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ANKIT SINGH

Abstract

Book My Electrician is a modern way and improved method in which User can easily find all Electrician's information, who are nearby us without manual efforts. Most people now days doesn't like travel to find Electrician, hence this project aims at simplifying their needs by offering a wide range of timings where they can choose from nearby and book their Electricians. The online Booking system gives all details of Electrician, cost, availablity and service detail bar making it easier for the user.

The outcome was implemented using programming languages like: Hyper Text markup Language (HTML), Cascading Style Sheet (CSS), JavaScript (JS), Google Map's API and database management system {MySQL}, this improved method will help solve the manual system drawbacks which included time consuming and other manual errors.

Hence it is more efficient Keywords: Book My Electrician, Online Electrician Booking.

1. INTRODUCTION ABOUT PROJECT

1.1 INTRODUCTION OF PROJECT

Electrical appliances and electrical Faults is an integral part of our social living. The modern society cannot known about best electrician services. There are many Websites and APP who give Electrician services to the individual and corporate users. In the current system, the user first contacts with the Electrical services provider company for getting electricals service. Then company contact the Electricals shop near that location and books the electrician for him on the requested date and time and then sends the Electrician to his place at the time but it takes so much time.

The Book My Electrician system is the online service which will automate the process of booking an electrician and will facilitate both the user and the company with reduced time and efforts. First the company will register his Electricians to the system. Then the user will request for booking an electrician on his required date and time, providing all necessary information. The fare will be calculated and user should confirm it. Then Electrician will go for serves the electric fault on the specific date and time or instantly. Finally the user will have an opportunity to give a feedback for the service he got. The Book My Electrician system Admin can check it and take appropriate action for the future improvements.

1.2 OVERVIEW OF PROJECT

The Book My Electricioan project is an implementation of a general Booking website like OLA, which helps the customers to search the availability and prices of various Cabs , along with the different packages.

This project also covers various features like online user Login and Electrician registration, modifying the details of the website by the management staff or administrator of the website, by Adding, Deleting or modifying the Electrician details.

In general, this website would be designed to perform like other website available online, but Our main focus to provide instant Electrician near you.

1.3 OBJECTIVE OF THE PROJECT

- To help Local Electrician in growing their services more efficient.
- > To provide employment for Local areas Electrician.
- > An added attraction for their potential User.
- It will also show the attitude of the management that they are aware to the newly introduced technology and ready to adopt them.

1.4 PURPOSE

The purpose of this SRS document is to specify software requirements of the Online Book the Electrician. It is intended to be a complete specification of what functionality the system provides. The main purpose of the system is to automate the process of book an Electrician online. Specific design and implementation details will be specified in a future document.

2. SCOPE, REQUIREMENT AND FEASIBILITY

2.1 SCOPE OF THE PROJECT

The Online Electrician booking system creates a user-friendly interface between a User, Electrician and administration to facilitate easy communication through software.

This project is the automation of finding process of Electrician in Book My Electrician system. The system is able to give much information like Electrician's information, Calculate the fare time, Distance between User & Electrician, etc.

The data used by the system is stored in a database that will be the center of all information held users and Electrician and the base for the remainder of the process after the initial website has been made. This enables things to be simplified and considerably quickened, making the jobs of the people involved easier. It supports the current process but centralizes it and makes it possible fordecisions to be made earlier and easier way.

2.2 REQUIREMENTS

To run this project successfully it is required that certain software and hardware requirements should be kept in mind. Following are the requirements:

2.2.1 Hardware Requirements:

- Pentium II to IV
- ➤ Ram –32MB
- ➤ H. D. space 4xGB
- **➢** FD
- ➤ CD ROM DRIVE 52x
- > 1 GB of RAM Network interface

2.2.2 Software Requirements:

2.2.2.1 Front-End Requirement:

- Hyper Text markup Language (HTML),
- Cascading Style Sheet (CSS),
- JavaScript (JS)
- NodeJS

2.2.2.2 Back-End Requirement:

- MySQL/ XML
- > JAVA
- Google API
- > File Handling

2.3 FEASIBLITY

A feasibility study is carried out to select the best system that meets the performance requirements.

Feasibility is the resolution of whether or not a project is worth doing. The process followed in making this resolution is called a feasibility study. This type of study determines if a project can and should be taken.

Since the feasibility study may lead to the commitment of large resources, it becomes necessary that it should be conducted efficiently and competently and that no any fundamental errors of judgment are made.

