

St Agnes College (Autonomous), Mangalore

A Project Report On:

"Stay Home – Home Services"

MASTER OF COMPUTER APPLICATIONS 2023-2024

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DECLARATION

I hereby declare that the project entitled "Stay Home – Home Services" is a genuine work in the partial fulfillment of the requirement for the curriculum of 4th Semester, Master of Computer Applications, St. Agnes College (Autonomous), Mangalore. It is an authentic project record of work carried out by me during the period of 2023 - 2024 under the guidance of Mrs Baji Raina Banu.

It is also declared that the matter embodied in the project work is original and has not been submitted by me to any other university wholly or partly.

AFRA FATHIMA - 2284061

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For her constant support and direction during my Master of Computer Applications (MCA) course, I am incredibly appreciative to

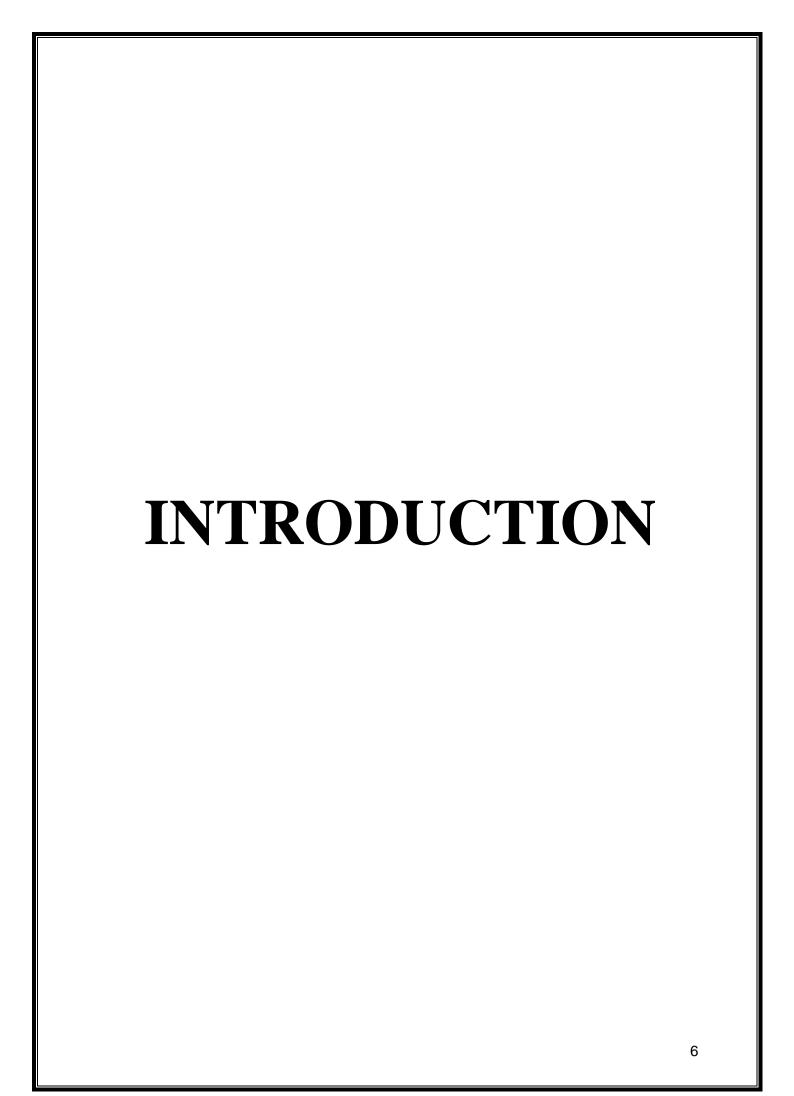
Mrs. Panchajanyeswari, Head of the Department of Computer Applications at St. Agnes College Mangalore (Autonomous). Her insightful knowledge and vast experience have greatly influenced my academic career.

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1. INTRODUCTION:

1.1 INTRODUCTION OF THE SYSTEM

"Stay Home" is an all-inclusive portal for home services that links professionals with the expertise and trustworthy services they require. "Stay Home" makes sure that customers can quickly locate and schedule skilled professionals in their region for any type of domestic task, including painting, plumbing, electrical, and other maintenance. With just a few clicks, buyers can browse services, read reviews, and make appointments on the site, which also gives service providers a chance to highlight their experience and handle bookings. All parties engaged in home maintenance can rest easy knowing that "Stay Home" has streamlined the entire process with its secure login system, smooth communication, and effective booking administration.

1.1.1 Project Title:

Stay Home – For Home Services

1.1.2 Category:

Web-based Application

1.1.3 Overview:

An easy-to-use online platform called "Stay Home" links homeowners with reliable contractors for necessary house maintenance such as painting, plumbing, and electrical work. Local professionals may be easily located and booked by clients, and service providers can highlight their abilities, control their schedules, and charge fair rates. The platform makes home care easy and stress-free for all parties involved by providing a secure login, streamlined communication, and an easy booking process.

1.2 BACKGROUND

1.2.1 Brief note on Existing System:

Finding trustworthy home service providers in the conventional system frequently requires physical labor, word-of-mouth referrals,

or searching through numerous unreliable sources. Consumers usually have to look for contacts, haggle over costs, and rely on scant details regarding the caliber and dependability of the service provider. There is no simple method to compare services, verify availability, or read user feedback, so this can be a time-consuming process. Furthermore, there is often no efficient way for clients and service providers to schedule, reschedule, or manage appointments together, leading to disorganized communication. These restrictions cause services to be delayed, prices to be unclear, and managing domestic chores to be generally inconvenient. The digital infrastructure required to streamline the experience for service providers and customers is absent from the current system.

1.3. OBJECTIVES

Simplify Service Discovery: By providing a user-friendly interface that allows customers to easily search for home service providers based on location and specific service needs, you cater to the primary concern of users looking for quick solutions. This ease of navigation reduces frustration and helps users find what they need promptly, enhancing overall satisfaction.

Boost Service Provider Visibility: Enabling service providers to list their offerings and showcase their expertise not only benefits them by increasing their reach but also enriches the customer experience. When customers can view a variety of providers and compare their skills and prices, they can make informed decisions, which leads to higher conversion rates and satisfaction.

Simplify the Booking Process: A seamless booking process that allows customers to compare reviews, check availability, and schedule appointments easily minimizes manual intervention. This convenience not only saves time but also enhances the user experience, making customers more likely to return for future bookings and recommend the platform to others.

Ensure Secure User Authentication: Implementing a secure login and authentication system is crucial for protecting user data and privacy. By ensuring that both service providers and customers have secure access to their accounts, you build trust in your platform. This trust is essential for retaining users and encouraging them to share their information and preferences.

Enhance Booking Management: Providing service providers with a user-friendly interface to manage bookings, availability, and client relationships empowers them to operate

efficiently. This capability allows service providers to focus on delivering quality service rather than getting bogged down in administrative tasks, ultimately leading to better service quality and customer satisfaction.

Enhance the Whole Customer Experience: By creating a reliable, one-stop-shop for expert home services, your platform addresses a significant pain point for customers: the hassle of finding and managing service providers. By simplifying the entire process—from discovery to booking to feedback—you position your platform as a valuable resource for customers, improving their overall experience and fostering loyalty.

1.4 SCOPE:

Customers and service providers will have a smooth experience using the "Stay Home" platform. Customers will be able to simply browse for home services like painting and plumbing, make appointments, and leave reviews thanks to its user registration, integrated booking system, and service listings. Service providers will effectively manage their bookings, pricing, and listings. In the future, payment integration and a secure communication route will be provided by the platform. An admin dashboard will also monitor quality control and user activities. "Stay Home" is fully responsive to mobile devices and built to evolve with you.

1.5 SYSTEM ARCHITECTURE

The technique or art of specifying a system's architecture, parts, modules, interfaces, and data in order to meet predetermined requirements is known as system design. It may be viewed as the product development of systems theory. The fields of systems analysis, systems architecture, and systems engineering share certain similarities.

The goal of system design is to determine which modules are required for the system and how their requirements should be coupled.

1.6 END USER

1. Admin Module

- Admin Login: Login with admin username and password to safely get into the platform.
- Add Classification and Sub-classification: For services provided on the platform, the administrator can establish and oversee categories and subcategories (e.g., Plumbing, Electrical, Painting). This guarantees that services are arranged in a way that facilitates clients' search for the services they require.
- **View All Orders**: Administrators have access to every service order that a client places. This entails monitoring each order's progress and handling any disputes that might

- emerge between clients and service providers.
- **Billing Information:** The billing data for customers and service providers is accessible to the administrator. This entails keeping an eye on the payments made for rendered services and guaranteeing accurate recording and processing of transactions.
- **User Creation:** Admins are able to create and oversee user accounts, particularly those belonging to service providers. They guarantee that service providers are authenticated and possess the required authorization to perform services on the platform.
- **View Feedback**: Administrators have access to reviews and ratings left by clients for service providers. This aids in preserving the platform's service quality and resolving any problems pertaining to poor service or unsatisfied users.
- **Logout:** After completing their tasks, they can log out of the platform.

2. Service Provider Module

- **Sign in**: Service providers utilize their username and password to safely log into the platform. They may monitor orders, manage their services, and communicate with clients after logging in.
- **View Orders:** A list of all incoming customer support requests is visible to service providers. Depending on their capacity and availability, they can view the specifics of each request and determine whether to accept or reject it.
- Add Service: Service Providers are able to list all of the services they provide on the platform, along with information on availability, cost, and service descriptions. This enables them to get in touch with clients who are looking for localized home services.
- **Billing Details**: Providers are able to view their own billing information, including funds received for completed work. They can better manage their finances and profits thanks to this.
- **Customer Request Authorization:** Customer service requests are subject to approval or rejection by service providers. They can effectively manage their calendars thanks to this function, which guarantees that they only take reservations that they can fulfill.
- **View Feedback:** Following the completion of a service, providers have access to the ratings and reviews left by clients. By utilizing this feedback, they are able to enhance their offerings and sustain a high degree of client happiness.
- **Change Password:** To keep their accounts safe, service providers can take control of their own account security by changing their passwords as needed.
- Logout

After completing their tasks, they can log out of the platform.

