SALON MANAGEMENT SYSTEM

A PROJECT REPORT

For

Mini Project (KCA353)

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Submitted in partial fulfillment of the

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Under the Supervision of

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Submitted to

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DECLARATION

I hereby declare that the work presented in report entitled “Salon Management System” was carried out by me. I have not submitted the matter embodied in this report for the award of any other degree or diploma of any other University of Institute. I have given due credit to the original authors/sources for all the words, ideas, diagrams, graphics, computer programs, that are not my original contribution. I have used quotation marks to identify verbatim sentences and give credit to the original authors/sources. I affirm that no portion of my work is plagiarized, and the experiments and results reported in the report are not manipulated. In the event of a complaint of plagiarism and the manipulation of the experiments and results, I shall be fully responsible and answerable.

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CERTIFICATE

Certified that **Harsh Chauhan 2200290140064, Harsh Awasthi 2200290140063** have carried out the project work having "**Salon Management System**" (**Mini Project-KCA353**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU),Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Date:

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This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

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ABSTRACT

The Salon Management System Web Application for Enhanced Reporting is a comprehensive solution designed to streamline and optimize the operational processes of salons and spas. This web-based platform aims to provide salon owners, managers, and staff with a robust toolset for efficient management and insightful reporting.

The Salon Management System Web Application is a dynamic and adaptive solution that evolves with the changing needs of the salon industry. By incorporating advanced reporting and analytics capabilities, it empowers salon owners to make informed decisions, enhance customer satisfaction, and optimize overall business performance.

By implementing SMS, salon businesses can streamline operations, optimize resource utilization, and ultimately enhance the overall customer experience. This report concludes with recommendations for further enhancements and future directions for SMS, emphasizing the potential for ongoing innovation and adaptation to evolving industry trends and customer needs.

This report provides an overview of the development process, key features, and benefits of SMS. The development of SMS involved extensive research into the specific needs and pain points of salon owners, managers, staff, and clients. The result is a user friendly interface that enhances productivity, reduces administrative burdens, aim to improves customer satisfaction.

ACKNOWLEDGEMENTS

Success in life is never attained single-handedly. My deepest gratitude goes to my project supervisor, **Mrs. Shalika Arora** for his guidance, help, and encouragement throughout my project work. Their enlightening ideas, comments, and suggestions.

Words are not enough to express my gratitude to **Dr. Arun Kumar Tripathi**, Professor and Head, Department of Computer Applications, for his insightful comments and administrative help on various occasions.

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Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me with moral support and other kind of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

Harsh Chauhan (2200290140064)

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CHAPTER 1

INTRODUCTION

1.1 Overview

With tremendous increase in technology, information technology is a fast-developing field. Technology which is in vogue today might become redundant tomorrow. This ever-changing scenario makes it possible to provide the latest and most modern IT solutions to various business and institutions.

I am doing my project on Salon Management System. There is the need for efficient management of a network-based system for handling customer orders. This project is an endeavor to provide a solution to this. The proposed system enables an administrator to keep track of customer orders and maintaining records of the customers. Thus the project is a sincere effort in simplifying the task of administrators in an easily usable format. I finalized to make this project and hence planned to develop this system using PHP for front end and MySQL as the Back End.

Implementing a saloon management system provides numerous benefits for businesses of all sizes. From improved efficiency and client satisfaction to data-driven decision making and cost reduction, an SMS can be a valuable tool for driving success in the competitive salon industry.

1.2 Motivation

Building a salon management system as a college project offers students a unique opportunity to apply their technical skills in a practical and relevant context, while also fostering collaboration, client interaction, and entrepreneurial thinking. It serves as a valuable learning experience that prepares students for future careers in software development and related fields.

Most of the employees are using smart phones and tablets, so eventually they got the basic idea about how to use web browsers and access internet and work on it. And they can easily adept to this online web base salon management system with simple system introduction of how to use it.

The system will provide user friendly simple interface which will help them to make reliable, quick and effective service.

1.3 Problem Statement

Salons and spas play a crucial role in the beauty and wellness industry, offering a wide range of services to clients seeking personal care and grooming. However, managing the operations of a salon efficiently can be challenging due to the complexity of scheduling appointments, managing staff, tracking inventory, and handling financial transactions.

1.3.1 Limitations Of Existing System

Before starting the project we have to study its limitations and objective some of them are:

- All the processes of this management are done manually in the form of paper work and the records are stored in the registers. In such cases there are frequent chances of data redundancy and data is ease to lose.
- All the introductions related to the customer and others printed on the papers, this activity generates the chances of data lost.
- All the bills structures are done by hand written; sometimes it produces mistakes in calculation.
- This system is very time consuming and require lots of manpower.

1.3.2 Proposed System

Objective is to overcome the major limitation of the existing enabling effective management of the customer details thereby improving the performance.

- With improved computerization being involved in the maintenance of monitoring of the processes from customer registration to activation. Report generation will help make it easy to analyze the performance at the Bank.
- Customer details, error and inconsistencies can be kept at par.
- Validation of data will ensure only accurate, valid and complete data is stored in the database.

1.4 Objective And Scope

The objectives of the proposed system are to overcome the major limitation of existing system enabling effective management of the customer details thereby improving the performance of SHOP ADMINISTRTION. The system will store all the basic data processing needs the shop management
The scope of the project listed according to the website and the system. The system requirements are listed with the user types.

Website:

The Site should be displayed with the 'Home', 'About us', 'Services', 'Specials', 'Contact us' and Registration pages.

- The 'Home' page should be displayed with value proportion of the business.
- The 'About us' page should be displayed with the background of the business and milestones which are offering to focus on customer value.
- The 'Services' page should be revealed the services with the standard of the business.
- The 'Contact us' page should be able to provide the direct communication between audiences.
- The customer should be able to register to the system by using the site. Appointment Management.