Depending on the results of the initial investigation, the survey is expanded to a more detailed and explained feasibility study. Feasibility study is a test of system proposal according to its effective use of resources, workability, effect on the organization and the ability to meet user and electrician needs.

The objective of the feasibility study is not to solve the problem but to acquire a sense of its scope. During the study, the problem definition is crystallized and aspects of the problem to be included in the system are determined.

Consequently, costs and benefits are described with greater accuracy at this stage. It consists of the following:

I. Statement of the problem:

An attentive worded statement of the problem that led to analysis.

II. Summary of findings and recommendations:

A list of the major findings and recommendations of the study are made with a lot of considerations. It is useful for the user who requires quick access to the results of the analysis of the system under study. Conclusion are made, followed by a list of the recommendation for them.

III. Details of findings:

An outline of the procedures and methods under-taken by the existing system, followed by coverage of the procedures and objectives of the candidate system. Included are also discussions of file structures, output reports, and costs and benefits.

There are three key considerations of feasibility study which are

- 1. Operational feasibility
- 2. Behavioral feasibility
- 3. Technical feasibility

2.3.1 Operational Feasibility:

Operational analysis is the most frequently used method for evaluating the effectiveness of a system. More commonly known as cost/ benefit analysis, the procedure is to determine the benefits and savings that are expected from a system and compare them with cost.

Earlier the work was done manually which takes a lot of people/labor as well as a lot of time which is more economical. Now the same work is computerized which is more efficient and effective, doesn't

consume a lot of time, reduces labor/manpower which in turn proves to be less economical and saves time.

2.3.2 Technical Feasibility:

Technical Feasibility bases on the existing computer system (software and hardware) and also it can support any modification that can be made.

In manual processing there are more chance of errors are there, creating lot of complications, less technical or logical. Through proposed system we can set this process in a very systematic pattern, which is more technical, safe and reliable with full proof and more authentic

2.3.3 Behavior Feasibility:

Our proposed system works to minimize the human errors that can happen, take less time to work on everything easy interaction with user and most of all bug free.

3. FUNCTIONAL AND SPECIFICATION REQURIMENTS

3.1 Administrator Aspect

- Perform weekly roster of Employees
- Print reports annually, weekly, and daily
- Check feedbacks
- Send newsletters
- Manage Electrician portfolio
- Changing the super password.

3.2 Electrician Aspect

- Logging into the system.
- To check their rosters.
- Maintain daily logs
- Select availability.
- Check online bookings and accept/reject option

3.3 User Aspect:

- Make a booking
- Check their booking status
- ❖ Fair calculation
- History of last electrician
- Changing password.
- Resetting of forgotten password.

3.4 Analysis

- ❖ Authenticating Electrician based on username and password.
- * Keeping session track of Electrician activity.
- * Recording user's request for booking.
- Checking whether the Electrician is available for booking.
- * Keeping history of bookings.
- Keeping record of feedbacks received from the users.

3.5 Mailing

- Temporary password will be mailed to registered Email I'd of the User & Electrician in case they forgets the passward.
- Newsletters should go the users email addresses.
- The user should get notification email of the booking while confirmed.

3.6 Performance

Some Performance requirements identified is listed below:

- ❖ The database shall be able to accommodate a minimum of 10,000 recordsof users.
- ❖ The software shall support use of multiple users at a time.
- ❖ There are no other specific performance requirements that will affect development.

3.7 Security

Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Specific requirements in this area could include the need to:

- Utilize certain cryptographic techniques
- Keep specific log or history data sets
- Assign certain functions to different modules
- * Restrict communications between some areas of the program
- Check data integrity for critical variables
- Later version of the software will incorporate encryption techniques in the Electrician /license authentication process.
- ❖ The software will include an error tracking log that will help the user.
- Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

3.8 Portability

Some of the attributes of software that relate to the ease of porting the software to other host machines and/or operating systems. This may include:

Apache is used to develop the product. So it is easiest to port the software in any environment.

Maintainability

 The Electrician will be able to reset all options and all stored Electrician variables to defaultsettings.

Reliability

Some of the attributes identified for the reliability is listed below:

- All data storage for user variables will be committed to the database at the time of entry.
- Data corruption is prevented by applying the possible backup procedures and techniques.

Usability requirements

Some of the usability requirements identified for this system are listed below:

- A logical interface is essential to an easy to use system, speeding up common tasks.
- Error prevention is integral to the system and is provided in a number of formats from sanity checks to limiting free-text input.

