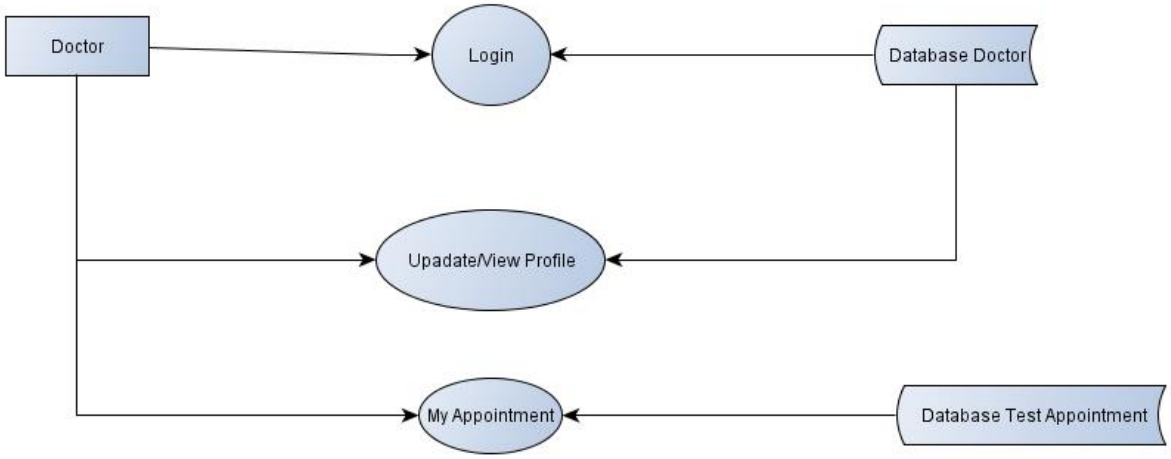
- Arrows should not cross each other.
- Squares, Circles, Files must bear a name.
- Decomposed data flow squares and circles can have same names.
- Draw all data flow around the outside of the diagram.

DATA FLOW DIAGRAM

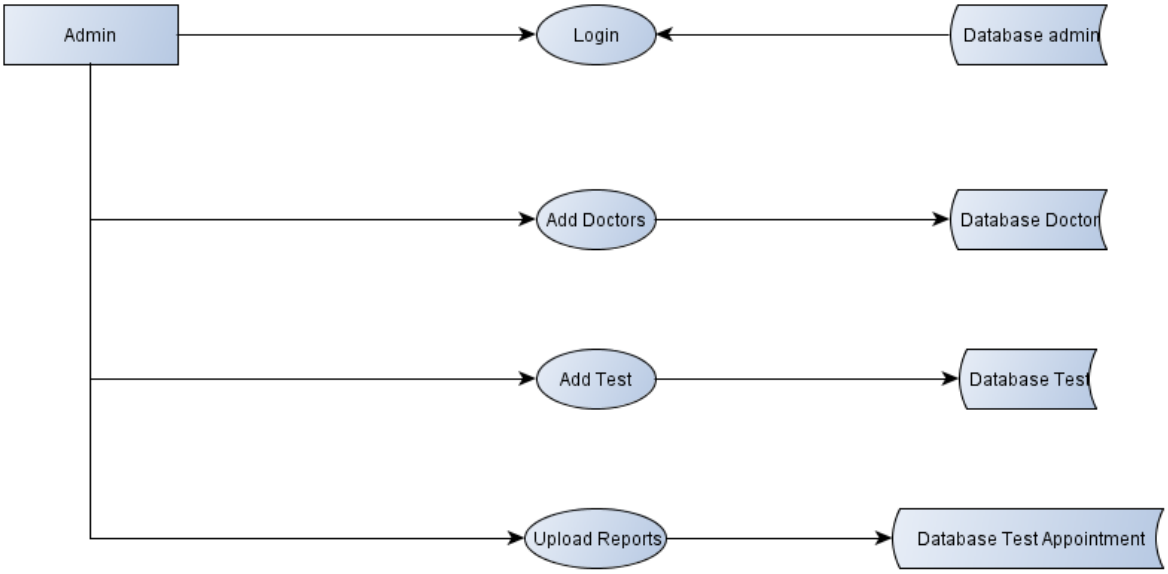
User DFD



Doctor DFD



ADMIN DFD


Admin
Login
Database admin
Add Doctors
Database Doctor
Add Test
Database Test
Upload Reports
Database Test Appointment

3.2 ENTITY RELATIONSHIP DIAGRAM

In software engineering, an **entity–relationship model** (**ER model**) is a data model for describing the data or information aspects of a business domain or its process requirements, in an abstract way that lends itself to ultimately being implemented in a database such as a relational database. The main components of ER models are entities (things) and the relationships that can exist among them.

However, variants of the idea existed previously, and have been devised subsequently such as super type and subtype data entities and commonality relationships.

An entity–relationship model is a systematic way of describing and defining a business process. The process is modeled as components (*entities*) that are linked with each other by *relationships* that express the dependencies and requirements between them, such as: *one building may be divided into zero or more apartments, but one apartment can only be located in one building.* Entities may have various properties (*attributes*) that characterize them. Diagrams created to represent these entities, attributes, and relationships graphically are called entity–relationship diagrams.

An ER model is typically implemented as a database. In the case of a relational database, which stores data in tables, every row of each table represents one instance of an entity. Some data fields in these tables point to indexes in other tables; such pointers represent the relationships.

The three schema approach to software engineering uses three levels of ER models that may be developed.

An entity may be defined as a thing capable of an independent existence that can be uniquely identified. An entity is an abstraction from the complexities of a domain. When we speak of an entity, we normally speak of some aspect of the real world that can be distinguished from other aspects of the real world.

A relationship captures how entities are related to one another. Relationships can be thought of as verbs, linking two or more nouns.

Cardinality constraints are expressed as follows:

- a double line indicates a *participation constraint*, totality or subjectivity : all entities in the entity set must participate in *at least one* relationship in the relationship set;
- an arrow from entity set to relationship set indicates a key constraint, i.e. injectivity: each entity of the entity set can participate in *at most one* relationship in the relationship set;
- A thick line indicates both, i.e. bijectivity: each entity in the entity set is involved in *exactly one* relationship.

An underlined name of an attribute indicates that it is a key: two different entities or relationships with this attribute always have different values for this attribute.

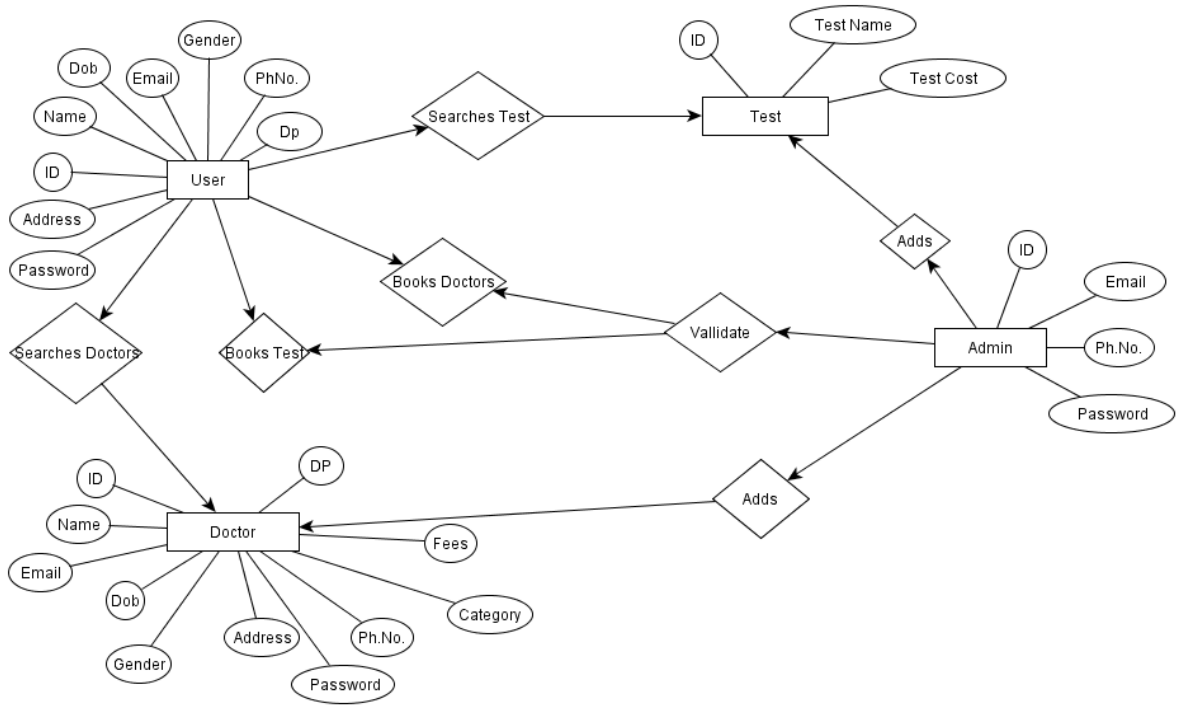


Figure: Entity-Relationship diagram

3.3 USE CASE DIAGRAM

A **use case diagram** at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well.

So only static behavior is not sufficient to model a system rather dynamic behavior is more important than static behavior. In UML, there are five diagrams available to model dynamic nature and use case diagram is one of them. Now as we have to discuss that the use case diagram is dynamic in nature there should be some internal or external factors for making the interaction.

These internal and external agents are known as actors. So, use case diagrams are consists of actors, use cases and their relationships. The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system. So, to model the entire system numbers of use case diagrams are used. The purpose of use case diagram is to capture the dynamic aspect of a system. But this definition is too generic to describe the purpose. Because other four diagrams (activity, sequence, collaboration and State chart) are also having the same purpose. So, we will look into some specific purpose which will distinguish it from other four diagrams.

Use case diagrams are used to gather the requirements of a system including internal and external influences. These requirements are mostly design requirements. So, when a system is analyzed to gather its functionalities use cases are prepared and actors are identified.

Now when the initial task is complete use case diagrams are modelled to present the outside view. So, in brief, the purposes of use case diagrams can be as follows:

- Used to gather requirements of a system.
- Used to get an outside view of a system.
- Identify external and internal factors influencing the system.
- Show the interacting among the requirements are actors.

How to draw Use Case Diagram?

Use case diagrams are considered for high level requirement analysis of a system. So, when the requirements of a system are analyzed the functionalities are captured in use cases. So, we can say that uses cases are nothing but the system functionalities written in an organized manner. Now the second things which are relevant to the use cases are the actors. Actors can be defined as something that interacts with the system.

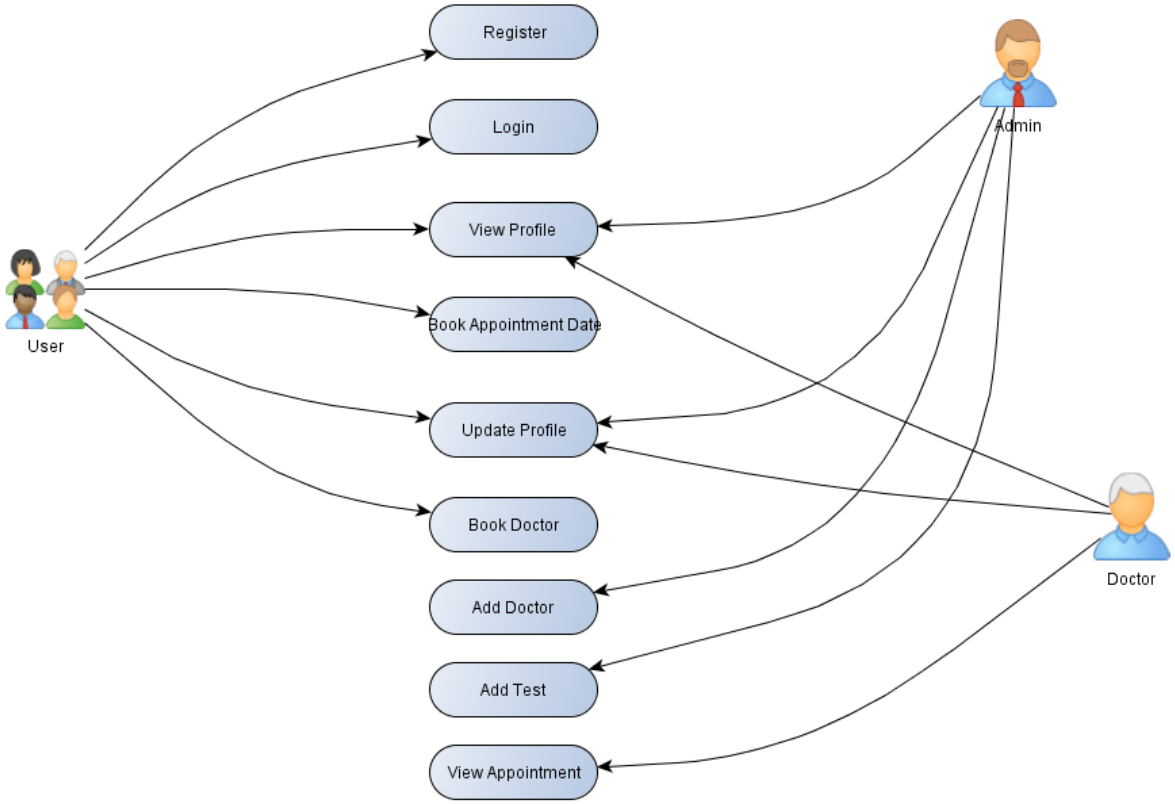
The actors can be human user, some internal applications or may be some external applications. So, in a brief when we are planning to draw a use case diagram we should have the following items identified.