3. Customer Module

• **Register**: Customers who wish to use the stay-at-home services platform can register and create an account.

- **Sign in**: Clients can view services, manage bookings, and access their personal dashboard by securely logging in with their credentials on the site.
- **View Services**: Clients can look through and search for services provided by different companies. Seeing comprehensive details about every service, including descriptions, costs, availability, and provider ratings, is part of this.
- **View Service Requests**: Clients can follow the progress of their service requests and review the booking status as well as any updates from the service provider (accepted, denied, in-process, etc.).
- **Billing Information**: Clients can view their own billing details, which include a breakdown of all payments that have been made as well as the price of the services they have requested. They are able to monitor their costs for the services they have reserved on the platform thanks to this.
- **Monitoring Arrangement**: Clients are notified of any adjustments or modifications to the booking process since they are able to monitor the real-time status and advancement of their service requests.
- **Give feedback:** Customers have the option to rate and review the service provider after a service is rendered. This input aids in the preservation of service excellence and helps prospective clients make wise choices.
- Change Password: To protect the confidentiality and security of their personal data, customers can take control of the security of their accounts by altering their passwords.
- **Logout :** After utilizing the service, users can securely quit the platform by using the Logout tool.

1.7 SOFTWARE/HARDWARE USED FOR THE DEVELOPMENT

1. Front-End Software Requirement

• React.js is a popular JavaScript library used for building dynamic, fast, and scalable user interfaces, particularly single-page applications (SPAs). Developed by Facebook, it follows a component-based architecture, allowing developers to create reusable, independent UI elements. React uses a virtual DOM for efficient updates, minimizing actual DOM manipulation and improving performance. With JSX syntax, developers can write HTML-like code within JavaScript, making the code more intuitive. React's unidirectional data flow ensures predictable state management, and it integrates well with libraries like Redux for handling complex applications. Known for its speed, flexibility, and large community support, React is widely used for modern web and mobile development.

2. BACK-END SOFTWARE REQUIREMENT

Node.js: An open-source server-side runtime environment based on the V8 JavaScript
engine of Chrome is called Node.js.It allows developers to execute JavaScript code
outside of a web browser, enabling the development of server-side applications using

JavaScript. Node.js is known for its non-blocking, event-driven architecture, making it highly efficient for handling concurrent requests, which is particularly useful for real-time applications like chat services, APIs, and streaming platforms.

- Express.js: Express.js is a straightforward and flexible Node.js web application framework. It simplifies the process of building web servers and APIs by providing a robust set of features for handling HTTP requests, routing, middleware integration, and more. Express is known for its minimalist design, allowing developers to structure their applications as needed while still providing the necessary tools for building fully functional web applications.
- MySQL: is an open-source relational database management system (RDBMS) that is
 widely used for storing and managing data in structured formats. It is based on
 Structured Query Language (SQL) and allows users to create, manage, and
 manipulate databases. MySQL is known for its speed, reliability, and flexibility,
 making it a popular choice for web applications, data storage, and enterprise-level
 systems.
- **XAMPP:** is an open-source, cross-platform web server solution that includes Apache (HTTP server), MySQL (database), and interpreters for PHP and Perl. It's widely used for local development purposes and serves as a convenient package for setting up a development environment on a personal machine. XAMPP allows developers to easily host and test PHP-based applications, making it a popular choice for developers working with web technologies like WordPress or other content management systems (CMS).

1.8 HARDWARE INTERFACES

Processor: Intel Core i3 or Above
 Memory: 2GB RAM or Above
 HARD DISK: 250GB OR MORE

1.9 SOFTWARE INTERFACES

• OS: Windows 7 or above

Front End: React, JAVASCRIPT and CSS

Back End: SOL Server

4.1 Database Design:

A database description explains every database that the software uses to store every record. In turn, a detailed description of the database is provided, including all of the fields that are used, along with information on their data types, limitations, and descriptions. Primary keys, foreign keys, and other constraints enable the entities to be uniquely identified.

The databases that are utilized to hold all of the Train Seat Scheduling System's records are all described in this database description.

Purpose:

- The database description provides information about the complete database that the software uses to store all of the records.
- The process of creating an intricate data model for a database is known as database design. A database design is an assemblage of pertinent data.
- The guidelines to be followed while creating and constructing the database are outlined in this paper.

Scope:

A well-designed, easily navigable database is an excellent one. There aren't any duplicate tables in the database. Entity Relationship Diagrams, or ER Diagrams, are a useful tool for database design. Understanding the hotel's software, KOT, and billing is made possible by this database design.

- Organize the system into modules
- Organize sub-modules for each module
- Allocate tasks to processors
- Choose an approach to manage data store
- Handle access to global resources
- Choose implementation logic

SOFTWARE REQUIREMENTS SPECIFICATIONS

2.1 INTRODUCTION

A document called the Software Requirement Specifications (SRS) fully explains the software's exterior behavior. Before beginning the designing phase, a software developer's primary responsibility is to analyze the system that has to be constructed and define the user requirements. We shall learn about the responses and behavior of this system from this document.

2.2 OVERALL DESCRIPTION

The "Stay Home" platform's Software Requirement Specifications (SRS) list the essential features and needs needed for the system to work properly. An overview of the platform's goals, user interface, and system limitations is given in this page. It outlines how the three different user roles—Admin, Service Provider, and Customer—will be served by the platform. The system's capability to manage user registration, service management, order tracking, and billing procedures is one of the functional and non-functional criteria that are outlined in the SRS. It also covers performance indicators, security procedures, future scalability, and usability of the system. The SRS lays the groundwork for the design and development stages by ensuring that the platform will satisfy the demands of its users and stakeholders through the specification of these requirements.

2.2.1 Product perspective

The relationship between a product and other products defines whether the product is standalone or a component of a larger product. The project uses a three-tiered architecture consisting of a presentation layer, an application layer, and a product layer.

- We are going to provide a project that will allow us to oversee labor system operations like plumbing, Masonry, and laundry.
- People can use this to locate the closest labor system to them while relaxing at home.
- The website itself will feature all of the service provider's phone numbers and addresses in this project. Customers can verify from the comfort of their own homes which service is the closest to them, click on the specific service provider they choose touse, and obtain their location and phone number.
- Customers can then phone to them, following which the Service provider will visit the Customer and offer the desired service.
- People who live in rural areas might benefit greatly from this as it saves time.

2.2.2 Product Functions

- Registration
- Login
- Service
- Billing

- Search
- FeedBack
- Change Password
- Category
- Sub Category

2.2.3 User Characteristics

1. Admin Module:

- **Technical Expertise:** Since administrators will be in charge of managing and supervising platform operations, they should possess a moderate to high level of technical expertise. They should be experienced with system administration activities, including user management, order tracking, and billing monitoring.
- Capability to Make Decisions: Important choices on the classification of services, the creation of users, and the handling of disagreements or complaints are made by administrators. It is imperative to have strong analytical and problem-solving abilities.
- Focus on the Details: Admins need to pay close attention to detail in order to preserve platform integrity and user happiness because they manage sensitive duties such as billing, service approvals, and user feedback.

2. Service Provider Module:

- Fundamental Technical Skills: In order to use the platform, administer their services, and communicate with clients, service providers must have a fundamental understanding of technology. It's necessary to have some experience with online platforms and basic data entry (such adding services and viewing orders).
- Customer Service Orientation: To effectively engage with consumers, providers need to possess strong communication skills and a customer-focused mindset. They have to respond to service requests promptly and take criticism seriously.
- Time Management: Service providers must efficiently manage their calendars, accepting or declining requests for services in accordance with their availability. They must to be able to manage several orders and monitor the completion dates of their services.

3. Customer Module:

- Basic Computer Literacy: In order to use the platform, locate services, and keep track of their reservations, customers must possess basic computer and internet abilities. They ought to feel at ease utilizing the booking, payment, and search functions.
- User Experience Awareness: Because the platform is user-friendly and efficient, customers will interact with it. As a result, when making purchases, tracking requests, and scheduling services, they will anticipate a flawless experience.
- Feedback-Oriented: In order to preserve service quality and educate prospective clients, customers should take the initiative to leave feedback after receiving services.

Their evaluations and ratings are crucial for raising the platform's general effectiveness.

2.2.4 General constraints

- In order to prevent scalability problems with the number of connected devices, such as PCs, tablets, or screens, the system needs to allow parallel operation.
- Careful analysis of loading item response times is necessary.
- One major limitation is confirming the legitimacy of users, which could be dangerous
 for
- Any platform (Unix, Linux, Mac, Windows, etc.) with a web browser that can run PHP should be able to use the developed system.

2.2.5 Assumptions

- Users ought to comprehend the fundamentals of computers.
- It is believed that the data entered by users is true and accurate.
- The system depends solely on an internet connection.

2.3 SPECIAL REQUIREMENTS

The requirements can be arranged according to the modes of operation, user class object, features, and functional hierarchies. This section contains all the information that the system developer needs to know in order to build and develop this system.

External Interface Requirements

It specifies all the interface of the system: to the people, hardware and other system.

User Interfaces

- The user can access the site through a web browser.
- Home page which has links to other pages.
- He can navigate to the various icons and view the products on the system.
- A start validation is provided to the login form. On successful validation, the permission to use the system is provided.

Hardware Interfaces

• Any device which has a web browser installed in it.

Software Interfaces

• Any web browser.

Communication Interfaces

TCP/IP

2.4 FUNCTIONAL REQUIREMENT

1. ADMIN MODULE

Classification: This module allows the Admin to add the classification/categories.

- Input: Category id, Category name
- Output: New Category is inserted
- **Processing:** if the number is entered then error message will be displayed.

Sub classification: This module allows the Admin to add the sub classification based on classification.

- Input: Sub_Category id, Category id, Sub_Category name
- **Output:** New sub category is inserted.
- **Processing:** if the number is entered then error message will be displayed.

User Creation: the admin adds the service providers.

- **Input:** worker id, worker name
- **Output:** the new worker will be added.
- **Processing:** if the worker id field is left blank it throws an error.

Search: the customer can search for the services.

- Input: Keyword
- Output: Search result will be displayed.
- **Processing:** If empty string is passed then error will be occurred.

Service request: If the customer wants any new service he can request for the service.