Availability

• All cached data will be rebuilt during every startup. There is no recovery of user data if it is lost. Default values of system data will be assigned when necessary.

Software System Attributes

- There are a number of attributes of software that can serve as requirements. It is important that required attributes by specified so that their achievement can be objectively verified. The following items provide a partial list of examples.
- The input system will allow for inputting numbers, operands, special symbols and letters of the alphabet.

3.9 INTERFACE REQUIREMENTS

***** Technologies:

- o This section lists all the technologies for the web based system.
- PHP scripting for server side scripting as it has a very strong support for MySQL.
- O **SQL** as database format: The database's performance requirements are not very high and the ability to have custom fields in case the application form needs to add more than expected requirement. This is limited in any other database management system where we have to first specify the maximum

number of fields.

O Apache as web server has a tight integration with PHP and is also available for various popular platforms.

4. Software

- o Macromedia Dreamweaver
- o PHP

Hardware

The recommended hardware specified by the respective software would suffice the needs. The memory and processing power needed would increase as the number of users increase. The estimated hardware requirements are as specified. **Server**

The minimum hardware as recommended by all of the software required on server side say web server, operating system and development software

- o Processing speed of 1.6 GHz
- o 1 GB of RAM Network interface

❖ User

- The minimum hardware as recommended by all of the software required on user side say web browser, operating system
- o Minimum hardware depending on the operating system used
- o True colour visual display unit
- User peripherals for better interaction

5. SYSTEM ANALYSIS

The system analysis phase is regarded to be one of the most important phases in the system development life cycle. It is extremely important that the software developer make thorough study of the existing system. Thorough study of the system is made and need i.e., features that are evaluative to system success and users wants (i.e., features that would be good but not essential) are brought out. The study will enable the developer to know the complexities of the existing system.

Requirement analysis is done in order to understand the problem which the software system is to solve e.g., the problem could be computerizing the existing manual system or developing a completely new automated system or a combination of the two. For large systems having a large number of features and the need to perform many different tasks, understanding the requirement of the system is an important and major task. The significance in requirement analysis is on identifying what is needed from the system and not how the system achieves its goal.

The main purpose behind any business organization is to maximize its profit besides maintaining quality and strategic standards. This can be achieved by improving the efficiency and effectiveness of the system by providing more facilities using automation, by adopting faster data access, proper communication, whereas the main aim behind automation is not only to maximize profit but also to take care of passenger's interest by providing them better and more comfortable facilities.

The most important objective behind automation is to minimize Paper Work. Paper Work/Registers are replaced by a Centralized Data Bank, which is well equipped to store and provide information as and when required. This Data Bank also helps speed up the communication between various departments outside agencies, as there is no need of making request against different departments for a specific data and to wait for it for a long period of time. This also improves the efficiency and it saves time and human resources.

By making the manual system computerized, we can ensure complete utilization of our existing resources. Automation helps in generating the reports and information in a consistent way, which saves time and labor/manpower if done manually.

4.1 SDLC MODEL

In this project we have followed the Waterfall model. The waterfall model is the most familiar model. This model has five phases: requirements analysis and specifications, design, implementation and unit testing, integration and system testing, and operation and maintenance.

I. Requirements Analysis and Specification Phase:

The aim of this phase is to understand the exact requirements of the customer and to document them properly. This activity is usually executed together with the customer, as the aim is to document all functions, performance and interfacing requirements for the software.

II. Design phase:

The aim of this is to modify the requirements specification into a structure that is suitable for implementation in any programming language.

III. Implementation and Unit Testing Phase:

During testing, the major activities are concentrated around the examination and modification of the code. Initially, small modules are tested in isolation from the rest of the software product. The objective of unit testing is to oversee that each independent module is correctly implemented. This gives little chance to determine that the interface between modules is also correct, integration testing is performed.

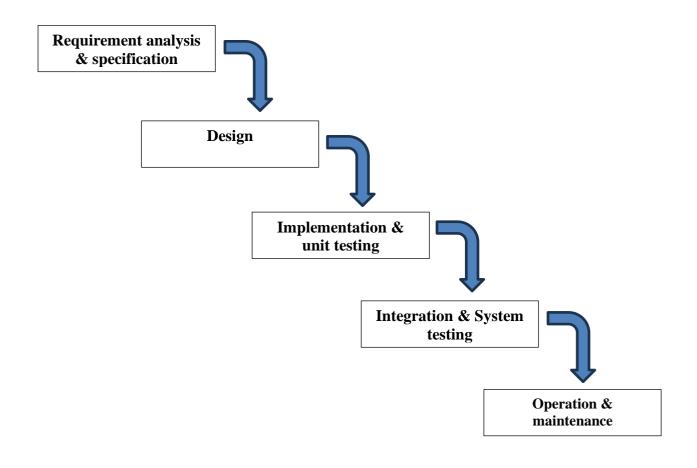
IV. Integration and System Testing Phase:

System testing involves the testing of the whole system including the software part. This is important to build confidence in the developers before software is delivered to the customer or released in the market.