- Functionalities to be represented as a use case
- Actors
- Relationships among the use cases and actors.

Use case diagrams are drawn to capture the functional requirements of a system. So, after identifying the above items we have to follow the following guidelines to draw an efficient use case diagram.

- The name of a use case is very important. So, the name should be chosen in such a way so that it can identify the functionalities performed.
- Give a suitable name for actors.

- Show relationships and dependencies clearly in the diagram.
- Do not try to include all types of relationships. Because the main purpose of the diagram is to identify requirements.
- Use note whenever required to clarify some important points.



3.4 MODULARIZATION DETAILS

As Modularization has gained increasing focus from companies outside its traditional industries of aircraft and automotive, more and more companies turn to it as strategy and product development tool. I intend to explain the importance aspects of modularization and how it should be initiated within a company. After determining the theoretical steps of modularization success described in literature, I intend to conduct a multiple case study of companies who have implemented modularization in order to find how real-world modularization was initiated and used to improve the company's competitiveness. By combining theory and practical approach to modularization I will derive at convergence and divergence between theoretical implementation to modularization and real-world implementation to modularization. This gives a valuable input for both implantations in companies as well as new aspects to be further.

DATA INTEGRITY AND CONSTRAINTS

Data integrity is normally enforced in a database system by a series of integrity constraints or rules. Three types of integrity constraints are an inherent part of the relational data model: entity integrity, referential integrity and domain integrity:

- *Entity integrity* concerns the concept of a primary key. Entity integrity is an integrity rule which states that every table must have a primary key and that the column or columns chosen to be the primary key should be unique and not null.
- Concerns the concept of a foreign key. The referential integrity rule states that any foreign-key value can only be in one of two states. The usual state of affairs is that the foreign-key value refers to a primary key value of some table in the database. Occasionally, and this will depend on the rules of the data

owner, a foreign-key value can be null. In this case we are explicitly saying that either there is no relationship between the objects represented in the database or that this relationship is unknown.

- *Domain integrity* specifies that all columns in a relational database must be declared upon a defined domain. The primary unit of data in the relational data model is the data item. Such data items are said to be non-decomposable or atomic. A domain is a set of values of the same type.

3.5 DATABASE DESIGN

A database is an organized mechanism that has capability of storing information through which a user can retrieve stored information in an effective and efficient manner. The data is the purpose of any database and must be protected.

The database design is two level processes. In the first step, user requirements are gathered together and a database is designed which will meet these requirements as clearly as possible. This step is called information Level design and it is taken independent of any individual DBMS.

In the following snapshots we display the way we have used SQL Server as the back-end RDBMS for our project and the various entities that have been used along with their table definition and table data.

DATA DICTIONARY

1. User registration table definition

Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Triggers

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	Id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext More
2	Name	varchar(40)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
3	Email	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
4	Dob	date			No	None		Change Drop Primary Unique Index Spatial Fulltext More
5	Gender	varchar(6)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
6	Address	varchar(90)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
7	Phoneno	varchar(11)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
8	Password	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
9	Dp	varchar(90)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More

Check All With selected: Browse Change Drop Primary Unique Index

User registration table data

+ Options

	Id	Name	Email	Dob	Gender	Address	Phoneno	Password	Dp
Edit Copy Delete	1	Piyushh Bhutoria	email@gmail.com	2017-06-30	Male	anything	9830768030	1234	clientdp/7729_Jason_Bradburyglass.jpg
Edit Copy Delete	2	Saharsh Modi	saharsh@gmail.com	0000-00-00	Male	something	9883085934	1234	

Check All With selected: Change Delete Export

2. Tests available table defination

Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Triggers

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	id	int(20)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext More
2	test_name	varchar(50)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
3	test_cost	int(50)			No	None		Change Drop Primary Unique Index Spatial Fulltext More

Check All With selected: Browse Change Drop Primary Unique Index

Tests available table data

	id	test_name	test_cost
Edit Copy Delete	1	Haemoglobin	1500
Edit Copy Delete	4	Allergy	500
Edit Copy Delete	5	Diabetes	800
Edit Copy Delete	6	Blood Group Test	200
Edit Copy Delete	7	Blood Test Package	9500
Edit Copy Delete	8	Urine Test	250
Edit Copy Delete	9	C.T.Scan(normal)	1100
Edit Copy Delete	10	Ultrasonography	750
Edit Copy Delete	11	Digital X-Ray	500
Edit Copy Delete	12	Colour Doppler	800
Edit Copy Delete	13	Digital E.E.G	1200
Edit Copy Delete	14	Endoscopy	3500
Edit Copy Delete	15	Health Check Up	10000
Edit Copy Delete	16	E.C.G.	200
Edit Copy Delete	17	Stool Test	250
Edit Copy Delete	18	Colonoscopy	8000
Edit Copy Delete	19	Angiography	20000
Edit Copy Delete	20	Cholesterol Test	500

Check All With selected: Change Delete Export

3. Test booking table definition

Browse Structure SQL Search Insert Export Import Operations Triggers

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	Id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext More
2	Test_name	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
3	Test_time	time			No	None		Change Drop Primary Unique Index Spatial Fulltext More
4	Test_date	date			No	None		Change Drop Primary Unique Index Spatial Fulltext More
5	User_id	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext More
6	Report	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More

Check All With selected: Browse Change Drop Primary Unique Index

Test booking table data

	Id	Test_name	Test_time	Test_date	User_id	Report
Edit Copy Delete	1	Health Check Up	00:00:00	0000-00-00	1	
Edit Copy Delete	2	Haemoglobin	00:00:00	0000-00-00	1	testreports/5468_Soft Skills Material Win 2015_201...

Check All With selected: Change Delete Export

4. Doctor Available table definition

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	Id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext More
2	Name	varchar(40)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
3	Email	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
4	Dob	date			No	None		Change Drop Primary Unique Index Spatial Fulltext More
5	Gender	varchar(6)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
6	Address	varchar(90)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
7	Phoneno	varchar(11)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
8	Password	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
9	Fees	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext More
10	Category	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More
11	Dp	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext More

Check All *With selected:* Browse Change Drop Primary Unique Index

Doctor Available table data

	Id	Name	Email	Dob	Gender	Address	Phoneno	Password	Fees	Category	Dp
Edit Copy Delete	1	Ross Gellar	ross@gmail.com	2017-07-01	Male	F.R.I.E.N.D.S	9830768030	1234	500	Paleantologist	docdp/7729_Jason_Bradburyglass.jpg

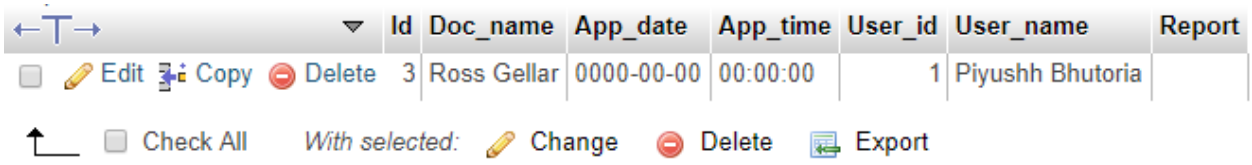
Check All *With selected:* Change Delete Export

5. Doctor Appointment table definition

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	Id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	Doc_name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	App_date	date			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
4	App_time	time			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
5	User_id	int(11)			No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
6	User_name	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
7	Report	text	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values

Check All *With selected:* Browse Change Drop Primary Unique Index

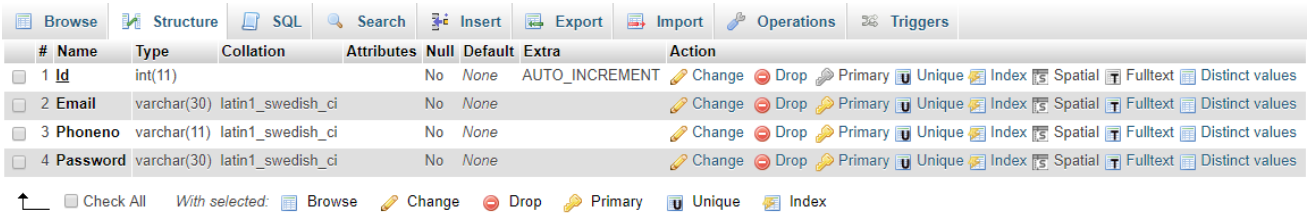
Doctor Appointment table data



	Id	Doc_name	App_date	App_time	User_id	User_name	Report
Edit Copy Delete	3	Ross Gellar	0000-00-00	00:00:00	1	Piyushh Bhutoria	

Check All With selected: Change Delete Export

6. Admin User table definition

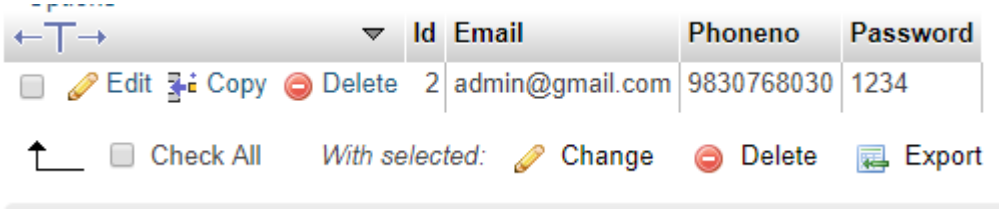


Browse Structure SQL Search Insert Export Import Operations Triggers

#	Name	Type	Collation	Attributes	Null	Default	Extra	Action
1	Id	int(11)			No	None	AUTO_INCREMENT	Change Drop Primary Unique Index Spatial Fulltext Distinct values
2	Email	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
3	Phoneno	varchar(11)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values
4	Password	varchar(30)	latin1_swedish_ci		No	None		Change Drop Primary Unique Index Spatial Fulltext Distinct values

Check All With selected: Browse Change Drop Primary Unique Index

Admin User table data



	Id	Email	Phoneno	Password
Edit Copy Delete	2	admin@gmail.com	9830768030	1234

Check All With selected: Change Delete Export

3.6 USER INTERFACE DESIGN

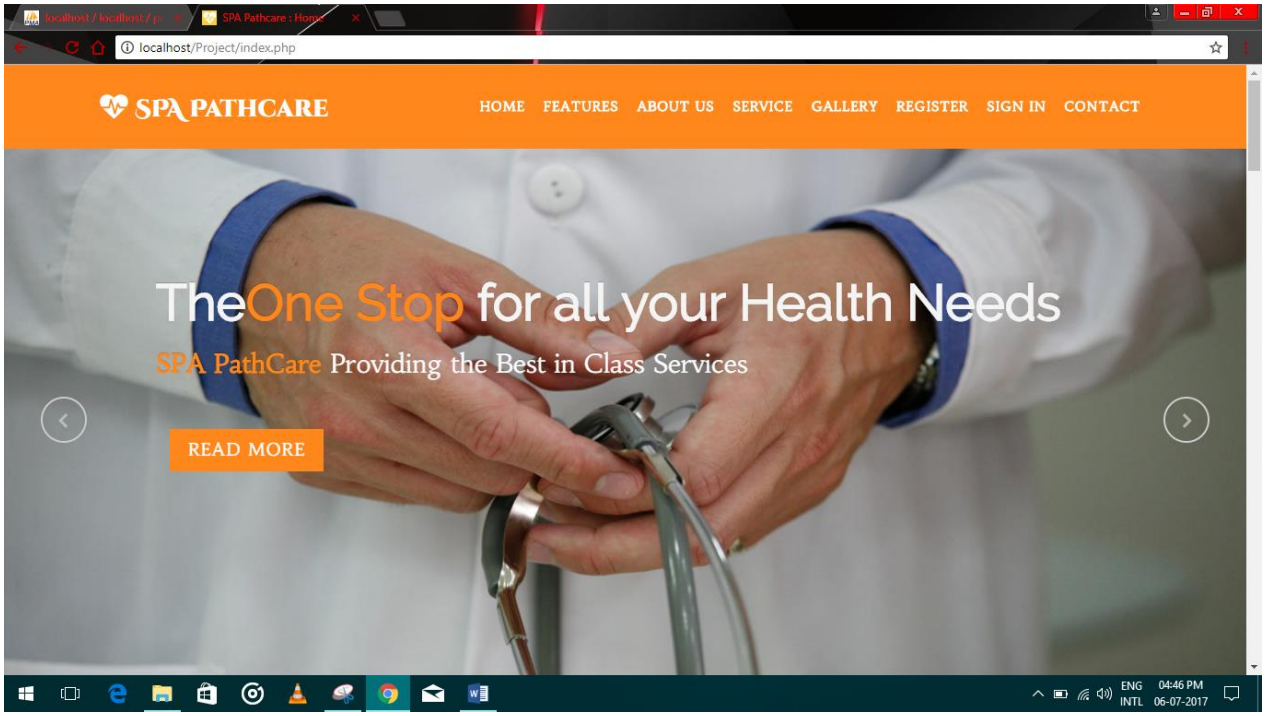
User interface design (UID) or **user interface engineering** is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing the user experience. The goal of user interface design is to make the user's interaction as simple and efficient as possible, in terms of accomplishing user goals (user-centered design).