- **Input:** request id, date, customer name
- **Output:** the service will be requested.
- **Processing:** displays the authorized page.

Booking: The customer can view the different services available and can book the required service online.

- Input: booking id, customer name, service booked
- Output: The services can be booked online.
- **Processing:** if the booking id is left blank it throws an error.

Rating: The customer can rate the service by providing the rating option.

- **Input:** feedbacks, Ratings
- **Output:** the customer provides the rating.
- **Processing**: the rating provided by the customer can be viewed by the admin.

Complaint: If there are any issues in the services they can register complaint.

- **Input:** complaint id, date, customer name
- **Output**: the complaint will be lodged.
- **Processing:** the details of the complaint lodged can be viewed by the admin.

User Creation Module: This module is used to create new users.

- Input: username, password, user type, confirm password, phone, email
- Output: A new user is created.
- **Processing:** If the required information is incorrect, appropriate error message will be displayed.

Login: This module is used login.

- **Input:** username ,password, user type, confirm password, phone ,email
- Output: A new user is created.
- **Processing:** If the required information is incorrect, appropriate error message will be displayed.

Change Password: This module is used to change the password.

- **Input:** username ,password
- Output: The password gets changed.
- **Processing:** If the required information is incorrect, appropriate error message will be displayed.

Forgot Password: If the user has forgotten his/her password he can click on forgot password to reset it.

- Input: current password, confirm password
- **Output:** The user will be able to set new password.
- **Processing:** If the required information is incorrect, appropriate error message will be displayed.

2.5 DESIGN CONSTRAINTS

- Message field to be entered with text in Message format itself.
- Requires to specify the information for all the mandatory fields.
- The application shall have a relational database.
- The application shall be implemented using javascript.
- The application shall display error messages to the user when an error is detected.

2.6 SYSTEM ATTRIBUTES

This section of the Labour System management system SRS describes the

applications attributes and properties.

- **Availability:** Labour System management system shall be available in internet 24x7 and capable of supporting a multiple login.
- **Security:** Labour System management system shall be managed by the administrator via predetermined roles.
- **Maintainability:** During maintenance stage, the SRS can be referred for the validation.
- **Portability:** Since it is a system, it is portable.
- **Timeliness:** The system carries out all the operations with consumptions of very less time.

	SYSTEM DESIGN
SYSTEM 1	DESIGN

seen as systems theory's product development. There are certain parallels between the domains of systems engineering, systems architecture, and systems analysis. Determining which modules are necessary for the system and how their requirements should be connected is the aim of system design.

3.2 ASSUMPTIONS AND CONSTRAINTS

- Two different user types are intended for the system.
- When accepting user details, administrators need to use caution.
- To collect and store data, the current application and database will be adjusted as necessary.
- The application needs an internet connection, and tampering with the website's content is not allowed.
- The finished system should provide data loss-free, seamless recovery from single device failures.

3.3 FUNCTIONAL DECOMPOSITION

A method for dissecting a problem into ever smaller and more manageable functions is called functional decomposition. This procedure breaks down a functional connection into its component pieces so that it can be managed and understood more easily. In the end, these smaller parts can be used to recreate the original function.

3.4 DESCRIPTION OF PROGRAMS

3.4.1 Context Flow Diagram:

A Context Flow Diagram gives a high-level picture of a system often known as a level 0 data flow diagram. It has a single process node that contains all of the system's functions with regard to outside entities. The system is shown in this figure as a single, integrated process with distinct sources, sinks, inputs, and outputs.

Level 0 :DFD

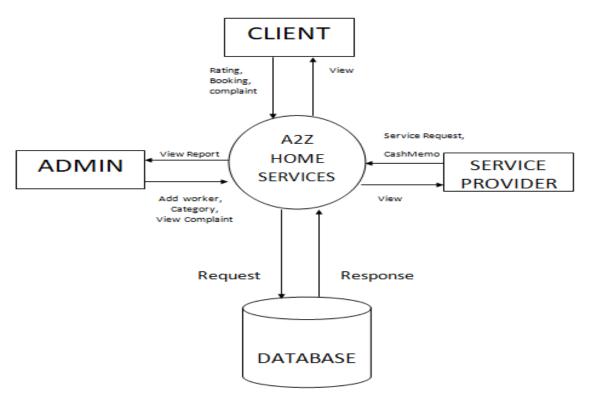


Fig 3.4.1 Context Level (CFD)

3.4.2 Data Flow Diagram:

- Data Flow Diagram: A data flow diagram (DFD) shows how data "flows" through an information system graphically. The visualization of data processing can also be accomplished with a data flow diagram. It is customary for a designer to start with a context-level DFD that illustrates how the system interacts with external elements. The system being modeled is then "exploded" to reveal more details from this context-level.
- A DFD illustrates the flow of data through a system. Diagrams of data flow are frequently employed in problem analysis. It sees a system as a tool that converts input into the intended result. A DFD illustrates how data moves across the various system operations or transformations.
- Dataflow diagrams are a useful tool for giving users a tangible understanding
 of how the data they enter affects the overall structure of the system, from
 order placement to dispatch and restocking. They also show how any system is
 created. The relevant registry, kept up to date by the relevant authorities and
 stored in a database. Logical DFD can be finished in the standard convention
 with the help of certain notations.
- Diagram of Data Flow: A data flow diagram (DFD) provides a graphic representation of how data "flows" through an information system. An additional tool for visualizing data processing is a data flow diagram. Typically, a designer begins with a context-level DFD that shows the

- relationships between the system and outside objects. Then, further information from this context-level DFD is "exploded" into the system under model.
- A DFD illustrates the flow of data through a system. Data flow diagrams are often used in problem analysis. It views a system as an instrument that transforms input into the desired output.

DFD Symbols:

Name	DIAGRAM	DESCRIPTION
External Entity		Represents Source or destination of data
Process		Represents a process that transforms Incoming data into Outgoing flows
Data flows		Represents data flow
Data store		Represents data stores

Table 3.4.2.1 DFD

Levell: DFD

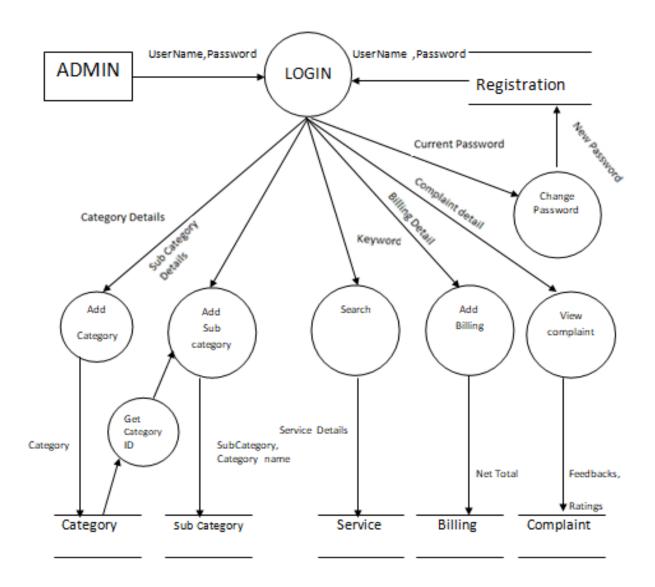


Fig 3.4.2. 2: Level 1 Data Flow Diagram

To log into the system, the administrator must input a valid username and password. Whether the user is an administrator or not is determined by comparing their username and password to the ones that are kept in the backend. The administrator can access modules that are restricted to administrators only if they have successfully logged in. The modules Add Category, Sub Category, Billing, Search, and View Complaint Status are available to administrators. In the end, all the information is kept in the database if and only if each entry is accurate and suitable given the specifications.

Level2 : DFD

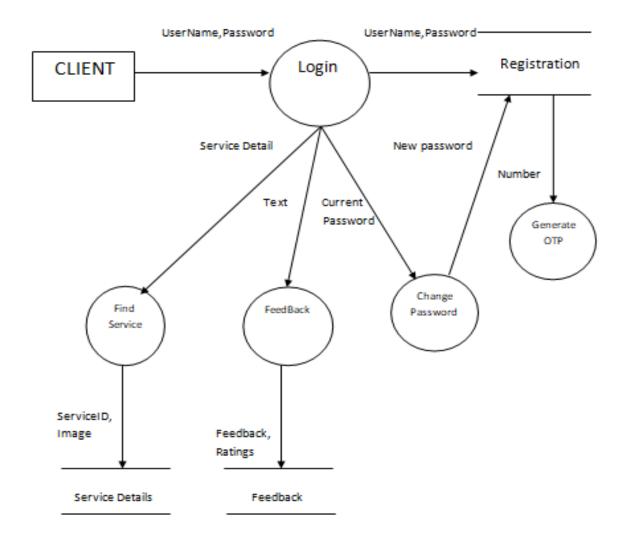


Fig 3.4.3.2 : Level 2 Data Flow Diagram

To log in to the system, the customer must enter a valid username and password. Whether or not he is a user is determined by comparing his username and password with the ones that are kept in the backend. The customer can access modules that are exclusive to them if they have successfully logged in. At last, the database has all of the information.