V. Operation and Maintenance Phase:

Software maintenance is a duty that every development group has to face, when the software is delivered to the customer's site, installed and is operational. Therefore, release of software initiates the operation and maintenance phase of the life cycle. The time spent and effort required to keep the software operational after release is very important.

4.2 SDLC DIAGRAM: -

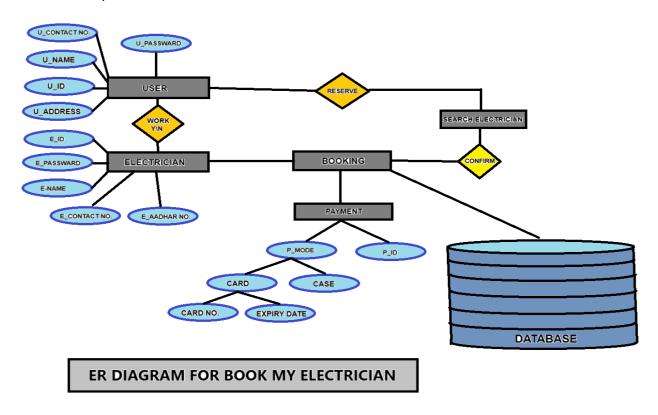


5. SYSTEM DESIGN

For Electrician Booking system project, we have different diagram that justify the project. These include;

1) ENTITY RELATIONSHIP DIAGRAM (ERD)

Is the graphical representation of data object relationship which include entity, relationship and attribute.



5.1.a ER Diagram of Book My Electrician

5.1 DATABASE TABLE STRUCTURE

Database Name ;- BOOK_MY_ELECTRICIAN

Sample Tables Name:

- Bill_Generation
- Electrician_Booking
- Electrician_Detail
- User_Detail

5.1.1 ELECTRICIAN DETAILS TABLE

| Field | Field code | Field size | Data | Description | Constraints |
|-----------|------------|------------|---------|-------------------------------------|-------------|
| | | | type | | |
| E_id | Id_code | 11 | varchar | Displays Electrician id | Primary key |
| Name | Id_code | 128 | varchar | Displays Name of electrician | NOT NULL |
| gender | Id_code | 6 | varchar | Displays Electrician gender | NOT NULL |
| Address | Id_code | 255 | varchar | Displays Electrician gender | NOT NULL |
| Mobile_no | Id_code | 10 | int | Display phone number | NOT NULL |
| Address | Id_code | 20 | varchar | Display address of Electrician | NOT NULL |
| Aadhar No | Id_code | 12 | int | Display Aadhar no of Electrician | Super key |
| passward | Id_code | 12 | int | Display passward | NOT NULL |



5.1.2 USER TABLE:

| Field | Field code | Field size | Data type | Description | Constraints |
|----------|------------|------------|-----------|------------------------------|-------------|
| USER_ID | ld_code | 20 | int | User ID | Primary key |
| Name | ld_code | 20 | varchar | Name of User | NOT NULL |
| Mobile | ld_code | 10 | int | Mobile Number of User | NOT NULL |
| Address | ld_code | 20 | varchar | Total Electricians available | NOT NULL |
| Email_ID | ld_code | 50 | Varchar | Email ID | NOT NULL |
| Passward | ld_code | 50 | Varchar | Login passward | NOT NULL |

5.1.3 BILL GENERATION TABLE

| Field | Field code | Field size | Data type | Description | Constraints |
|---------------|------------|------------|-----------|-------------------------|-------------|
| User id | U_ID | 20 | varchar | Displays user id | Not null |
| Bill id | B_ID | 20 | varchar | Displays bil id | Primary key |
| Bill amount | BILL_AMT | 20 | Varchar | Shows total bill amount | NOT NULL |
| Paymentdate | PAY_DATE | 20 | varchar | Date of payment | NOT NULL |
| Username | U_NAME | 20 | varchar | Display user name | NOT NULL |
| Mobile number | UMOB_NO | 20 | varchar | Displays number of user | NOT NULL |