Good user interface design facilitates finishing the task at hand without drawing unnecessary attention to it. Graphic design and typography are utilized to support its usability, influencing how the user performs certain interactions and improving the aesthetic appeal of the design; design aesthetics may enhance or detract from the ability of users to use the functions of the interface. The design process must balance technical functionality and visual elements (e.g., mental model) to create a system that is not only operational but also usable and adaptable to changing user needs.

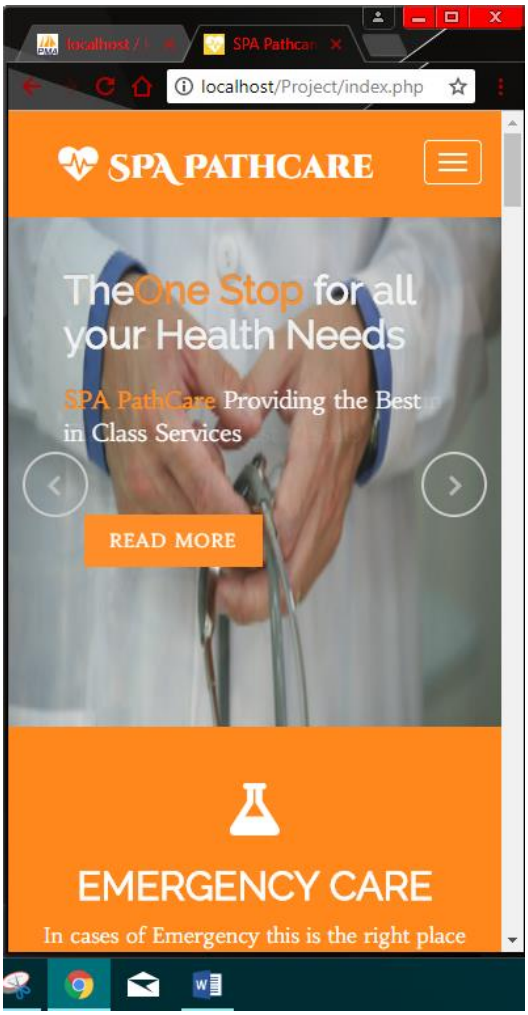
Interface design is involved in a wide range of projects from computer systems, to cars, to commercial planes; all of these projects involve much of the same basic human interactions yet also require some unique skills and knowledge. As a result, designers tend to specialize in certain types of projects and have skills centered on their expertise, whether that be software design, user research, web design, or industrial design.

SNAPSHOTS

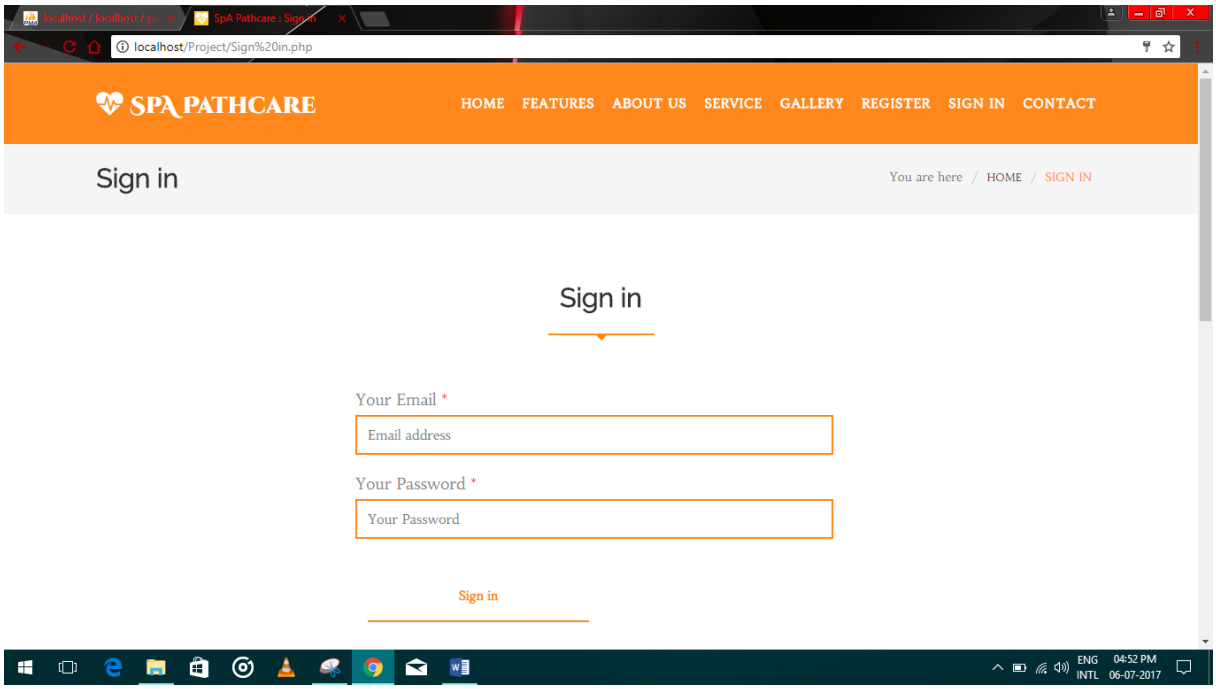
HOME PAGE



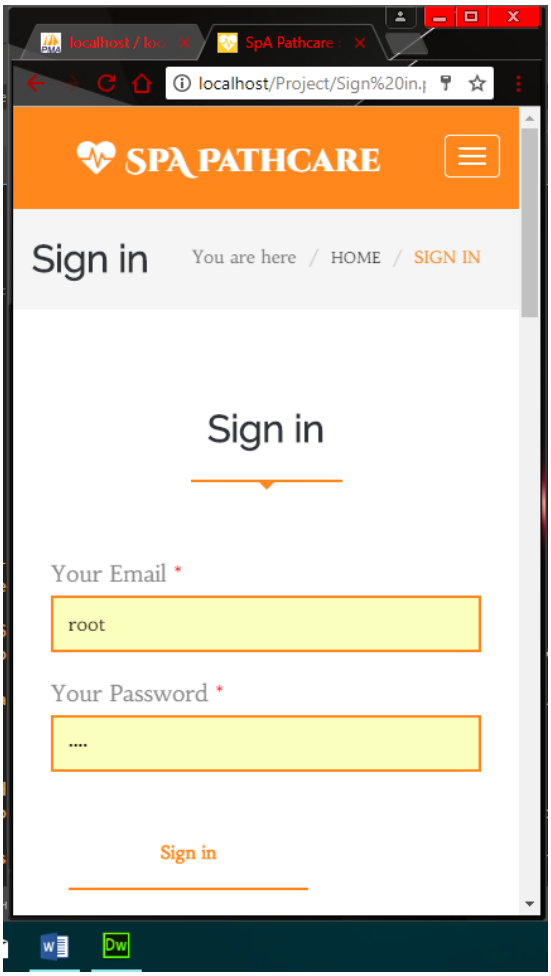
MOBILE VIEW


localhost/Project/index.php
SPA PATHCARE
The One Stop for all your Health Needs
SPA PathCare Providing the Best in Class Services
READ MORE
EMERGENCY CARE
In cases of Emergency this is the right place

LOGIN


localhost/Project/Sign%20in.php
SPA PATHCARE
HOME
FEATURES
ABOUT US
SERVICE
GALLERY
REGISTER
SIGN IN
CONTACT
Sign in
You are here / HOME / SIGN IN
Sign in
Your Email *
Email address
Your Password *
Your Password
Sign in
ENG
INTL
04:52 PM
06-07-2017

MOBILE VIEW

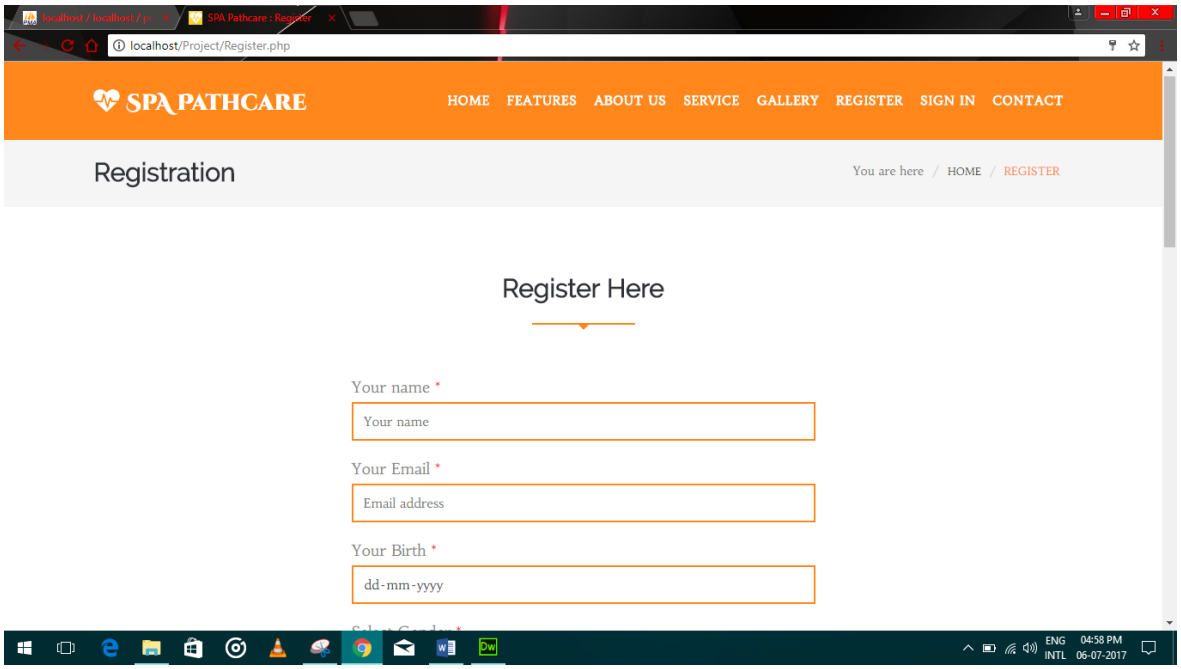

localhost / loc
SpA Pathcare
localhost/Project/Sign%20in.
SPA PATHCARE
Sign in
You are here / HOME / SIGN IN
Sign in
Your Email *
root
Your Password *
....
Sign in

CODING

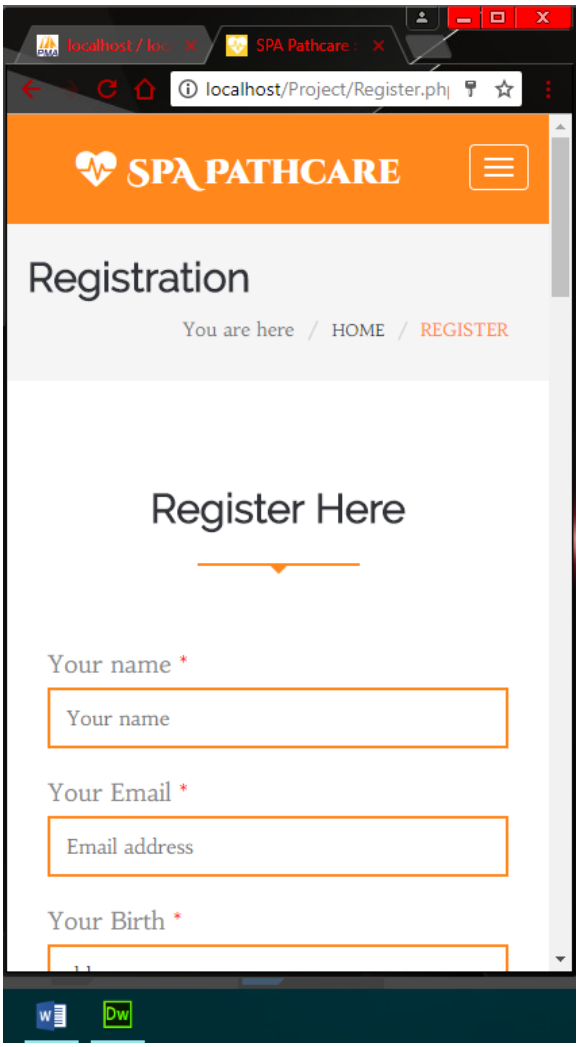
```
<section id="meetDoctors">
        <div class="container">
          <div class="row">
            <div class="col-lg-12 col-md-12">
              <div class="meetDoctors-area">
               <!-- Start Service Title -->
                <div class="section-heading">
                  <h2>Sign in </h2>
                  <div class="line"></div>
                </div>
                <div class="modal-body">
                      <div class="appointment-area" style="margin-left:25%">
                        <form class="appointment-form" action="Sign_in.php"
    method="post">
                          <div class="row">
                          <div class="col-md-6 col-sm-6">
                             <label class="control-label">Your Email <span
    class="required">*</span>
                             </label>
                             <input type="email" class="wp-form-control wpcf7-
    email" placeholder="Email address" name="a1">
                          </div>
                                                    </div>
                        <div class="row">
                          <div class="col-md-6 col-sm-6">
                             <label class="control-label">Your Password <span
    class="required">*</span>
                             </label>
                             <input type="password" class="wp-form-control wpcf7-
    text" placeholder="Your Password" name="a2">
                          </div>
                        </div>
```

```
                    <button class="wpcf7-submit button--itzel"
type="submit"><i class="button__icon fa fa-share"></i><span>Sign
in</span></button>
                  </form>
                </div>
              </div>
            </div>
          </div>
        </div>
      </section>
```