Level 3: DFD

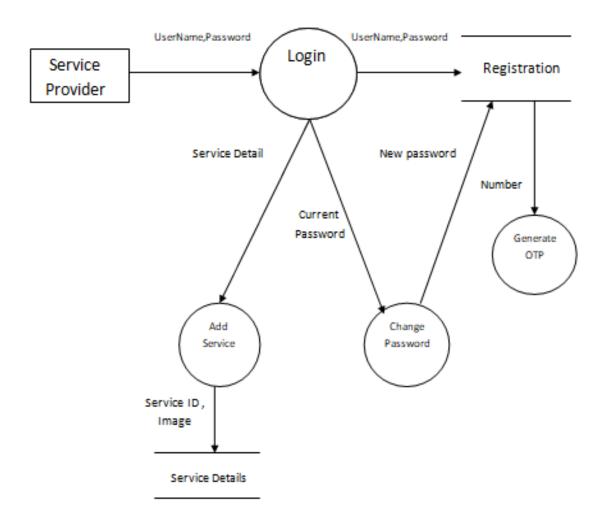
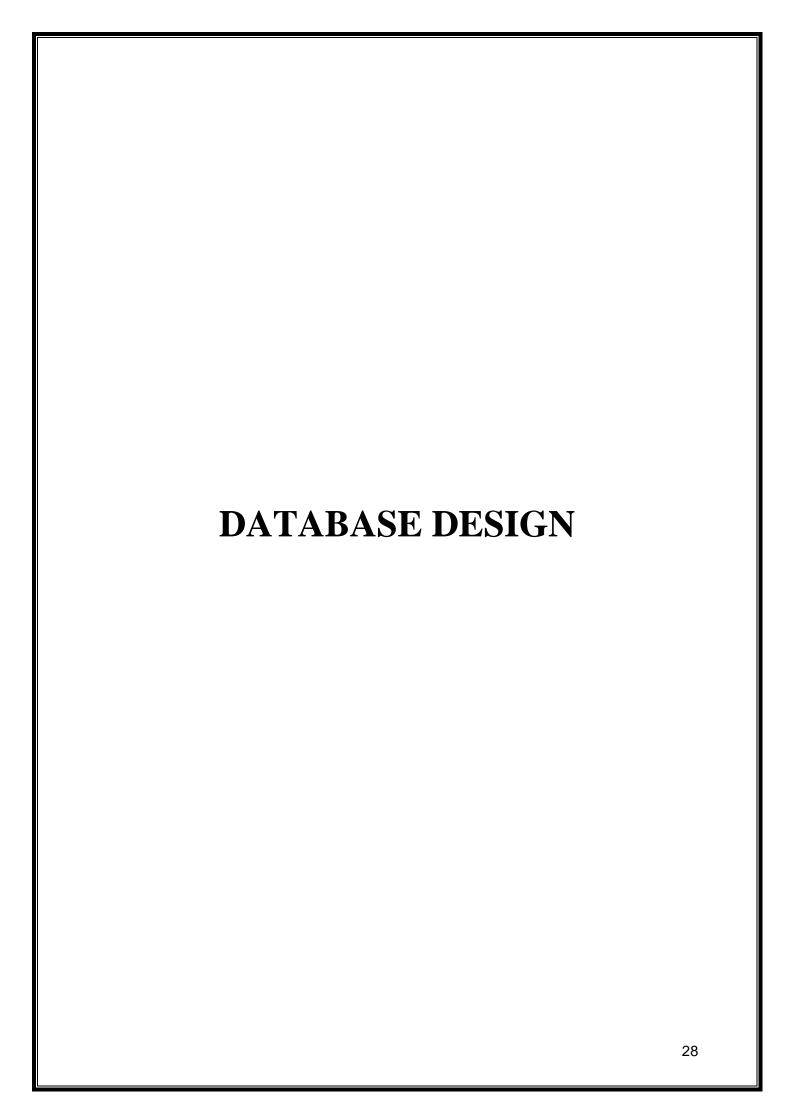


Fig 3.4.2.3: Level 3 Data Flow Diagram

The user name and password will be used by the service provider to sign in. Once the user has successfully signed in, they can add services to the modules that the customer can only access. At last, the database has all of the information. The password can be changed by any service provider.



DATABASE DESIGN 4.1 INTRODUCTION:

A database description explains every database that the software uses to store every record. In turn, a detailed description of the database is provided, including all of the fields that are used, along with information on their data types, limitations, and descriptions. Primary keys, foreign keys, and other constraints enable the entities to be uniquely identified. The databases that are utilized to hold all of the Train Seat Scheduling System's records are all described in this database description.

PURPOSE AND SCOPE:

- The whole database that the software uses to store all of the records is described in the database description.
- The process of creating an intricate data model for a database is known as database design. A database design is an assemblage of connected data.
- The guidelines to be followed while creating and constructing the database are outlined in this paper.

The process of creating an intricate data model for a database is known as database design. A database design is an assemblage of connected data.

The guidelines to be followed while creating and constructing the database are outlined in this paper.

An easily understood and well designed database is a good one. There are no unnecessary tables in the database. An effective database can be created by using Entity Relationship Diagrams, or ER Diagrams. To comprehend the hotel's software, KOT, and billing, this database design is utilized.

- Organize the system into modules
- Organize sub-modules for each module
- Allocate tasks to processors
- Choose an approach to manage data store
- Handle access to global resources
- Choose implementation logic

TABLE DEFINITION

Database name: labour

Registration Table:

ttributes Datatype	Length	Constraint	
--------------------	--------	------------	--

User Name	Varchar	30	Not Null
DOB	DateTime		Not Null
Gender	Char	1	Not Null
Name	Varchar	20	Not Null
Password	Varchar	15	Not Null
Phone No	Number	10	Not Null
ОТР	Varchar	4	Not Null
Address	Varchar	30	Not Null
User_type	Varchar	10	Not Null
Verified	Varchar	45	Not Null
Locality	Varchar	45	Not Null
Id	Integer	20	Primary key

Category Table:

Attributes	Datatype	Length	Constraint
Id	int(10)	10	UNSIGNED, NOT
			NULL,
			AUTO_INCREMENT,
			PRIMARY KEY
Name	varchar	255	NOT NULL

Service Table:

Attributes	Datatype	Length	Constraint
Category	Varchar	20	Not Null
Name			
Name	Varchar	20	Not Null
Phone_no	Decimal	10,0	Not Null
Address	Varchar	100	Not Null
Image	Varchar	500	Not Null
Service_Id	Integer		Primary key
Locality	Varchar	45	Not Null
Sub_Category	Varchar	45	Not Null
Clicks	Integer		Not Null
Username	Varchar	45	Not Null

Billing Table:

Attributes	Datatype	Length	Constraint
id	int(10)	10	UNSIGNED, NOT
			NULL,
			AUTO_INCREMENT,
			PRIMARY KEY
billno	varchar	15	NOT NULL
no_of_hours	decimal	5,0	NULL (default)
date	varchar	45	NULL (default)
category	varchar	45	NULL (default)
sub_category	varchar	45	NULL (default)
name	varchar	45	NULL (default)
amount	varchar	45	NULL (default)
worker_recieved	varchar	45	NULL (default)

Sub Category Table:

Attributes	Datatype	Length	Constraint
Sub_ Category ID	Integer	10	Primary Key
Category ID	Varchar	45	Not Null
Sub Name	Varchar	45	Not Null

Feedback Table:

Attributes	Datatype	Length	Constraint
id	int(10)	10	UNSIGNED,
			NOT NULL,
			AUTO_INCR
			EMENT,
			PRIMARY
			KEY
feedback_text	text	-	NULL
rating	int(2)	2	NOT NULL

Order Table:

Attributes	Data Type	Length	Constraints
------------	-----------	--------	-------------

id	int(10)	10	UNSIGNED, NOT
			NULL,
			AUTO_INCREMENT,
			PRIMARY KEY
service_id	int(10)	10	UNSIGNED, NOT
			NULL
user_id	int(10)	10	UNSIGNED, NOT
			NULL
status	varchar	45	NULL (default)
total_amount	varchar	45	NULL (default)

4.4 Entity Relationship Diagram

An entity-relationship (ER) diagram is a type of specialized visual aid that shows how entities within a database relate to one another. Three separate sorts of information are frequently represented by symbols in ER diagrams. Entities are often represented by boxes. Typically, ovals are used to symbolize qualities and diamonds to depict relationships. In software engineering, an entity-relationship model (ERM) is a conceptual and abstract representation of data. A relational schema database modeling technique called entity-relationship modeling is used to create a top-down conceptual schema or semantic data model of a system, usually a relational database, along with its requirements. Something that is acknowledged as having the capacity for autonomous existence and that can be uniquely identified is referred to as an entity.

An abstraction from a domain's complexity is called an entity. Typically, when we refer to an entity, we are referring to a particular feature of the real world that sets it apart from other features.

An entity might be a real thing, like a house or a car, an occasion, like a car service or house sale, or an idea, like an order or client transaction. Even though "entity" is the most widely used term, according to Chen, we need actually distinguish between "entity" and "entity type." An entity type typically has a large number of instances. Most people choose to use the term entity as a synonym for this because the phrase entity type might be a bit confusing.

You can think of entities as nouns. A computer, a worker, a song, and a mathematical used theorem are few examples. Rectangles are to symbolize The relationship between two or more entities is captured by a relationship. Relationships connect two or more nouns and can be viewed as verbs. As an illustration, consider the following relationships: a company's ownership of a computer; an employee's supervision of a department; an artist's performance of a song; and a mathematician's proven link with a theorem. Relationships are shown as diamonds with lines connecting them to all the relationship'sentities.

Ellipses connected to their owning entity sets by a line represent attributes; examples of both entities and relationships with attributes include the following: an employee entity may have

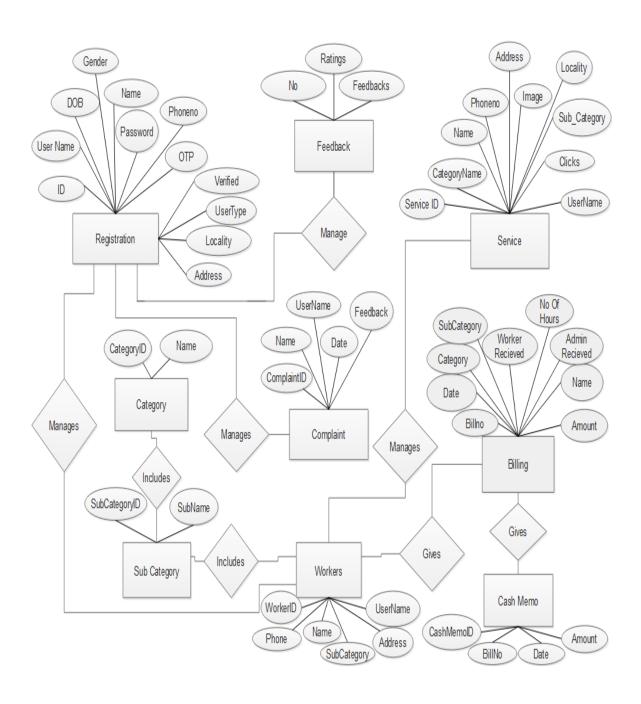
an SSN attribute, while the proved relationship may have a date attribute.

Every entity (unless it is a weak entity) must have a minimal set of uniquely identifying attributes, which is called the entity's primary key.