5.1.4 ELECTRICIAN BOOKING TABLE

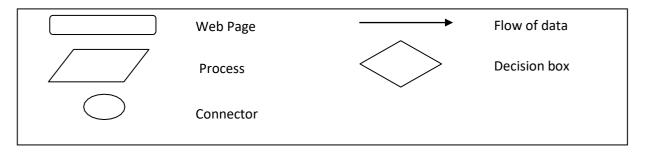
| Field | Field code | Field size | Data type | Description | Constraints |
|-------------------|------------|------------|-----------|---|-------------|
| Date_of_booking | ld_code | 20 | varchar | Includes date of booking of electrician | NOT NULL |
| Booking_id | ld_code | 20 | varchar | Shows aunique booking id | Primary key |
| User_id | ld_code | 20 | Varchar | Shows user id | NOT NULL |
| Bill_id | ld_code | 20 | varchar | Shows bill id | NOT NULL |
| Service_address | ld_code | 20 | varchar | Displays service address | NOT NULL |
| Permanent_address | ld_code | 20 | varchar | Displays permanent address | NOT NULL |
| Name | ld_code | 20 | varchar | Displays name of user | NOT NULL |
| Phone_number | ld_code | 20 | int | Displays number of user | NOT NULL |

2) FLOW CHART

This diagram is a special kind of diagram that shows the flow from activity to activity within a system. Activity diagrams address the dynamic view of a system. They are especially important in modeling the function of a system and emphasize the flow of control among objects. An activity is an ongoing monatomic execution within a state machine. Activities ultimately result in some action that is made up of executable atomic computations that result in a change in state of the system or a return of a value.

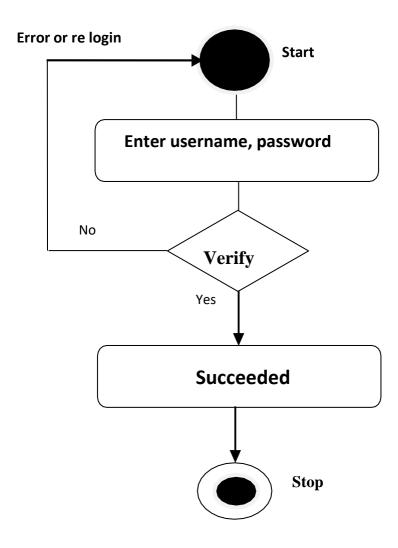
- a. Activity states and action states action states are executable atomic computations. They are the states of a system each representing the execution of an action. Action states are atomic i.e., events may occur but the work of the action state is not interrupted. Activity states are not atomic i.e., they may be interrupted and they take some time to complete. An action state is a special case of an activity state.
- **b. Transitions** they represent the path from one action or activity state to the next action or activity state. It is denoted by a simple directed line.
- c. Objects objects can also be involved in the flow of control associated with anactivity diagram. Not only the flow of an object through the activity diagram, but

how its role, state and attribute values change can also be depicted



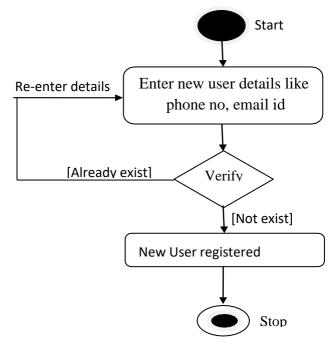
5.2.a Components of flow chart Diagram

5.2.1 LOGIN FLOW CHART DIAGRAM



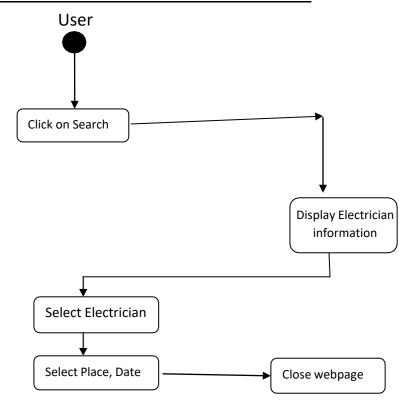
5.2.1 Login Flow Diagram

5.2.2 REGISTRATION FLOW CHART DIAGRAM



5.2.2 Registration Flow Diagram

5.2.3 ELECTRICIAN SEARCH FLOW CHART DIAGRAM



5.2.3 ELECTRICIAN SEARCH Flow Diagram

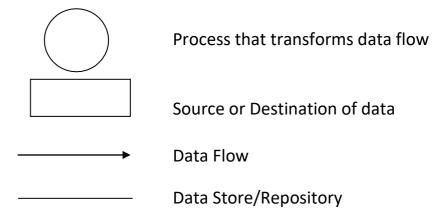
5.2.4 BILL PAYMENT FLOW CHART DIAGRAM: success login verify Display login Re-enter user's page failure login details Bill payment Display bill Enter bill payment details Enter user ID Credit card info Submit Enter bill details Display no No verify yes_l updation Sent mail Confirmation message Logs out 5.2.4 Bill Payment Flow Chart Diagram