USER REGISTRATION



MOBILE VIEW


SPA Pathcare :
localhost/Project/Register.ph
SPA PATHCARE
Registration
You are here / HOME / REGISTER
Register Here
Your name *
Your name
Your Email *
Email address
Your Birth *

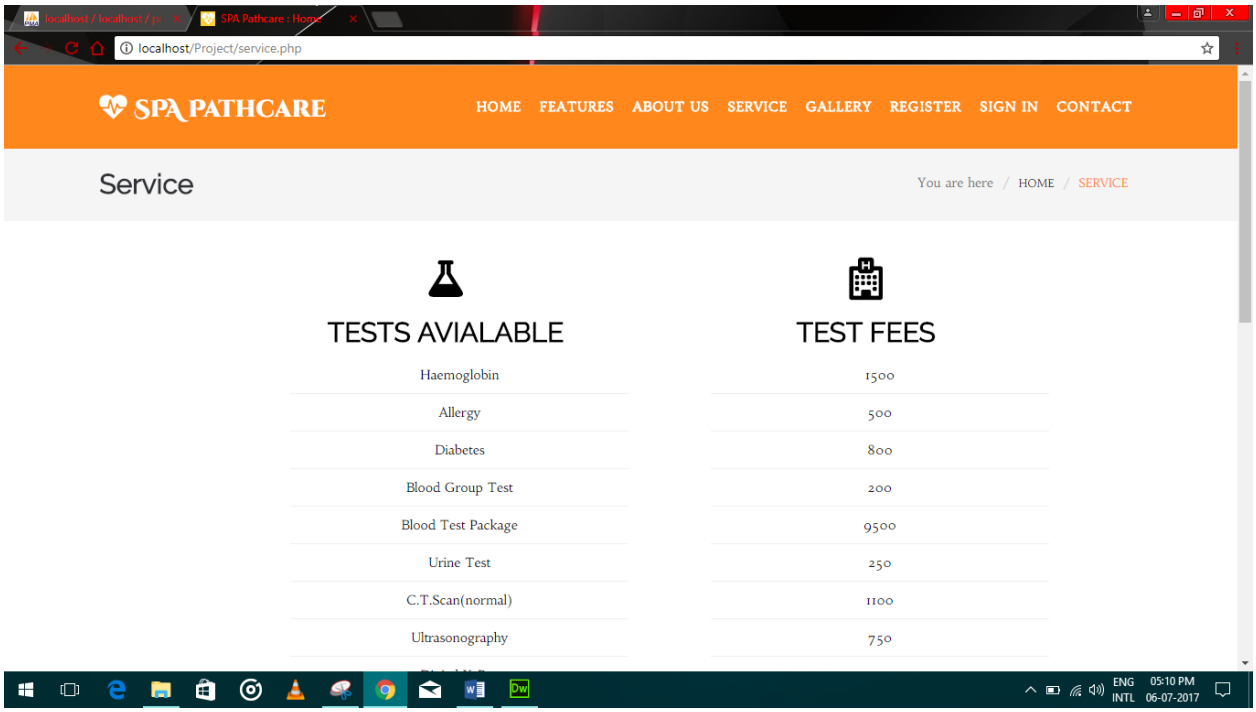
CODING

```
<section id="meetDoctors">
    <div class="container">
      <div class="row">
        <div class="col-lg-12 col-md-12">
          <div class="meetDoctors-area">
           <!-- Start Service Title -->
            <div class="section-heading">
              <h2>Register Here</h2>
              <div class="line"></div>
            </div>
            <div class="modal-body" style="margin-left:25%">
                  <div class="appointment-area">
                    <form class="appointment-form" action="Registration.php" method="post">
                      <div class="row">
                        <div class="col-md-6 col-sm-6">
                          <label class="control-label">Your name <span class="required">*</span>
                          </label>
                          <input type="text" class="wp-form-control wpcf7-text" placeholder="Your name" name="nam">
                        </div>
                      </div>
                      <div class="row">
                      <div class="col-md-6 col-sm-6">
                          <label class="control-label">Your Email <span class="required">*</span>
                          </label>
                          <input type="email" class="wp-form-control wpcf7-email" placeholder="Email address" name="mail">
                        </div>
                                                    </div>
                      <div class="row">
```

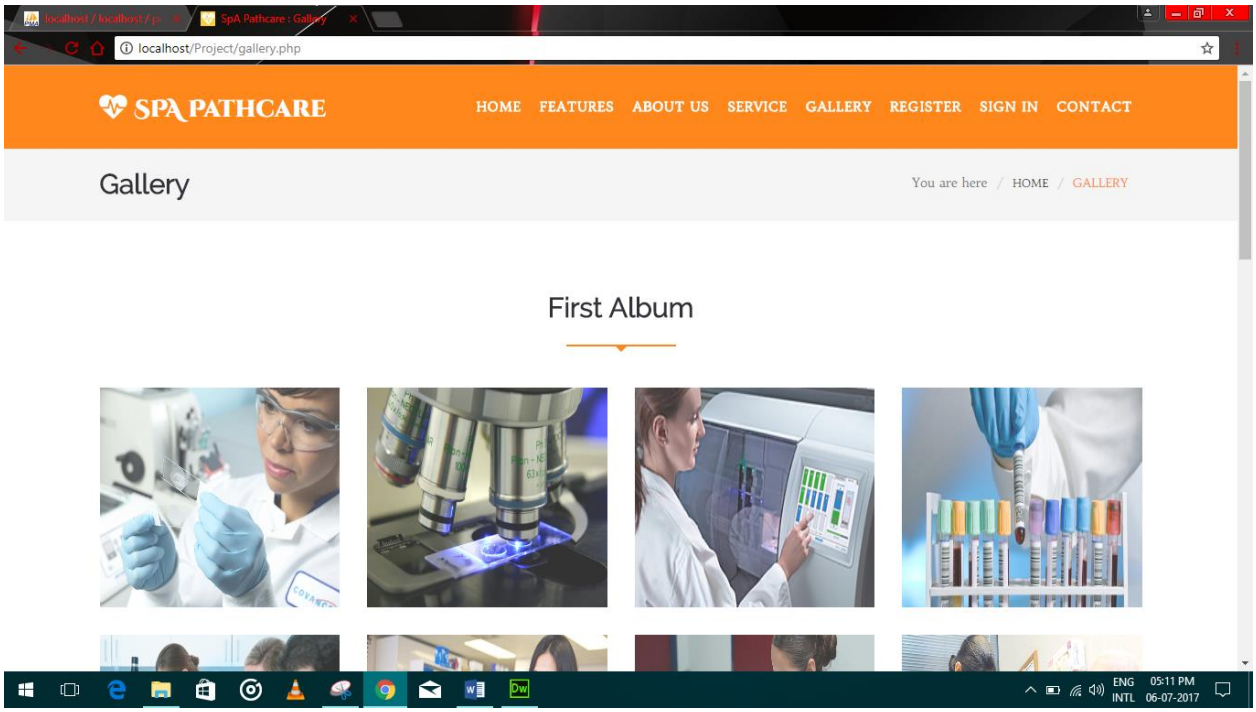
```
                    <div class="col-md-6 col-sm-6">
                      <label class="control-label">Your Birth <span
class="required">*</span>
                      </label>
                      <input type="date" class="wp-form-control wpcf7-text"
placeholder="dd/mm/yy" name="dob">
                    </div>
                   </div>
                   <div class="row">
                   <div class="col-md-6 col-sm-6">
                      <label class="control-label">Select Gender <span
class="required">*</span>
                      </label>
                      <select class="wp-form-control wpcf7-select" name="gnd">
                       <option val="Undefined">Select Gender</option>
                       <option val="Male">Male</option>
                       <option val="Female">Female</option>
                      </select>
                     </div>
                                                  </div>
                   <div class="row">
                    <div class="col-md-6 col-sm-6">
                      <label class="control-label">Your Address <span
class="required">*</span>
                      </label>
                      <input type="text" class="wp-form-control wpcf7-text"
placeholder="Your Address" name="addr">
                    </div>
                   </div>
                   <div class="row">
                   <div class="col-md-6 col-sm-6">
                      <label class="control-label">Your Phone <span
class="required">*</span>
                      </label>
                      <input type="number" class="wp-form-control wpcf7-text"
placeholder="Phone No" name="phno">
                   </div>
```

```
                    </div>
                    <div class="row">
                      <div class="col-md-6 col-sm-6">
                        <label class="control-label">Your Password <span class="required">*</span>
                        </label>
                        <input type="password" class="wp-form-control wpcf7-text" placeholder="Your Password" name="pwd">
                      </div>
                    </div>
                    <div class="row">
                      <div class="col-md-6 col-sm-6">
                        <label class="control-label">Retype Password <span class="required">*</span>
                        </label>
                        <input type="password" class="wp-form-control wpcf7-text" placeholder="Retype Password" name="repwd">
                      </div>
                    </div>
                    <button class="wpcf7-submit button--itzel" type="submit"><i class="button__icon fa fa-share"></i><span>Register</span></button>
                  </form>
                </div>
              </div>
            </div>
          </div>
        </div>
      </section>
```