Single entities or isolated instances of relations are not displayed in entity-relationship diagrams. Instead, they display relationship and entity sets. As an illustration, a certain music is an entity. An entity set is the entirety of the song catalog in a database. A child's eaten connection with her lunch is a one-sided one. A relationship set in a database is the collection of all these child-lunch relationships. Entity sets and the relationship sets they are a part of have boundaries. A thick or double line is drawn if every entity in the entity set is required to take part in the relationship set.

We refer to this as a participation constraint. An arrow is drawn from the entity set to the relationship set if each entity in the entity set is capable of participating in a maximum of one relationship in the relationship set. We refer to this as a critical constraint. A thick arrow is created to show that every entity in the entity set is a part of exactly one relationship.

ER-DIAGRAM:



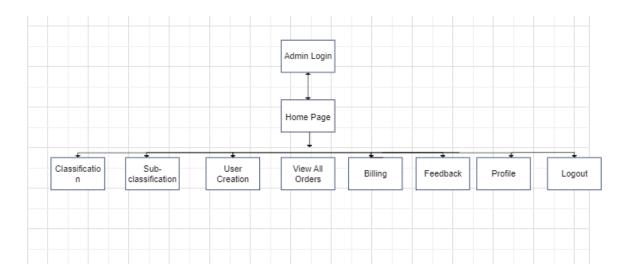
5. DETAIL DESIGN

5.1 INTRODUCTION

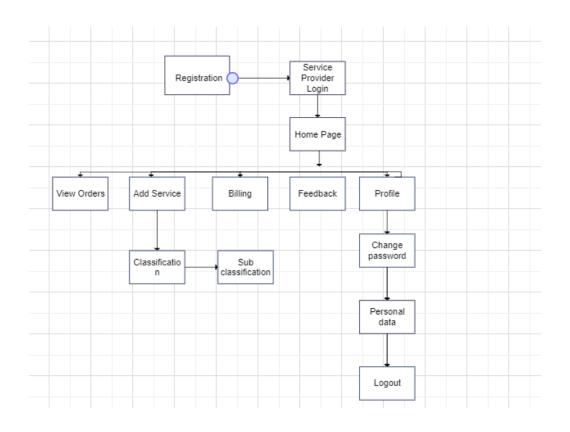
The second step in the design process is detailed design. This phase is commonly called logic design because it defines the internal logic of each module and describes how the system's modules interact with one another. In order to prepare it for coding, this step expands on the initial system and database designs by giving a more detailed explanation of the processing logic and data structures. In detailed design, the general concept is refined and blueprints, specifications, and estimates are created. This phase may produce 2D and 3D models, P&IDs, cost estimates, and procurement strategies, among other outputs. It's also the phase at which the project's overall cost is established.

5.2 STRUCTURE OF THE SOFTWARE

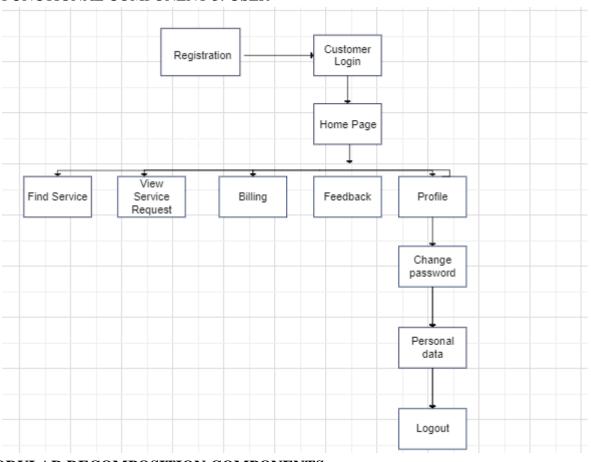
FUNCTIONAL COMPONENT 1: ADMIN



FUNCTIONAL COMPONENT 2: SERVICE PROVIDER



FUNCTIONAL COMPONENT 3: USER



5.3 MODULAR DECOMPOSITION COMPONENTS

Admin Module:

Admin Login

Purpose: Allows the administrator to log into the system securely with a username and password.

Features:

Secure login with encryption

Validation for correct username/password

Login session management

Dashboard

Purpose: Central hub for administrators to manage the platform.

Features:

Overview of total services, users, orders, and feedback

Notifications for pending tasks (e.g., feedback to review or new orders)

Add Classification and Sub-classification

Purpose: Allows administrators to create and manage service categories and subcategories, like Plumbing, Electrical, Painting, etc.

Features:

Add, update, delete categories and subcategories

Organize services into structured categories for easy access by customers

Validation for duplicate categories

View All Orders

Purpose: View all customer service orders placed on the platform.

Features:

View details of each order: customer, service provider, service category, and order status (e.g., pending, in progress, completed)

Filter and search for specific orders based on various criteria (e.g., date, status)

Option to cancel or resolve issues related to orders

Billing Information

Purpose: View and manage billing details related to service orders, payments, and revenue.

Features:

Overview of all payments made for services (including admin's share)

Monitor and approve payments between customers and service providers

Generate financial reports

User Creation and Management

Purpose: Create and manage user accounts, including customers and service providers.

Features:

Add, update, delete user profiles

Approve or reject service provider registrations

View all user details, including feedback and complaints

View Feedback

Purpose: Allows administrators to view customer feedback and ratings of service providers.

Features:

View and moderate reviews and ratings

Take action against service providers with repeated poor feedback

Resolve customer complaints.

Logout

Purpose: Allows the admin to securely log out after managing the platform.

Features:

End session securely

Clear session data to prevent unauthorized access

Service Provider Module:

Service Provider Login

Purpose: Allows service providers to log in securely with their username and password.

Features:

- o Secure authentication
- o Password encryption and validation
- Session management

Dashboard

Purpose: Central hub for service providers to view and manage their activities on the platform.

Features:

- o Overview of new orders, pending orders, completed orders
- o Notifications for new service requests or feedback
- o Quick links to update profile, view billing, or manage services

View Orders

Purpose: View all incoming service requests from customers.

Features:

List all service requests with details like customer name, requested service, date, and status (pending, accepted, rejected)

Accept or reject service requests based on availability

Track progress of accepted orders (e.g., in progress, completed)

Add and Manage Services

Purpose: Allows providers to add and manage the services they offer on the platform.

Features:

Add new services with details (name, description, availability)

Update or delete services as needed

Set availability for different services

Billing Information

Purpose: View and manage billing details related to completed services and payments.

Features:

View a breakdown of all earnings from completed orders

See payment history and status of pending payments

Generate or download billing reports

Customer Request Authorization

Purpose: Approve or reject customer service requests.

Features:

Approve requests based on availability

Reject requests if not feasible, providing reasons if necessary

Keep track of rejected orders for future reference

View Feedback

Purpose: Allows service providers to view feedback and ratings given by customers.

Features:

See customer reviews for completed services

Monitor overall ratings for services provided

Use feedback to improve service quality and customer satisfaction

Change Password

Purpose: Allows service providers to update their password for better account security.

Features:

Change password with secure validation (current password, new password)

Provide guidance on creating strong passwords

Update Profile

Purpose: Service providers can update their profile information.

Features:

Update personal details (name, phone, email)

Manage service areas or expertise

Upload or change profile pictures

Logout

Purpose: Allows service providers to securely log out of the platform after managing their tasks.

Features:

End session securely

Clear session data to prevent unauthorized access

Customer Module:

Customer Registration

Purpose: Allows new customers to create an account on the platform.

Features:

Form for entering personal details (name, email, phone number, etc.)

Email verification for account activation

Validation for required fields and unique email/phone

Customer Login

Purpose: Enables customers to log in securely with their credentials.

Features:

Secure authentication

Password encryption and validation

Option for "Remember Me" for easy access

Dashboard

Purpose: Central hub for customers to manage their activities on the platform.

Features:

Overview of active bookings, service requests, and notifications

Quick access to view services, manage bookings, and update profiles

View Services

Purpose: Allows customers to browse and search for services offered on theplatform.

Features:

List of available services with details (descriptions, costs, provider ratings)

Filters for sorting services based on categories, ratings, or price

Search functionality for quick access to specific services

Book a Service

Purpose: Enables customers to book services from available service providers.

Features:

Selection of desired service, date, and time

Confirmation of booking details before submission

Option to provide special requests or instructions

View Service Requests

Purpose: Allows customers to track the status of their service requests.

Features:

List of all service requests with details (service type, status, provider info)

Notifications for updates (e.g., accepted, in progress, completed)

Option to cancel requests if needed Billing Information

Purpose: Customers can view their billing details for services booked.

Features:

Breakdown of payments made for services

Invoice generation for completed services

Payment history and status of pending payments

Monitor Arrangement

Purpose: Keep track of any changes to service bookings.

Features:

Real-time updates on service status

Notifications for any delays or modifications

Communication channel with service providers for queries

Give Feedback

Purpose: Customers can provide ratings and reviews for services received.

Features:

Option to rate the service provider and leave comments

Feedback form with validation for required fields

View past feedback submitted for services

Change Password

Purpose: Allows customers to update their password for account security.