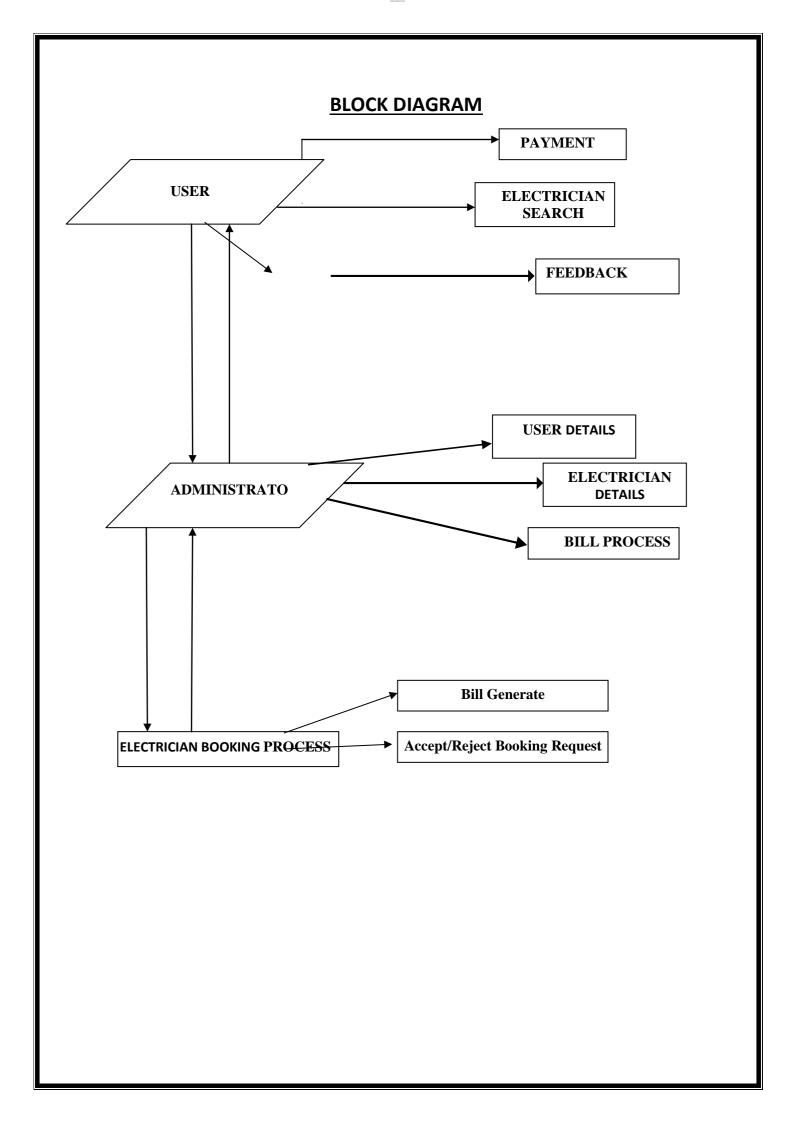
3) DATA FLOW DIAGRAM (DFD)

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). The DFD is also known as a Data Flow Graph or a Bubble Chart.

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

A DFD provides no information about the timing 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.