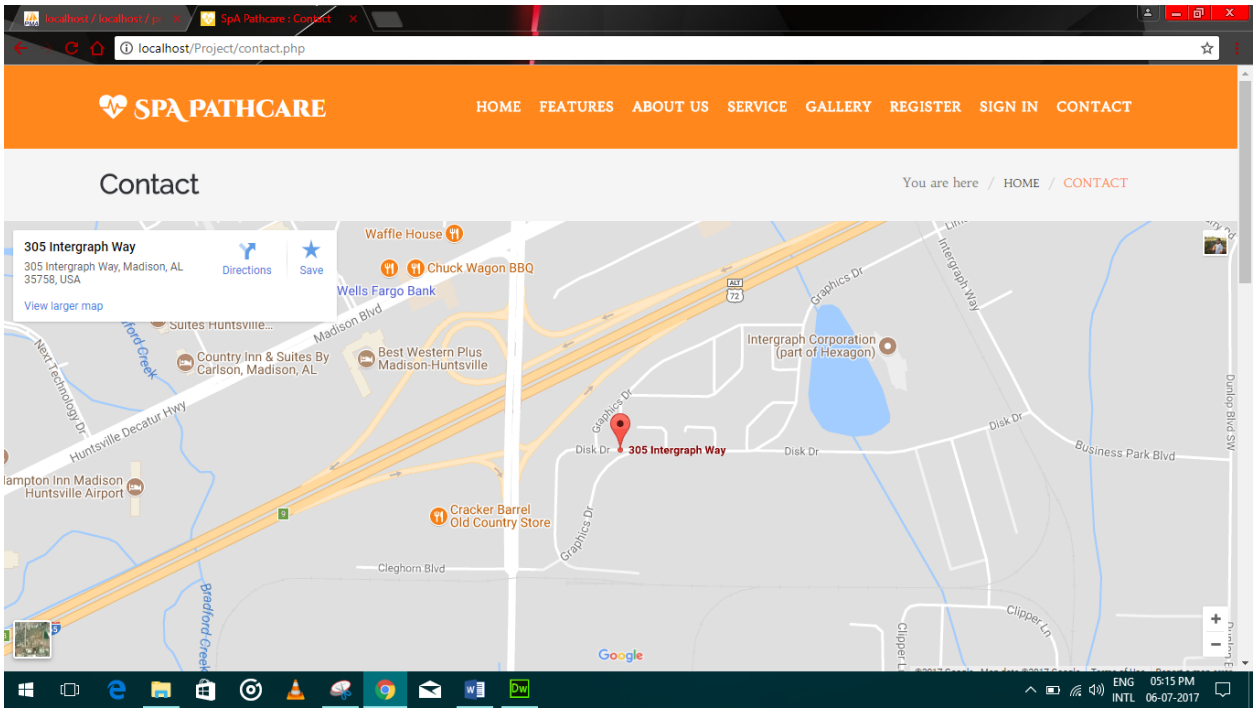
SERVICE PAGE



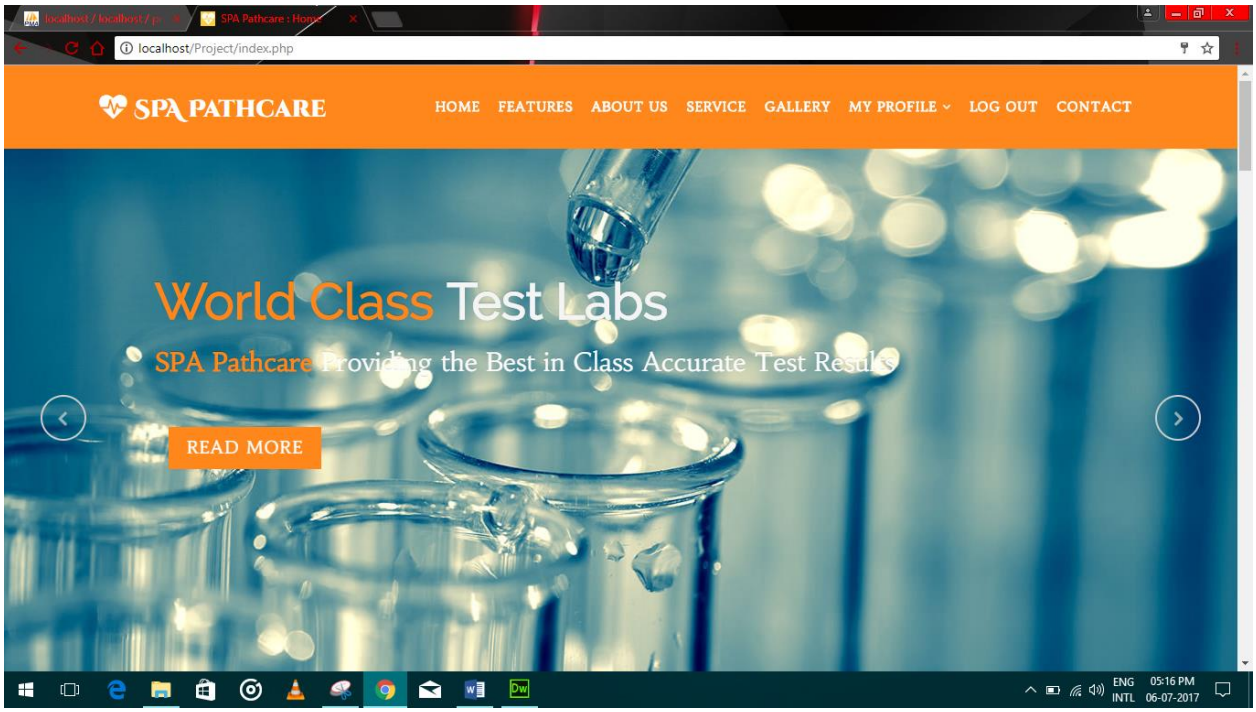
GALLERY PAGE



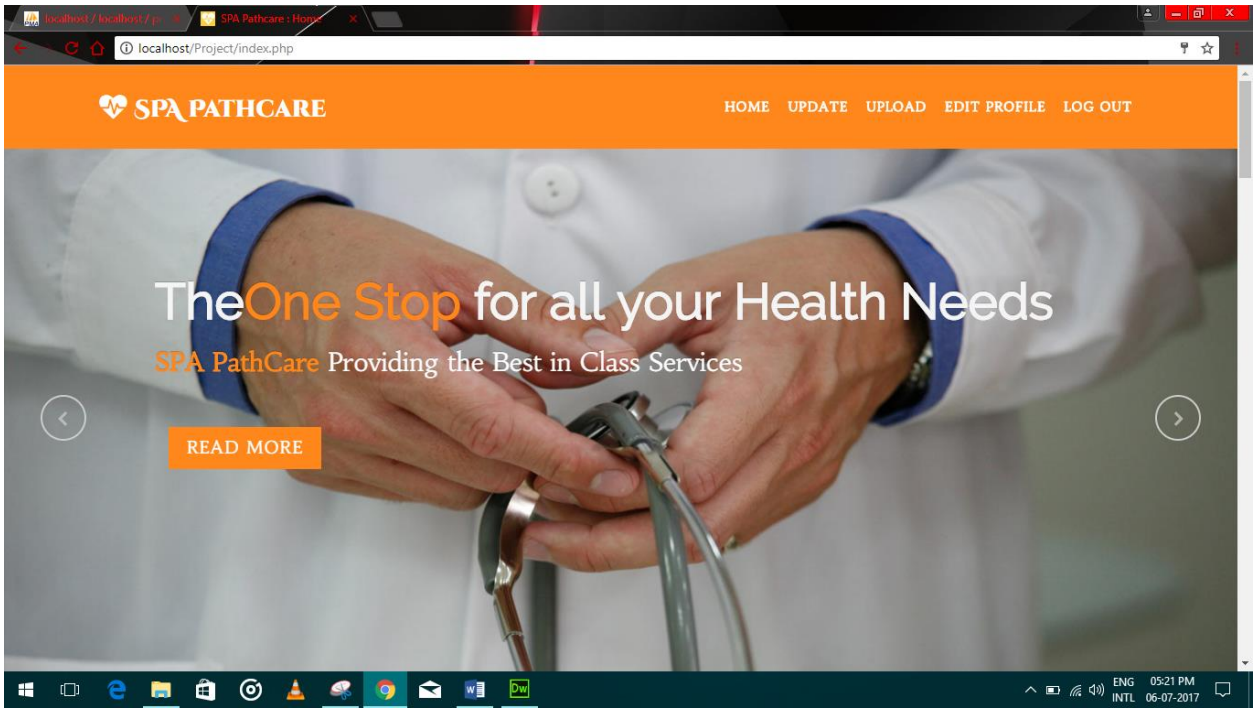
CONTACT PAGE



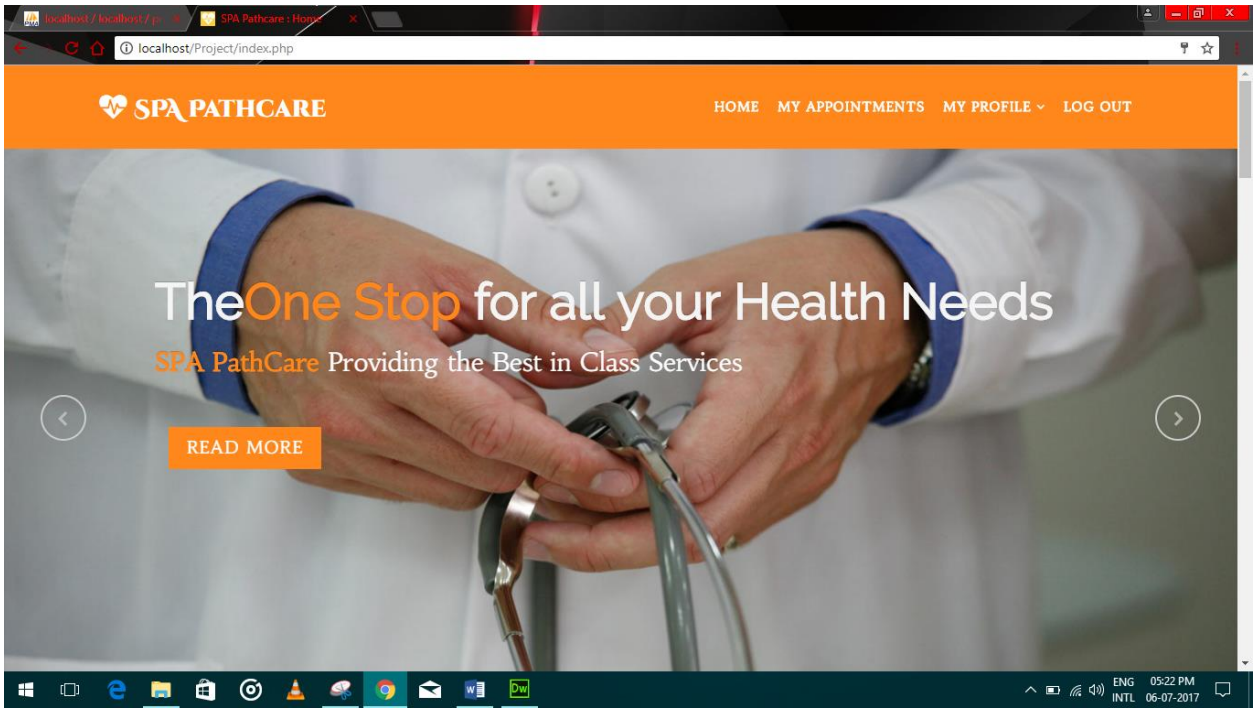
USER LOGIN HOME PAGE



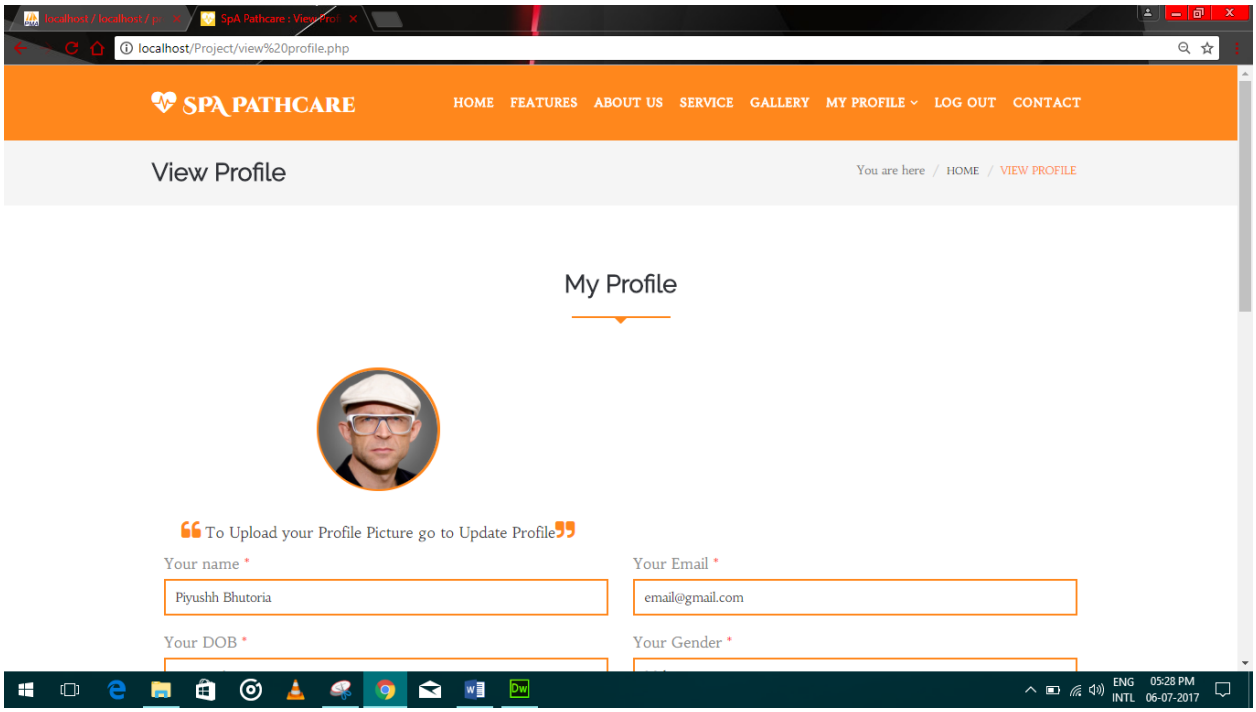
ADMIN LOGIN HOME PAGE



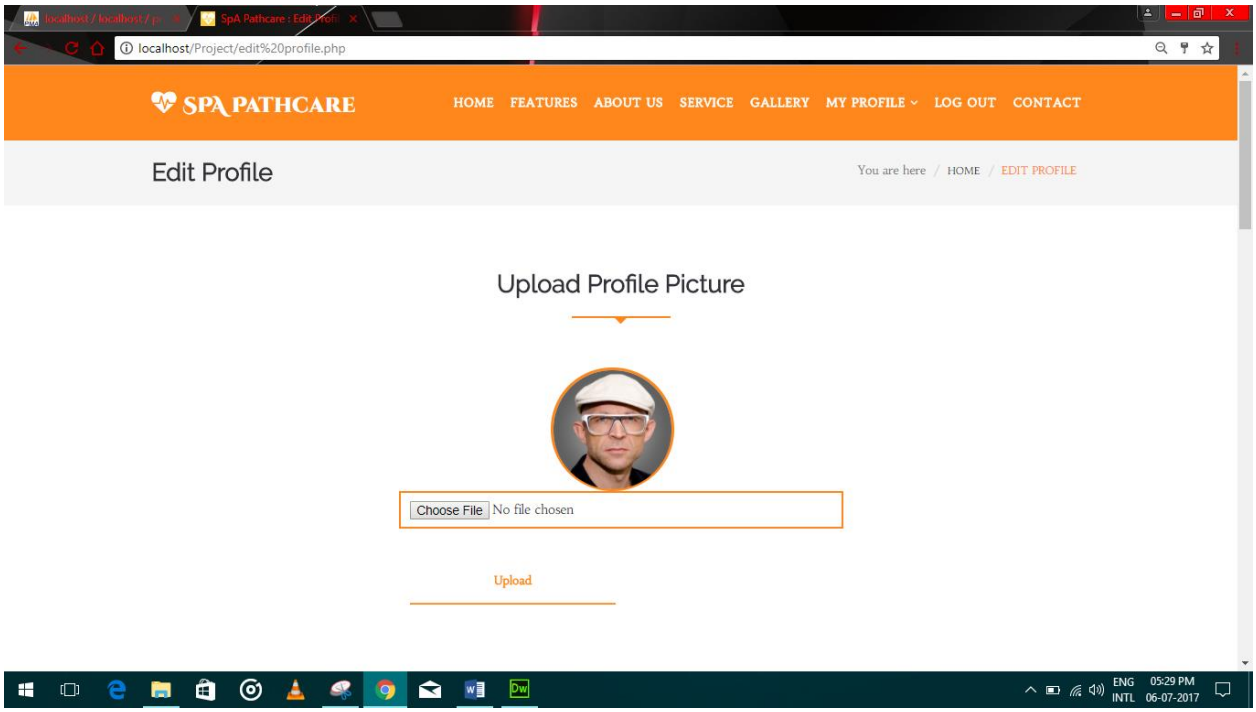
DOCTOR LOGIN HOME PAGE



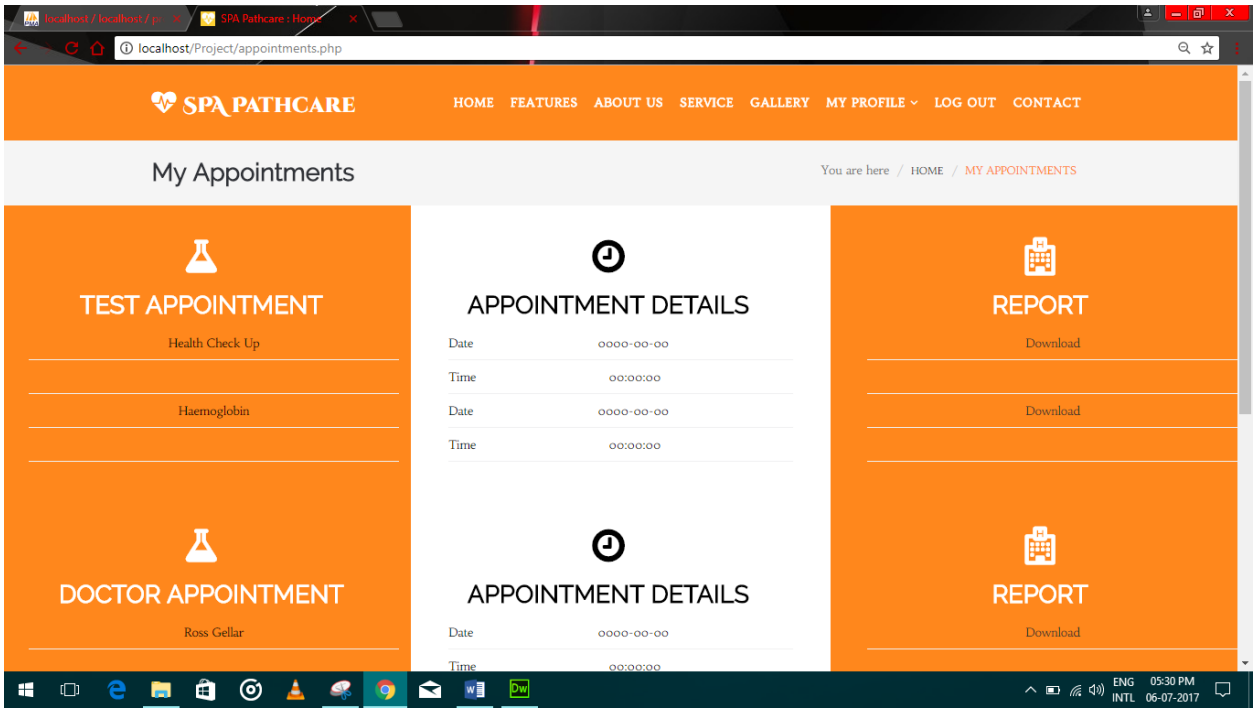
USER LOGIN VIEW PROFILE PAGE



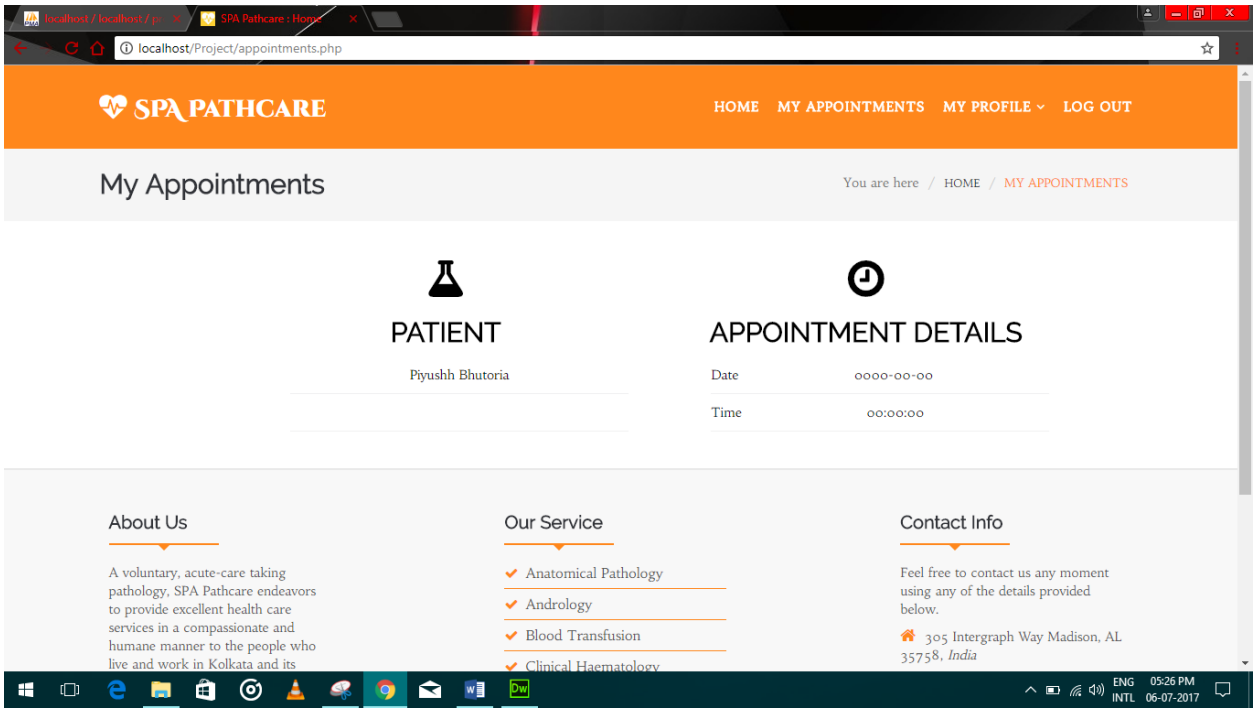
USER LOGIN EDIT PROFILE PAGE



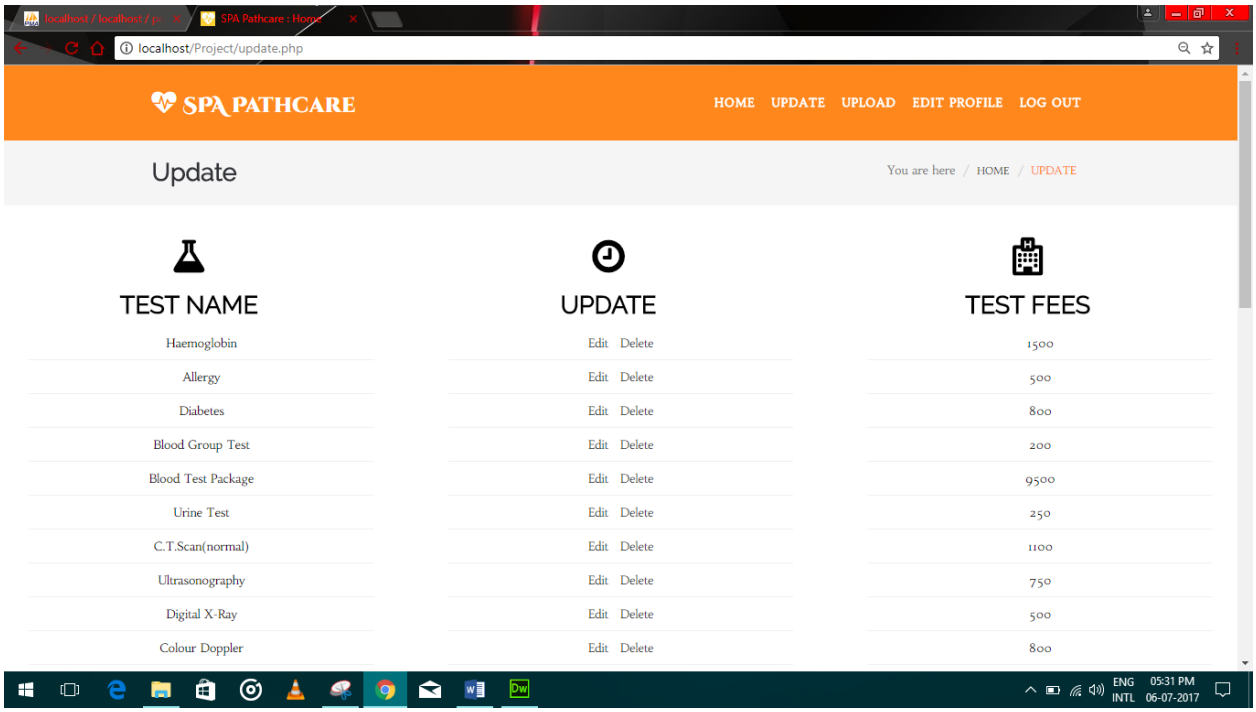
USER LOGIN APPOINTMENT PAGE



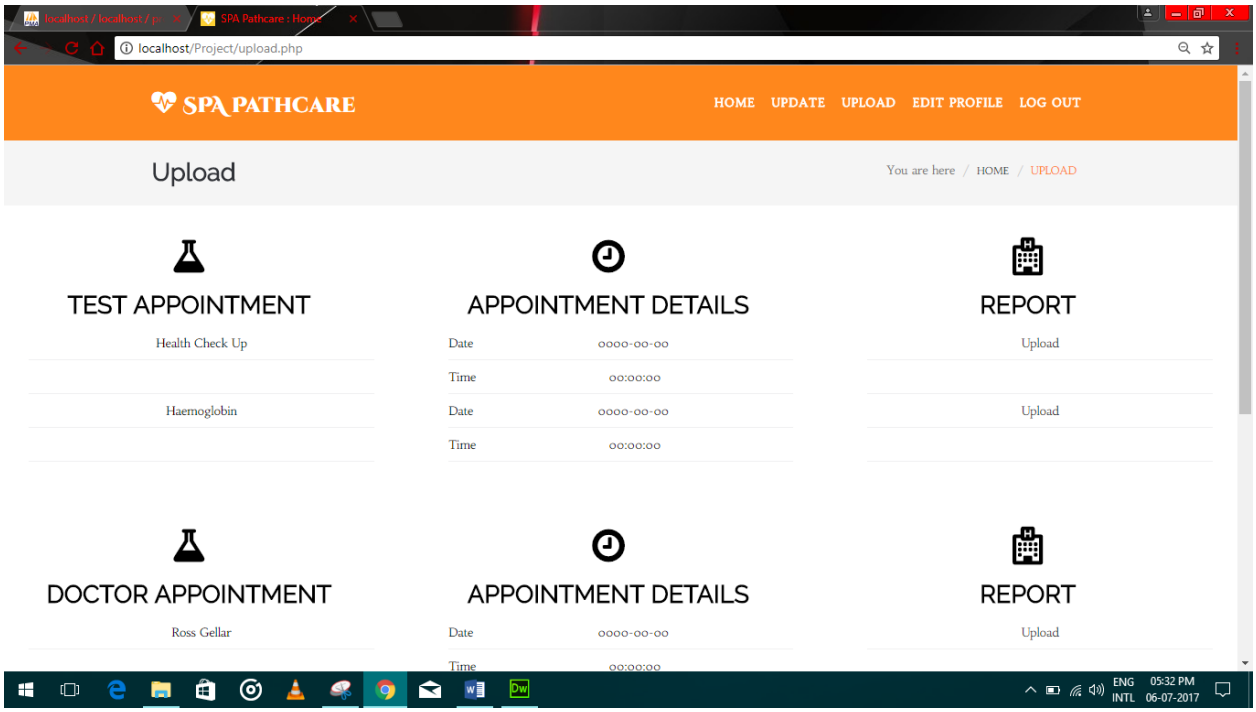
DOCTOR LOGIN APPOINTMENT PAGE



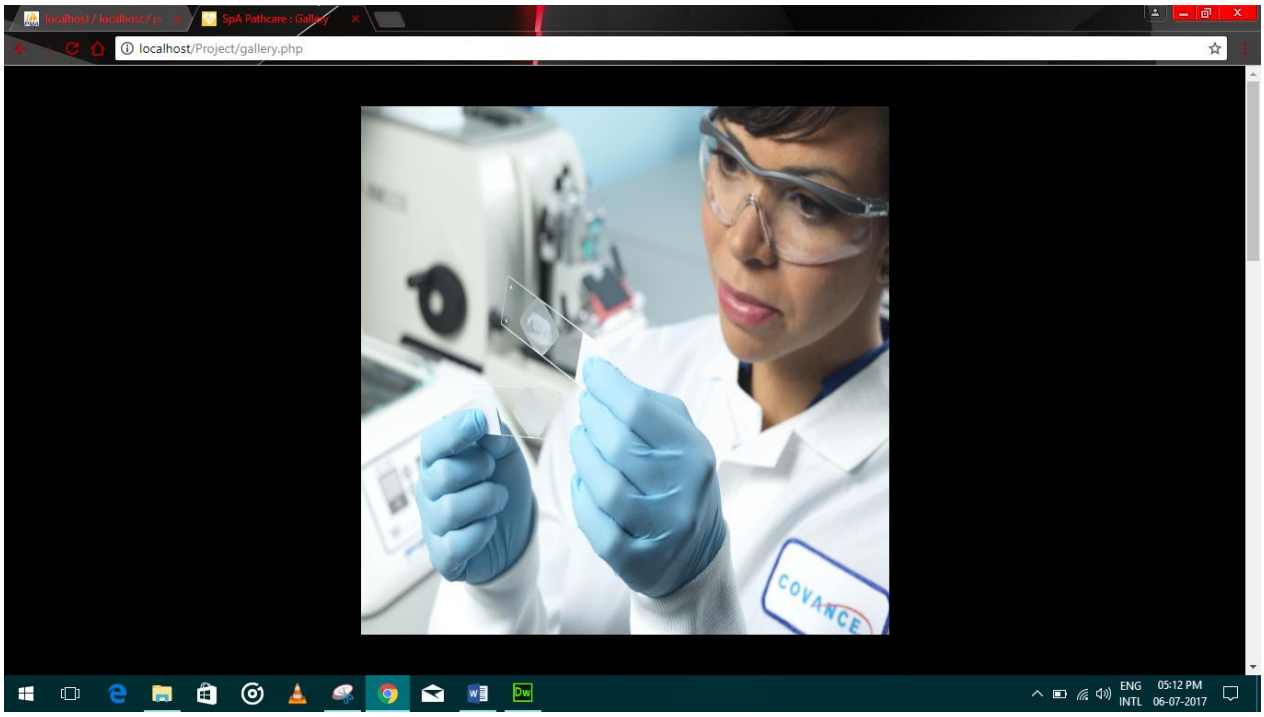
ADMIN LOGIN UPDATE PAGE



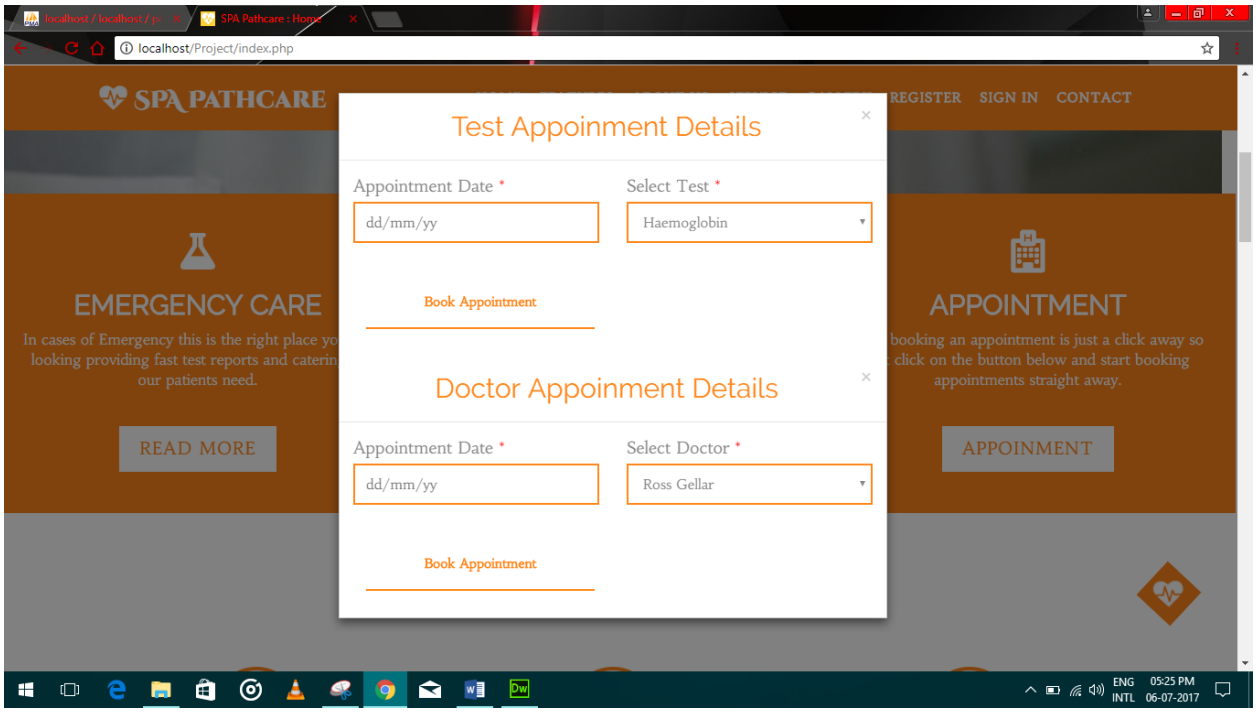
ADMIN LOGIN UPLOAD PAGE



RESPONSIVE GALLERY IMAGES



RESPONSIVE APPOINTMENT BOOKING BUTTON



WHY RESPONSIVE WEBSITE?

We have designed a fully responsive website with the help of bootstrap and jQuery. Now a days smartphones, tablets and other gadgets are most widely used and every user would fancy all web activity to be done through those gadgets. Hence, we have come forward with this idea of a fully responsive website with a responsive menu which automatically fits the website in any screen size and readjusts its components as and when required, be it smartphone, tablet, phablet or any other gadget.

IMPLEMENTATION AND TESTING

IMPLEMENTATION AND TESTING

A software system test plan is a document that describes the objectives, scope, approach and focus of software testing effort. The process of preparing a test plan is a usual way to think the efforts needed to validate the acceptability of a software product. The complete document will help people outside the test group understand the "WHY" and "HOW" product validation. It should be through enough to be useful but not so through that no one outside the test group will read it.

4.1 INTRODUCTION

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