Features:

Secure validation for current and new passwords

Guidance for creating strong passwords

Option to reset the password if forgotten

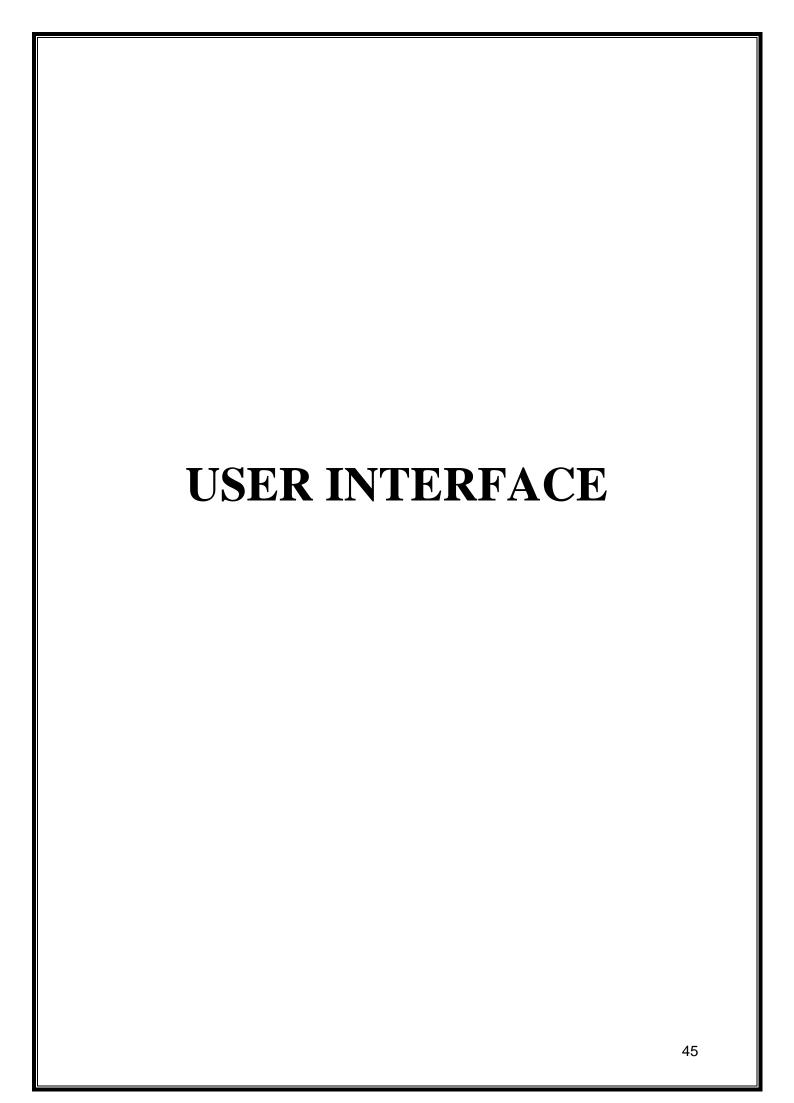
Logout

Purpose: Allows customers to securely log out of the platform after use.

Features:

End session securely

Clear session data to prevent unauthorized access

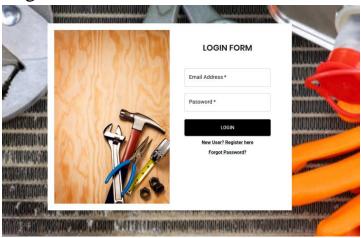


USER INTERFACE

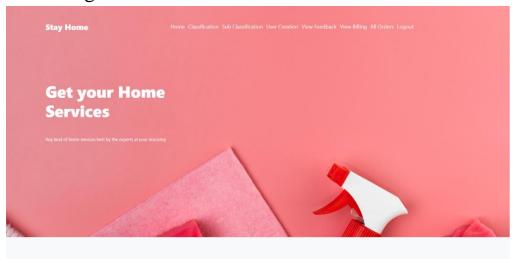
Sign up



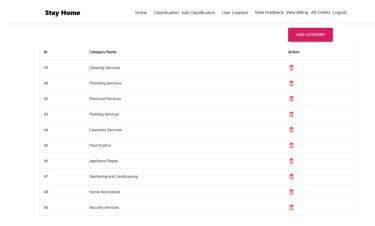
Login



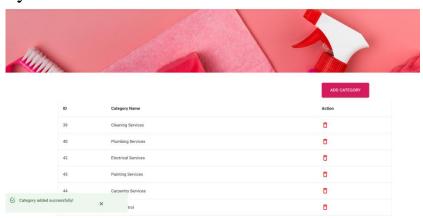
Home Page/ Main Screen



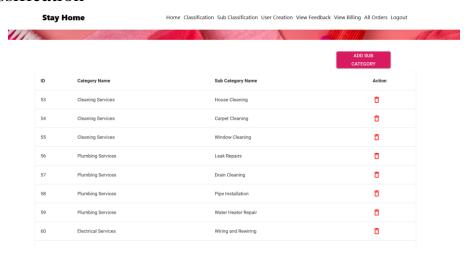
Classification



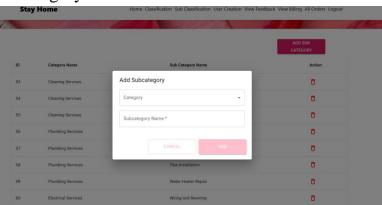
Add category



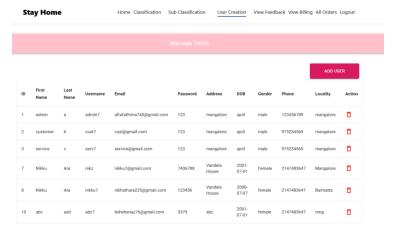
Sub classification



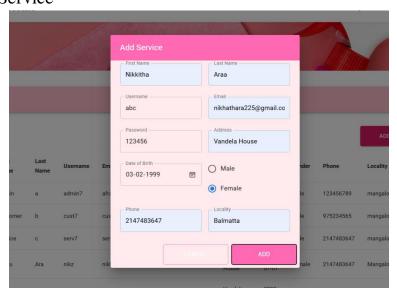
Add sub category



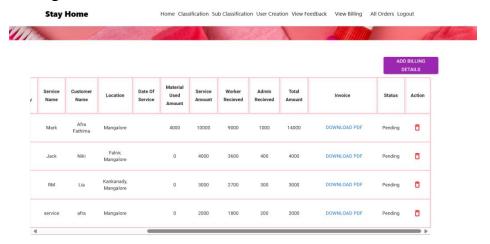
User Creation



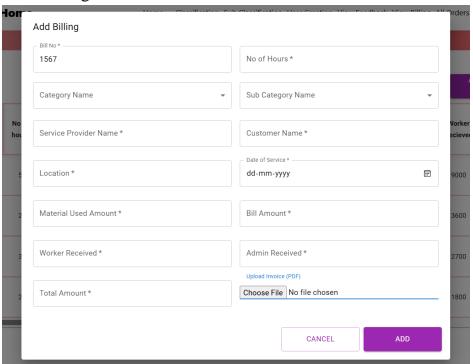
Add Service



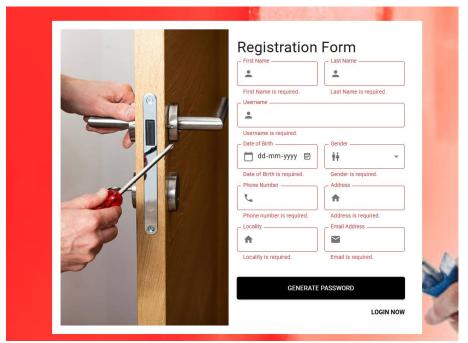
Billing Details

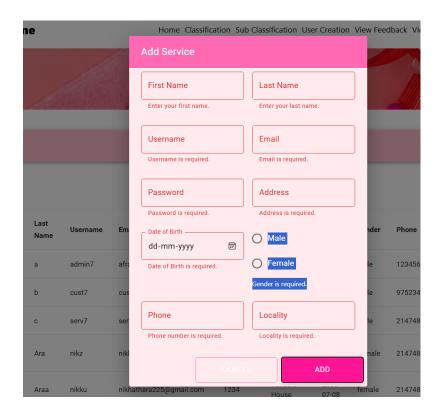


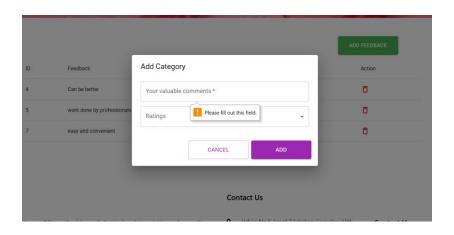
Add Billing



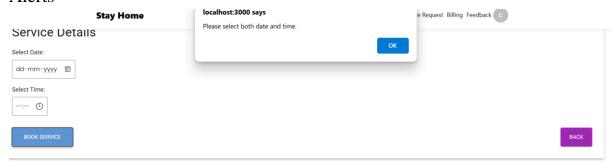
Validation



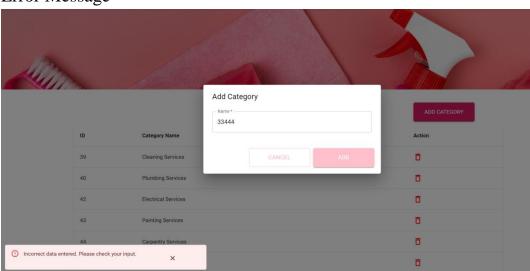


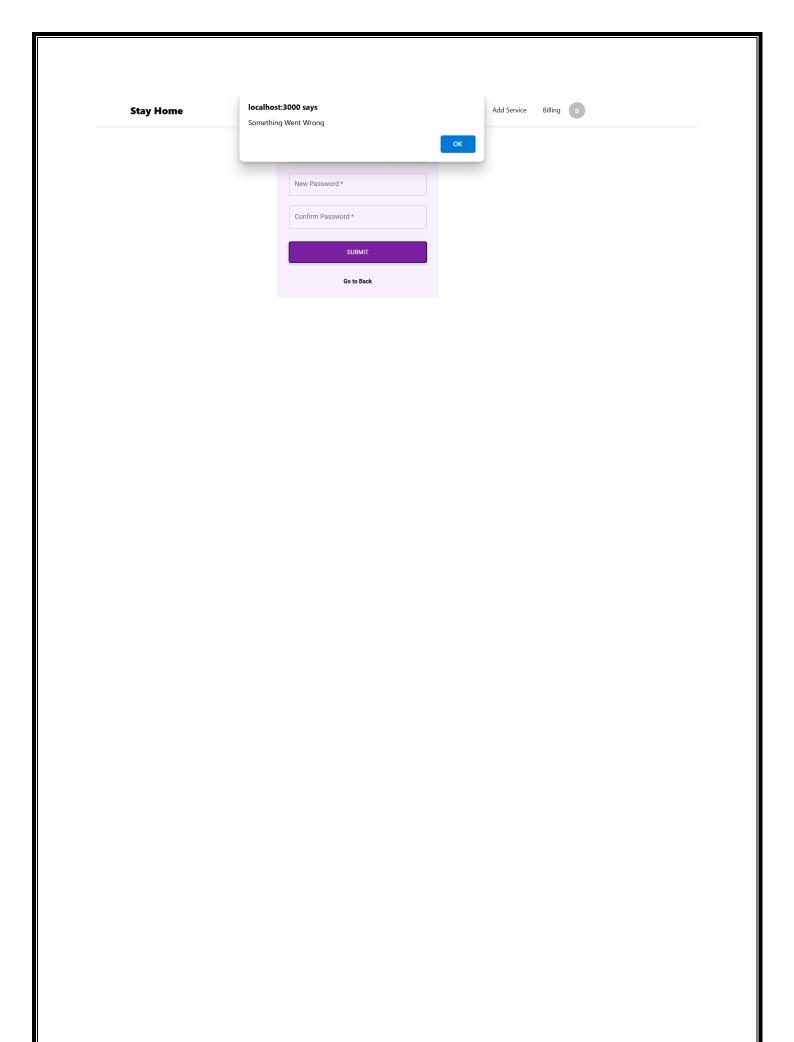


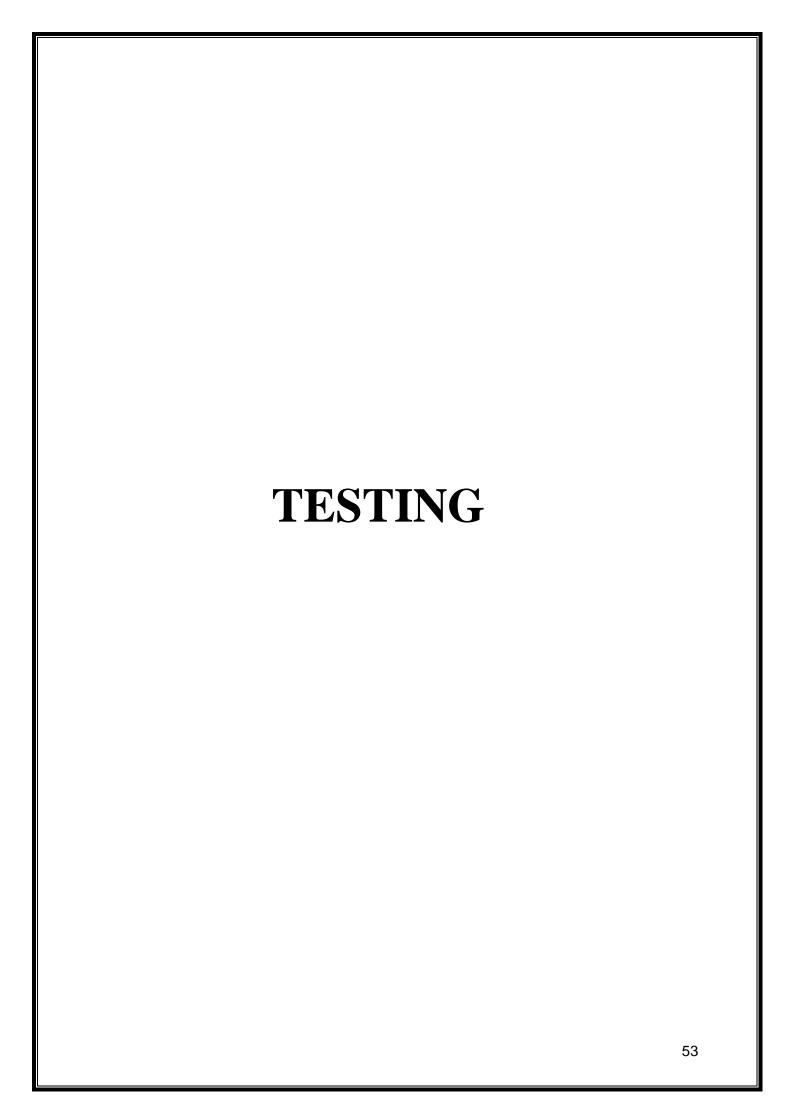
Alerts



Error Message







Testing

Intoducation

Analyzing software to find differences between its intended state and its existing state—often called bugs—involves assessing both the product's features and functionality. A series of test cases are used to run the software, and the results are evaluated to see if it performs as expected. It's crucial to remember that testing is more about finding faults than it is about defining their precise nature.

The effectiveness of the testing process is significantly influenced by the quality of the test cases used. As testing can be a complex process, it is often broken down into smaller, more manageable jobs. As a result, incremental testing is frequently applied.

PURPOSE OF THE TEST

- •Verification: One of the main goals of testing is to verify that the program satisfies the technical and business criteria that the client stated before the project started. Strict adherence to these requirements and specifications is crucial as they function as guidance for the software's design and development. In order to meet client expectations and ensure the success of the project, compliance is essential.
- **Validation:** This procedure confirms that the program operates as planned and complies with user specifications. Validation is comparing the actual output to the anticipated outcomes and adjusting as needed when differences are found.

Defects: Finding software flaws to prevent malfunctions or crashes during project launch or implementation is one of testing's main goals. Defects that go unnoticed or untreated can impair the software's functionality and cause resource loss, financial ramifications, and reputational harm to the client. Software testing is therefore carried out at every level of development in order to find different kinds of flaws.

• **Compatibility:** Testing guarantees that the program is appropriate for the many devices, operating systems, and user needs that make up its implementation environment.

Quality Analysis: By regularly assessing and validating software's design and code, testing contributes significantly to the improvement of software quality. To assist in achieving the intended degree of software quality, a variety of testing techniques are used.

8.3 TEST CASES 8.3.1 UNIT TESTING

Admin Module

Input	Test Condition	Test Output	Comments
Login	If admin email is not	email is required	Admin email is
	entered		required to proceed
	If admin password is	Password is required	Admin password is
	not entered		required to proceed

	If the email and	The supplied auth	Enter valid email and
	password are not valid	incorrect.	password
	If the admin email and	Appropriate Password	Successfully logged
	password are valid.	and email are entered,	in.
		and the admin is now	
		logged in.	
Add Category	If category name is	Error: Category name	Category name must
	not entered	is required	be mandatory
	If entered number	Error: : Category	Category name
		name is required	cannot be number
Add Sub-Category	If sub-category is not	Error: Select a	Ensure sub-category
	entered without	category before	is related to a
	selecting a category	entering sub-category	category
	If sub category	Category price format	Enter Valid Category
	format not valid	does not match	
	If valid details entered	Supplied details are	Successfully added
		valid	the category the
			password
Managa Hagna	If a new service	Error: All fields are	All fields must be
Manage Users	provider is added		
	with incomplete	required	completed to add a provider
	details		provider
	If name not enterd	Name required	Enter your name
	If enterd email in	Email invalid	Enter a valid email
	incorrect		
	If enterd dob is	Invalid dob	User must be 18 and
	invalid		above
	If enterd phone	Valid 10 digit phone	Phone number is not
	number is invalid	number	valid
	If entered details are	Incorrect fields	All fields must be
	wrong		correct to add a
			provider
	If valid details entered	Supplied details are	Successfully added
		valid	new user
View Orders	If admin tries to view	Redirect to login	Admin must be
	orders without	page	logged in to view
	logging in		orders
View Billing Info	If admin tries to view	Error: Permission	Admin must have

	billing details without valid permissions	denied	correct privileges for viewing
View Feedback	If feedback rating is missing	Error: Rating is required	Feedback cannot be saved without a rating
	If valid details entered	Supplied details are valid	Successfully added feedback
Logout	Admin clicks on logout	Successfully logged out	Redirect to the admin login page
Change Password	If new password is not strong enough	Error: Password must be at least 8 characters long	Enforce password complexity rules
	If valid details entered	Supplied details are valid	Successfully changed password
Forgot password	If email is not entered	Associated email is required	Enter Email
	If new password are not entered.	New password number is required.	Enter new password
	If confirm password not entered.	Confirm password number is required.	Enter confirm password
	If valid email not entered	The supplied authentication incorrect.	Enter valid email
	If valid email entered	The supplied authentication correct.	Successfully updated the password

Service Provider Module

Input	Test Condition	Test Output	Comments
Login	If service provider	Email is required	Email is required to
	email is not entered		proceed
	If service provider	Password is required	Service provider
	password is not		password is required
	entered		to proceed
	If the username and	The supplied auth	Enter valid email and
	password are not valid	incorrect.	password
	If the service provider	Appropriate Password	Successfully logged
	email and password	and email are entered,	in.

	are valid.	and the service provider is now logged in.	
View Orders	If no orders are assigned	Message: No orders available	Service provider should be informed of empty orders
Add Service	If service name is not entered	Error: All fields are required	Service details must be fully filled in
Approve Requests	If service provider approves a request without availability	Error: Cannot approve service due to conflict	Ensure provider has availability
View Feedback	If feedback is not available	Message: No feedback available yet	Provide a clear message for empty feedback
Billing Information	If incorrect billing details are fetched	Error: Billing information could not be retrieved	Double-check API or database connectivity
Change Password	If new password is not strong enough	Error: Password must be at least 8 characters long	Enforce password complexity rules
Logout	Service provider clicks logout	Successfully logged out	Redirect to provider login page
Forgot password	If email is not entered	Associated email is required	Enter Email
	If new password are not entered.	New password number is required.	Enter new password
	If confirm password not entered.	Confirm password number is required.	Enter confirm password
	If valid email not entered	The supplied authentication incorrect.	Enter valid email
	If valid email entered	The supplied authentication correct.	Successfully updated the password

User Module

Input	Test Condition	Test Output	Comments
Registration	If username or email	Error: Username and	Ensure both fields
	is not entered	email are required	are mandatory
	If password does not	Error: Password must	Enforce secure
	meet security	be at least 8	password creation
	requirements	characters	

Login	If user email is not	Email is required	Email is required to
	entered		proceed
	If user password is	Password is required	Service provider
	not entered		password is required
			to proceed
	If the username and	The supplied auth	Enter valid email and
	password are not valid	incorrect.	password
	If the users email and	Appropriate Password	Successfully logged
	password are valid.	and email are entered,	in.
		and the service	
		provider is now	
		logged in.	
View Services	If no services are	Message: No services	Display clear
	available	found	message when no
			services are listed
Service Booking	If service is booked	Error: Date and time	Date and time fields
	without selecting	are required	are mandatory for
	date/time		booking
View Service	If no requests have	Message: No	Show message when
Requests	been made	requests found	no requests are
			available
Provide Feedback	If feedback rating is	Error: Rating is	Rating is mandatory
	missing	required	for submitting
			feedback
	If feedback has digits	Error: feedback	Only use text format
		cannot be numbers	
Change Password	If old password is	Error: Incorrect old	Verify old password
	incorrect	password	before allowing a
			change
Logout	User clicks logout	Successfully logged	Redirect to user login
		out	page

8.3.2 INTEGRATE TESTING

Finding potential issues with the combination of different modules is the aim of integration testing, particularly those pertaining to data loss between interfaces. If a module adversely impacts the sub-function of another, it's likely that the whole planned functionality won't be realized. Global data architectures may potentially lead to problems. This type of testing develops tests in a methodical manner to identify problems with the module interface. During integration testing, every module is assembled and the software is tested as a whole.