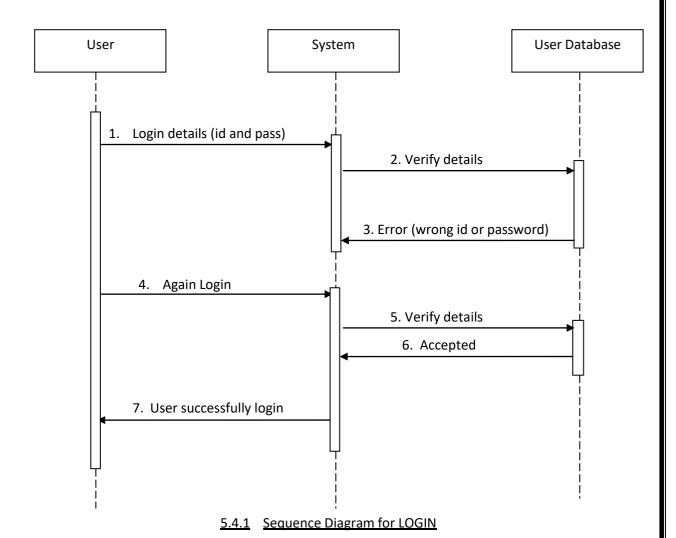




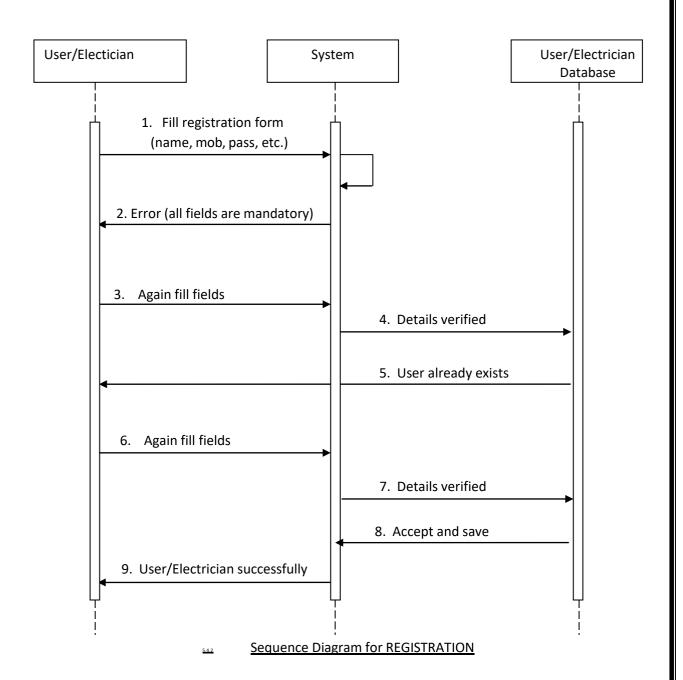
4) **SEQUENCE DIAGRAM**

Is the diagram that elaborates on the data transfer from the user to the amines through their corresponding actions.