4.2 OBJECTIVES OF TESTING

The objective our test plan is to find and report as many bugs as possible to improve the integrity of our program. Although exhaustive testing is not possible, we will exercise a broad range of tests to achieve our goal. Our user interface to utilize these functions is designed to be user-friendly and provide easy manipulation of the tree. The application will only be used as a demonstration tool, but we would like to ensure that it could be run from a variety of platforms with little impact on performance or usability.

Process Overview

The following represents the overall flow of the testing process:

1. Identify the requirements to be tested. All test cases shall be derived using the current Program Specification.

2. Identify which particular test(s) will be used to test each module.

3. Review the test data and test cases to ensure that the unit has been thoroughly verified and that the test data and test cases are adequate to verify proper operation of the unit.

4. Identify the expected results for each test.

5. Document the test case configuration, test data, and expected results.

6. Perform the test(s).

7. Document the test data, test cases, and test configuration used during the testing process. This information shall be submitted via the Unit/System Test Report (STR).

8. Successful unit testing is required before the unit is eligible for component integration/system testing.

9. Unsuccessful testing requires a Bug Report Form to be generated. This document shall describe the test case, the problem encountered, its possible cause, and the sequence of events that led to the problem. It shall be used as a basis for later technical analysis.

10. Test documents and reports shall be submitted. Any specifications to be reviewed, revised, or updated shall be handled immediately.

4.3 TEST CASES