Admin and Service Provider Integration

Test Case	Test Condition	Expected Outcome	Test Case
Admin adds Service	Admin adds new	Provider can log in	Admin adds Service
Provider	provider	successfully	Provider
Admin assigns order	Admin assigns an order	Order appears in	Admin assigns order
	to provider	provider's dashboard	
Provider rejects order	Provider rejects an	Order status updated to	Provider rejects order
	order	"Rejected" in admin	
		panel	
Admin updates billing	Admin updates billing	Provider sees updated	Admin updates billing
	for provider	billing	
Admin deletes provider	Admin deletes provider	Provider can no longer	Admin deletes provider
	account	log in	

Service Provider and User Integration

Test Case	Test Condition	Expected Outcome
User books service	User books a service	Booking appears in provider's
		dashboard
Provider accepts booking	Provider accepts a booking	User sees booking status as
		"Accepted"
Provider completes service	Provider marks service as	User notified and can give
	completed	feedback

Admin and User Integration

Test Case	Test Condition	Expected Outcome
Admin approves registration	User registers	User can log in after admin
		approval
User submits complaint	User submits a complaint	Admin receives and can act
		on the complaint

Admin, Service Provider, and User Integration

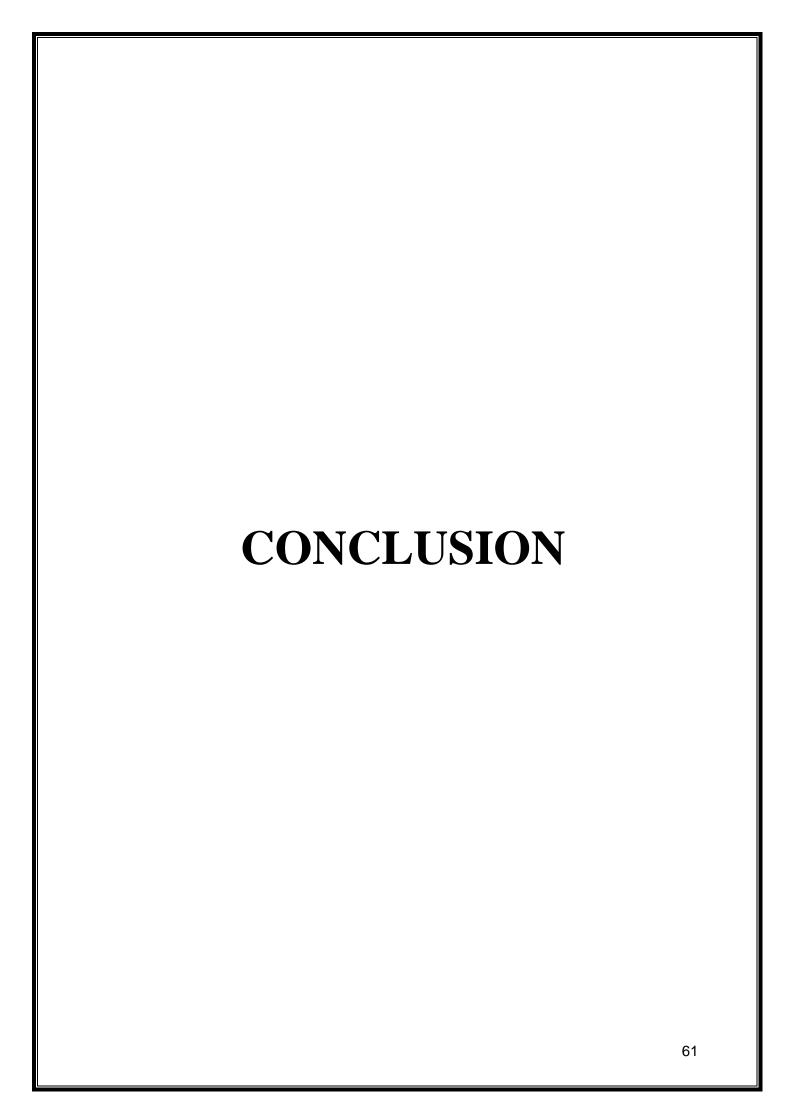
Test Case	Test Condition	Expected Outcome
Admin assigns order to	User books service, admin	Both user and provider
provider	assigns it to provider	receive updates
Provider updates service	Provider marks service as "In	Status updates for both
status	Progress"	admin and user

8.3.3 SYSTEM TESTING:

System testing involves evaluating a complete and fully integrated software product. Since software typically operates as part of a larger computer-based system, it must interact effectively with other software and hardware components.

This testing phase comprises of a number of varied tests created especially to put the system through its paces. Making ensuring everything functions as it should and that the system satisfies all requirements is the aim. System testing finds any flaws in the program before it is deployed by confirming its overall functionality, performance, security, and dependability in the intended environment.

Sl. No	Test condition	Test report
1	System lading	Successful
2	System run procedure	Successful
3	File I/O operation	Successful
4	Database communication	Successful
5	Server/client interaction	Successful
6	Memory usage	Normal
7	System processor usage	Normal
8	Authentication/Authorization	Successful



Conclusion

To sum up, the "Stay Home" platform provides a simple and user-friendly method of connecting customers with trustworthy home service providers. The platform offers a streamlined interface for booking services, tracking orders, and scheduling appointments to ensure a seamless experience for both clients and service providers. With its adaptable design, customized service listings, and safe login process, "Stay Home" meets the growing need for trustworthy and accessible home maintenance services. The project successfully incorporates components that make it simpler to identify and manage home services in order to make house upkeep more convenient.

Limitations

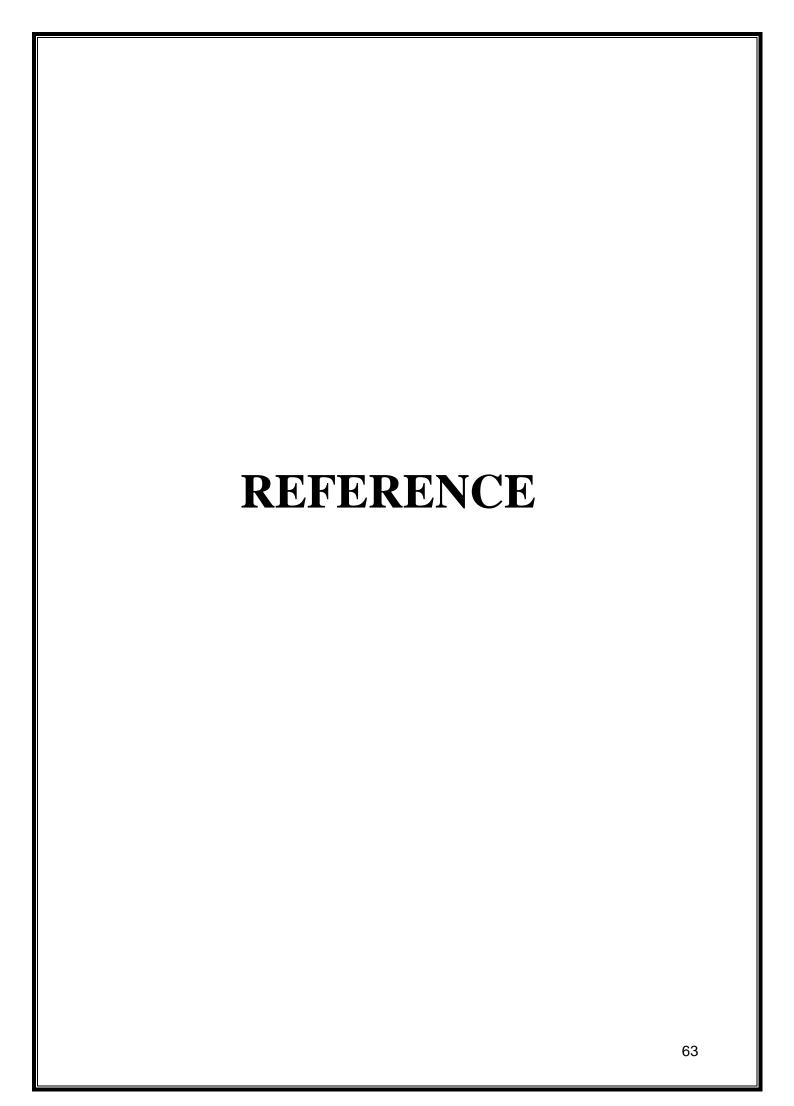
The "Stay Home" platform has significant drawbacks despite its efficacy. First of all, because of its heavy reliance on internet connectivity, users in places with patchy or inconsistent access may find difficulties. Furthermore, server infrastructure limits the platform's scalability, which may have an impact on performance as the user base expands. Further integration with third-party APIs may be necessary for some sophisticated capabilities, such as real-time tracking of service providers, which could result in increased complexity and expense.

Future Scope

The "Stay Home" platform plans to add new home service categories and extend its services to further areas in the future. AI-driven service recommendations that are based on past reservations or customer preferences may also be included in later versions. Other possible advancements include integrating advanced analytics to help service providers optimize their offers and improving the real-time tracking system for service providers. A mobile app version might also improve accessibility even more, giving consumers additional convenience when they're on the road.

ABBREVIATIONS AND ACRONYMS

- GUI Graphical User Interface
- DBMS Database Management System
- RDBMS Relational Database Management System
- SRS Software Requirement Specification
- ADMIN -The Administrator.
- CPU -Central processing unit
- PHP -Hypertext Preprocessor
- SQL -Structured Query Language.
- HTML -Hyper Text Markup Language.
- CSS -Cascading style sheet



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