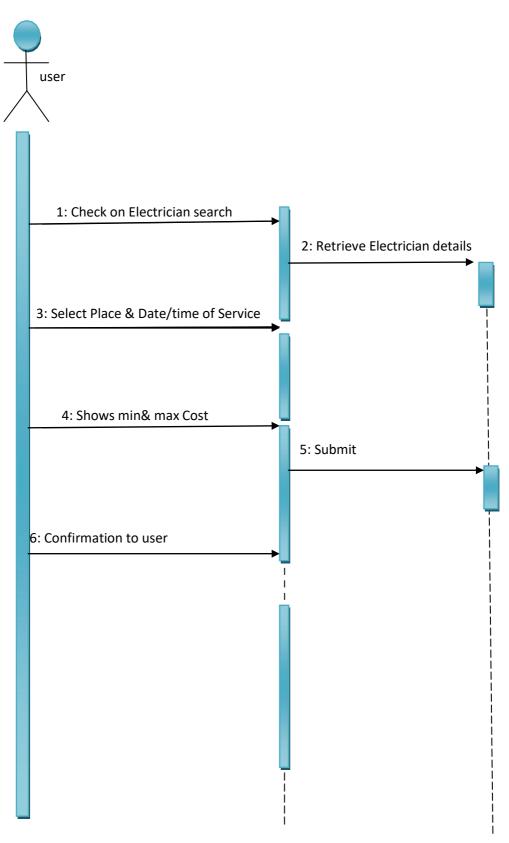
5.4.1 SEQUENCE DIAGRAM FOR LOGIN



5.4.2 SEQUENCE DIAGRAM FOR REGISTRATION



5.4.3 SEQUENCE DIAGRAM FOR ELECTRICIAN BOOKING



5.4.3 Sequence Diagram for Electrician Booking

6. All Webpages Design Layout with brief descriptions

6.1 HOME PAGE:



6.1 Home Page:

6.2 ELECTRICIAN BOOKING PAGE:

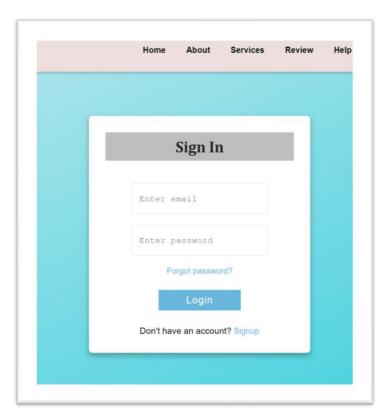


6.2 Electrician Booking page:

6.3 SIGN UP PAGE:

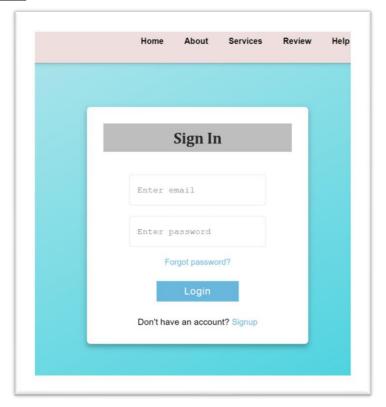


6.3.1 Electrician sign up page:



6.3.2 User sign up page:

6.4 LOGIN PAGE:

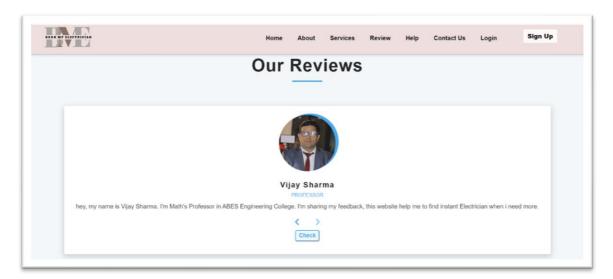


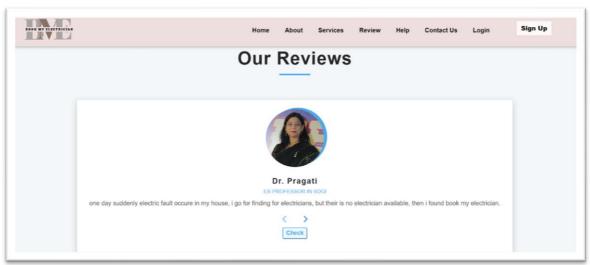
6.4.1 sign In page:

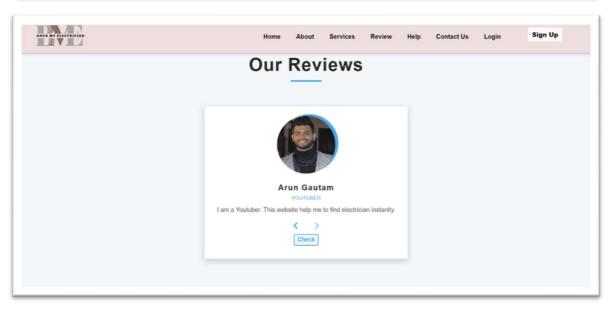


6.4.2 Forget Password page:

6.5 REVIEW OF USER'S ON PAGE:







7. LIMITATIONS AND FUTURE SCOPE OF PROJECT

7.1 LIMITATIONS

> Time and speed

These are dependent problems whereas by having slow speed that could be caused by having internet problem that could lead to delay of booking an Electrician, check in leads to either delay fare time or time wastage at the counter.

Security problem

Since the reservation occurs online there might be with security bleach or hacking of information thus leads to misleading of passengers.

Costly

By having to maintain data whereas each data from every branch has to be maintained and stored where as their copies.

Skilled labour

Since the whole process requires people computer course in case of maintenance of documents and operating it becomes a challenge to the ones that desire working to the sector with no high education experience.

> High cost

Having most of the process done online it leads to high charges where as you have to pay for the service charges that are included in final ticket payment also at the same time you have to pay for the internet used.

7.2 FUTURE SCOPE OF THE PROJECT

- ➤ By having this system, it helps the Electrician to update and save in the Services and schedules at different timings whereas the user want the services that would help them have a comfortable Services.
- Moreover, for the future purpose this project is to reach and being understood even by the rural people whereas by development of this project we might use scan codes and applications,
- whereas all this is possible by having internet thus having sufficient infrastructure to provide them with internet that could help them save time finding to the Shop to meet the Electrician.

8. **CONCLUSION**

Information Technology plays a vital role not only in a particular field, it provides various kinds of services solutions to the various problems prevailing in home appliances. Electrician exploit information technology at the maximum extent. It uses the information technology in an efficient way for providing better Electricals services. The online Electrician booking system helps to solve to finding the instant Electrician problem near you. It also Provide the employment for the electricians.

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- https://www.urbancompany.com/