A test case is a document that describe an input, action, or event and expected response, to determine if a feature of an application is working correctly. A test case should contain particular such as test case identifier, test condition, input data Requirement expected results. The process of developing test cases can help find problems in the requirement or design of an application, since it requires completely thinking through the operation of the application.

TESTING STEPS

UNIT TESTING

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module.

INTEGRATION TESTING

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

VALIDATION

At the culmination of the integration testing, Software is completely assembled as a package. Interfacing errors have been uncovered and corrected and a final series of software test begin in validation testing. Validation testing can be defined in many ways, but a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After validation test has been conducted, one of the three possible conditions exists.

a) The function or performance characteristics confirm to specification and are accepted.

b) A deviation from specification is uncovered and a deficiency lists is created.

c) Proposed system under consideration has been tested by using validation test and found to be working satisfactory.

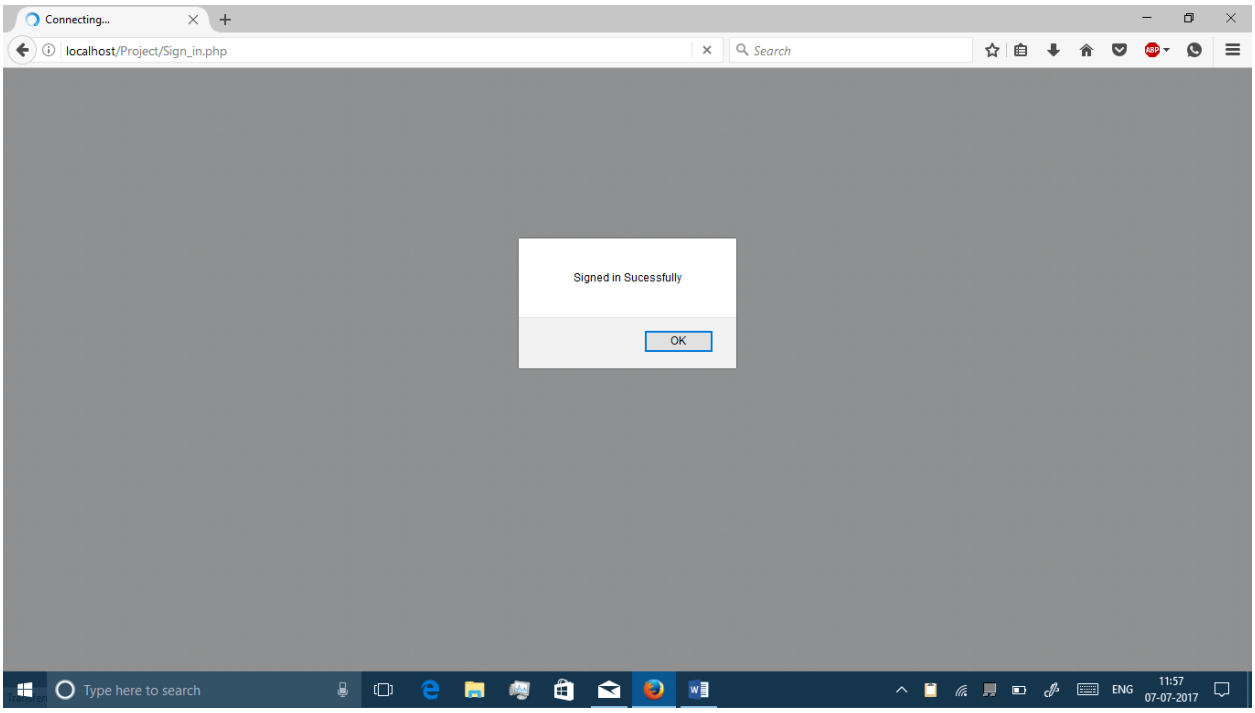
Tested By:	Arya Saumitra
Test Type	Unit Testing
Test Case Number	1
Test Case Name	User Identification
Test Case Description	The user should enter his/ her accurate user id and password so that he/she can able to go for the further options. The test case will check the application for the same since a user can only login with the correct user id and password.

Item(s) to be tested	
1	Verification of the user id and password with the record in the database.

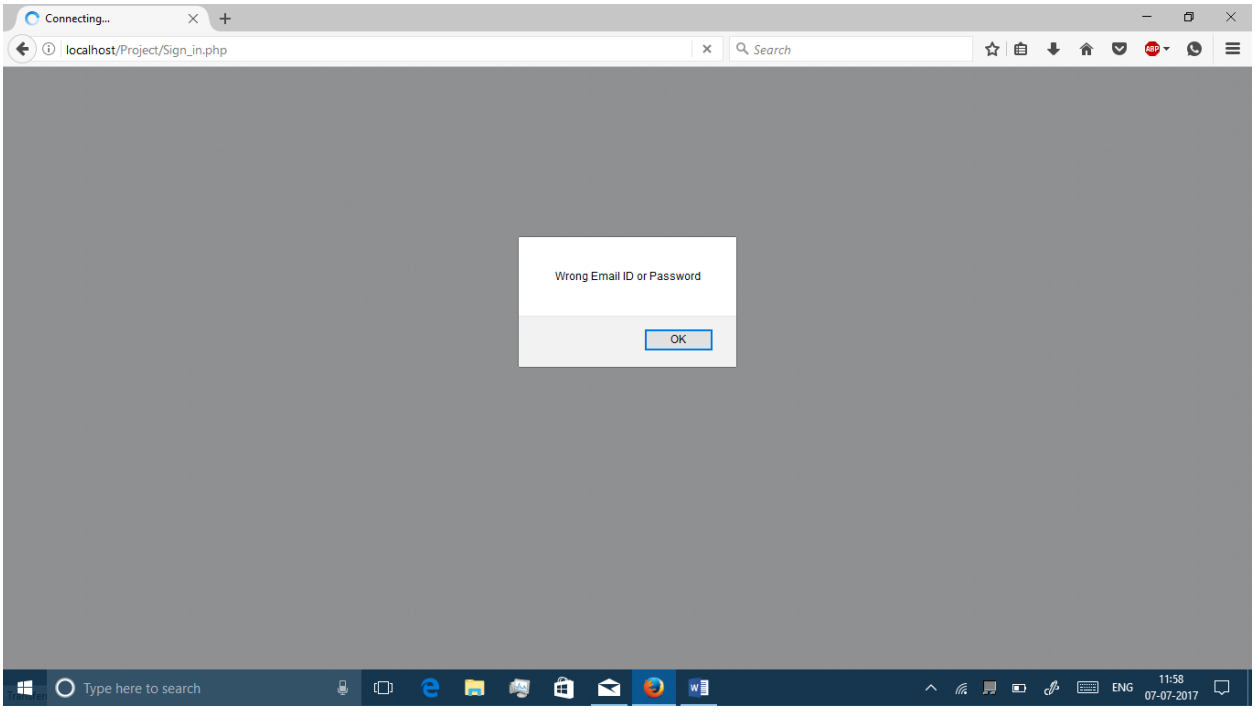
Specifications	
Input	**Expected Output/Result**
1) Correct User id and password 2) Incorrect Id or Password	1) Successful login 2) Failure Message

SNAPSHOT

When User Entered correct details.



When User Entered incorrect details



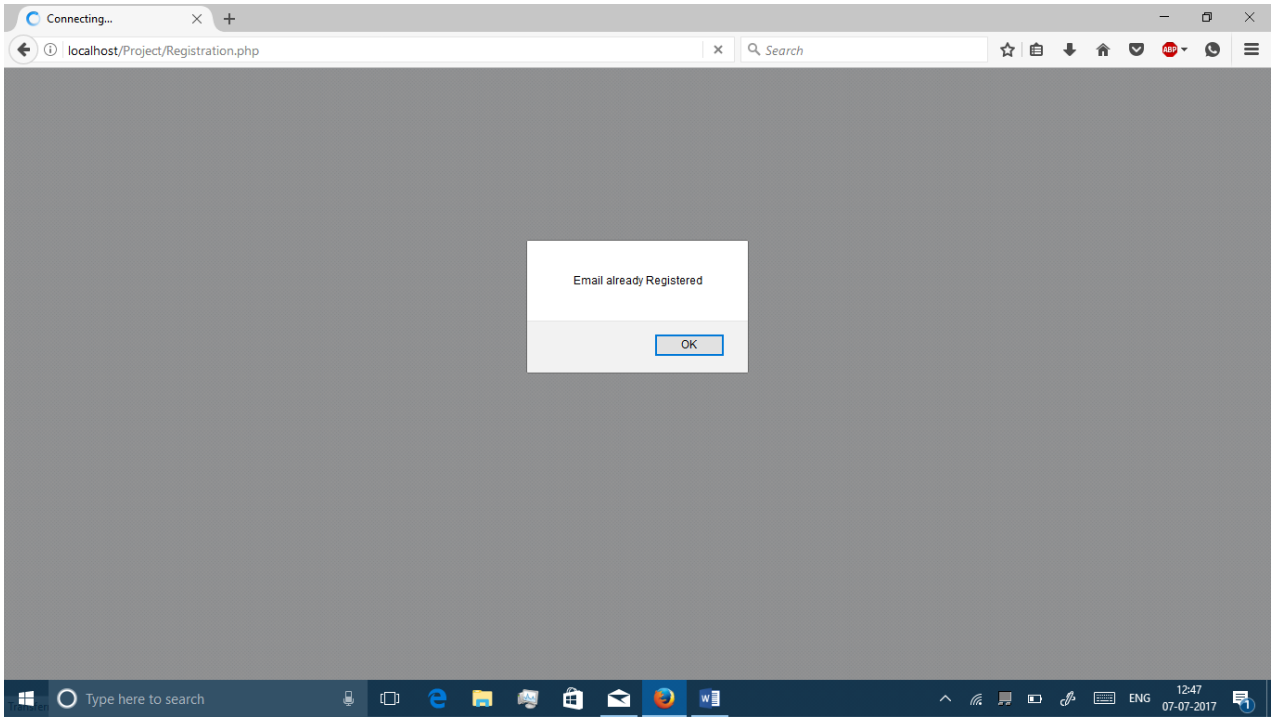
Tested By:	Arya Saumitra
Test Type	Unit Testing
Test Case Number	2
Test Case Name	User Registration
Test Case Description	A new user will enter his details in the registration form and the credentials will be checked by the validators used in the form. After all the credentials are validated then only the form will be submitted and data will be stored in the database

Item(s) to be tested	
1	Required fields in the form are not empty, validation of proper credentials

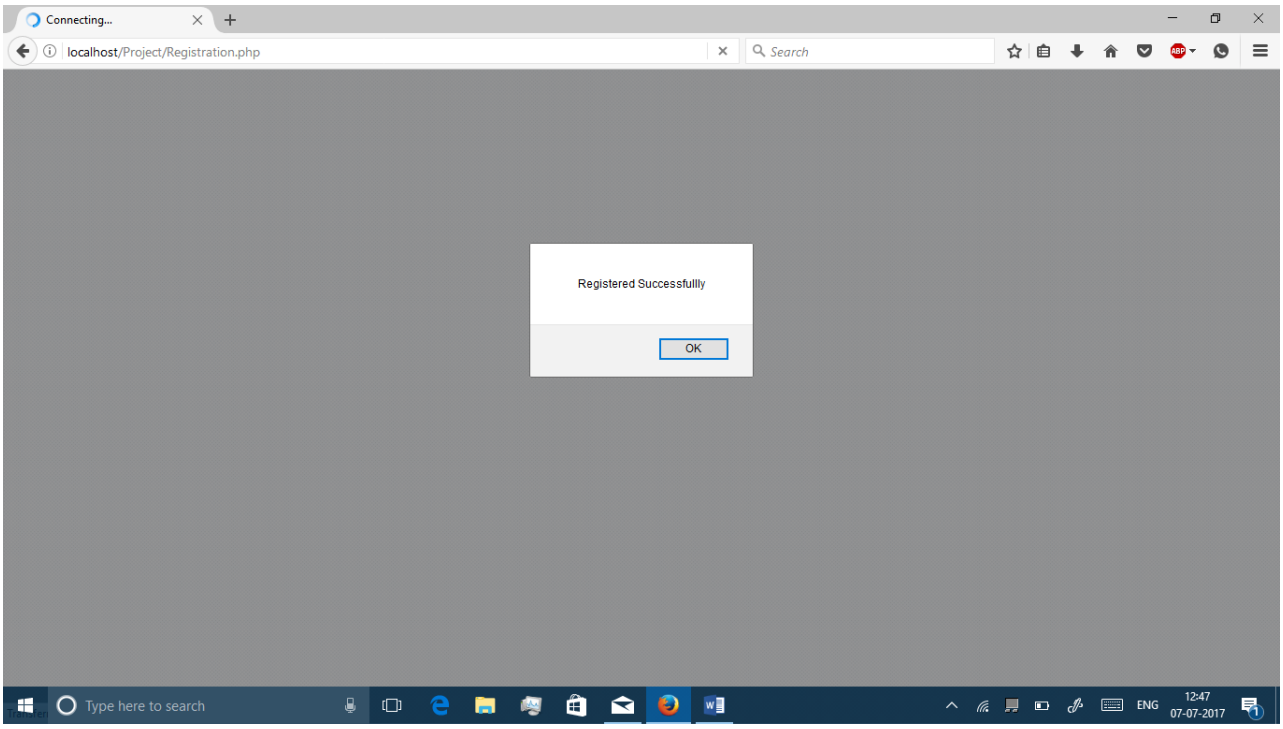
Specifications	
Input	**Expected Output/Result**
1) User id, name, password, phone, address, email. 2) Empty field, Invalid entry	1) Successful registration 2) Failure Message

SNAPSHOT

When User entered already registered Email ID



When User entered all information correctly



4.4 WHITE BOX TESTING

In white box testing, the UI is bypassed. Inputs and outputs are tested directly at the code level and the results are compared against specifications. This form of testing ignores the function of the program under test and will focus only on its code and the structure of that code. Test case designers shall generate cases that not only cause each condition to take on all possible values at least once, but that cause each such condition to be executed at least once. To ensure this happens, we will be applying Branch Testing. Because the functionality of the program is relatively simple, this method will be feasible to apply.

Each function of the binary tree repository is executed independently; therefore, a program flow for each function has been derived from the code.

4.5 BLACK BOX TESTING

Black box testing typically involves running through every possible input to verify that it results in the right outputs using the software as an end-user would. We have decided to perform Equivalence Partitioning and Boundary Value Analysis testing on our application.

System Testing

The goals of system testing are to detect faults that can only be exposed by testing the entire integrated system or some major part of it. Generally, system testing is mainly concerned with areas such as performance, security, validation, load/stress, and configuration sensitivity. But in our case well focus only on function validation and performance. And in both cases, we will use the black-box method of testing.

4.6 OUTPUT TESTING

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the required output in a specific format. The output format on the screen is found to be correct. The format was designed in the system design time according to the user needs. For the hardcopy also; the output comes as per the specified requirements by the user. Hence output testing did not result in any correction for the system.

4.7 USER ACCEPTANCE TESTING

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes whenever required.

This is done in regard to the following point:

a) Input Screen Design

b) Output Screen Design

c) Format of reports and other outputs.

4.8 INTEGRATION TESTING

Software testing is always used in association with verification and validation. In the testing phase of this project our aim is to find the answer to following two questions.

- Whether the software matches with the specification (i.e.process base) to verify the product.

- Whether this software in one client what wants (i.e. product base) to validate the product.

- Unit testing and integration testing has been carried out to find the answer to above questions. In unit testing each individual module was test to find any unexpected behaviour if exists. Later all the module was integrated and flat file was generated.

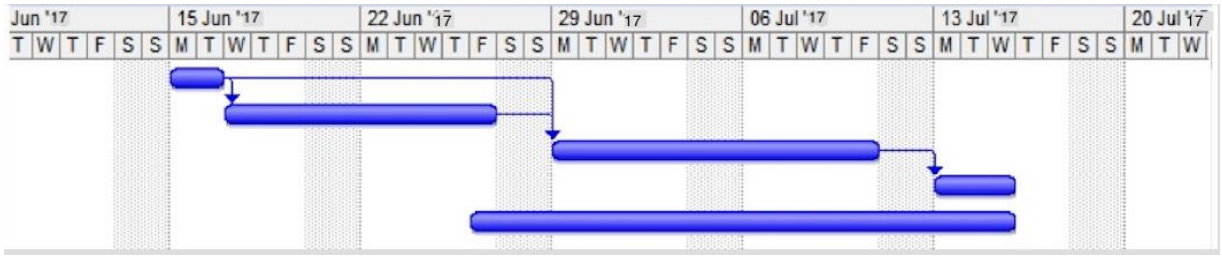
FUNCTIONAL TESTING

These are the points concerned during the stress test:

- Nominal input: character is in putted in the place of digits and the system has to flash the message "Data error"
- Boundary value analysis: exhaustive test cases have designed to create an output report that produces the maximum (and minimum) allowable number of table entries.

5. GANTT CHART

	Task Name	Duration	Start	Finish	Predecessors	Resource Names
3	Project Planning	2d	Mon 15-06-17	Tue 16-06-17		
4	Design	1w 1d	Wed 17-06-17	Fri 26-06-17	1	
5	Coding	1w 3d	Mon 29-06-17	Fri 10-07-17	1,2	
6	Testing	3d	Mon 13-07-17	Wed 15-07-17	3	
7	Verification	2w	Fri 26-06-17	Wed 15-07-17		



SOFTWARE SYTEM ATTRIBUTES

6.1 DATABASE SECURITY

System security measure is meant to be provided to make your system reliable and secured from unauthorized user may create threats to the system. So you should follow some security measures. We have used security levels in database level at system level.

6.2 SYSTEM SECURITY

If we talk about the system security in our proposed system we have implemented with the help of maintain the session throughout the system's use. Once a user has logged out than he/she will not be able to perform any task before signing back again.

A high level of authentic login is given to the system so this is a very tedious task to enter without authorization and authentication.

6.3 LIMITATIONS

- Since it is an online project, customers need internet connection to use it.
- People who are not familiar with computers can’t use this software.
- Customer must have their medical background before booking appointments.

7. CONCLUSION

This project has been appreciated by all the users in the organization. It is easy to use, since it uses the GUI provided in the user dialog. User friendly screens are provided.The usage of software increases the efficiency, decreases the effort. It has been efficiently employed as a Site management mechanism. It has been thoroughly tested and implemented.

The project **"online clinic system"** is the ideal place for everyone for their medical needs. It will provide user the benefit of booking online appointments just with a click sitting in his home without having to make the long walk and standing in queues.

The software collects basic information of the user and it provides a secure link for all kinds of bookings online. The software provides a reliable platform for keeping all sensitive information. For this kind of online business, the special software must be installed on the server which host the site, or on a secure server which receives all sensitive data.

8. FUTURE SCOPE AND FURTHER ENHANCEMENTS

In future, we would like to keep working on this project and make new additions to provide users with more advanced features and more detailed information. We have set our sights on the following additions in future-

1. Addition of new and updated tests.

2. Home delivery system of reports.

3. Addition of new doctors.

4. User will have an option of buying medicine online through our shopping system we will introduce.

9 REFERENCES

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3. https://www.scribd.com
4. https://www.tutorialspoint.com
5. https://www.youtube.com

THANK YOU