User Type – Customer

- The customer should be able make appointments.
- The system should be able to facilitate with selecting staff, selecting services, viewing assigned calendar details (availability), selecting date and time.

- The customer should be able to receive the message for the confirmation of an appointment.
- The system should be able to facilitate the cancellation process of appointments.

User Type – Admin / Staff

1. The user should be able to manage the appointments.

Customer Management :

User Type – Admin

- The user should be able to manage details of offers/discounts.
- The user should be able to request reviews for the appointment.
- The user should be able to receive reviews.
- The user should be able to manage reviews.
- The user should be able to manage customers.

User Type – Customer

- The customer should be able to receive the information about seasonal promotions.
- The customer should be able to facilitate with the rating facility.

User Management

User Type – Admin

- The user should be able to manage system users by add/edit/delete.
- The user should be able to manage the daily availability of the user.
- The staff members should be able to login to the system by the created account

Administration

User Type – Admin

- The user should be able to generate the reports.
- The user should be able to manage the site 'Specials'.

1.5 Feasibility Study

Economic Feasibility:

Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly known as cost/benefit analysis the procedure is to determine the benefit and saving that are expected from a system and compare them with costs, decisions is made

to design and Implement the system. This part of feasibility study gives the top management the economic justification for the new system.

Technical Feasibility:

Technical feasibility centers on the existing manual system of the test management process and to what extent it can support the system. According to feasibility analysis procedure the technical feasibility of the system is analyzed and the technical requirements such as software facilities, procedure, inputs are identified. It is also one of the important phases of the system development activities.

Behavioral Feasibility:

People are inherently resistant to change and computer has been known to facilitate changes. An estimate should be made of how strong the user is likely to move towards the development of computerized system. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

CHAPTER 2

LITERATURE REVIEW

In [1], SHEARS INC. Salon Management System, November 2017, JOIV International Journal on Informatics Visualization 1(4-2):246

Shears Inc. Salon is a hair salon owned by Mr. Kenny. The salon is located at 1980, Block 16 KCLD, Brighton Square Jalal Song, Kuching, Sarawak, Malaysia. The operating hours is from Monday to Sunday, 10a.m. to 8p.m. and can be contacted at 082-285556. The salon offers hair services such as cut, wash, rebounding, bleach, perming, and color.

Management system is the framework of processes and procedures used to ensure that an organization can fulfill all task required to achieve its objectives. In recent times, most organization will opt to use management system in their daily business task.

They also present results from an exploratory study that aims to evaluate the impact of the Empathic Companion by measuring users' skin conductance and heart rate. While an overall positive effect of the Empathic Companion could not be shown, the outcome of the

In accordance with ISO 9000:2000, management system is defined as a set of interrelated or interacting elements to establish policy and objectives, and to achieve those objectives [1, 2]. Today, management system is slowly becoming a necessity to business organizations. The management system is slowly becoming the norm by taking over tasks that are meddlesome to be done manual

In [2] Systematic literature of Online Beauty Industry Service Management System, Mrs. Pranali G. Chavhan1, Mrs. Snehal R. Rathi 2, Vishwakarma Institute of Information Technology, Pune.

In the world of e-commerce, we need some new techniques in the management field. Every field nowadays needs e-commerce websites to manage their businesses and to reach customers. The main aim of such management systems is to make things easier for both the customer and business authorities. It provides the ease of time and research required in the offline mode. The expectation from such sites is that customers should receive the accurate timing and best service available at reasonable rates.
This study investigates the impact of the internet and online services on the beauty industry and its management. Here we studied the different case studies related to the topic which contributes to the importance of online services. Our results show the limitations, solutions and also advantages over traditional methodology.

In [3] Edward Tezak "Successful Salon and spa management" for improved and systematic management of salon.

The emergence of the spa industry had created job and economic opportunities formation, specifically for the tourism industry to lead as discussed in the 2012 Global Spa and Wellness Summit in Bali. The spa industry has contributed more than $106 billion in the wellness tourism globally, and had generated more revenue than any other sector in the tourism industry. In Malaysia, the spa industry has increased to over 200% since 2002 and has the potential to continuously grow. Under the Malaysian Economic Transformation Program (ETP), the spa industry is earmarked as one of the twelve initiatives budgeted for tourism development. However, the industry is not without its problems. Besides competition from other tourism sectors and also from neighboring countries, the spa industry in Malaysia needs to address issues which include the shortage of therapist expertise and providing excellent service. It was reported that the "lack of talent" in the spa industry is caused by high staff turnover when compared with the other services in the tourism industry.

In [4] SalonBook.com CIS 499 SENIOR PROJECT FINAL REPORT Joshua Roth Advisor: Norm Badler, Jeff Nimeroff University of Pennsylvania.

Salon Book is a web-based salon management application with appointment scheduling functionality. It connects clients, salons, and stylists in an online community allowing users to browse salons and stylists, and book or cancels appointments. Users can also write and read reviews of salons and particular stylists. Salons can specify the stylists that work at their salons, as well as the services they offer. Salons can also book appointments for customers, and can view and print schedules in convenient formats. OpenTable.com serves a similar need in the restaurant industry, but nothing quite like this existed to bring clients and beauty salons together online. SalonBook.com fills this void in a way that is on-

demand, easy to use, and effective for users and salon managers. My project will use MySQL and PHP to back the interface with strong database functionality. For appointment scheduling, Salon Book will integrate Web Calendar as a backend database for appointments as well as a front-end scheduling interface. Web Calendar is a PHP-based calendaring application that can be a stand-alone program or integrated into other applications. This project will target the major web browsers as the initial platform for the Beta version.

In [5] Salon Management International Journal of Innovative Science and Research Technology ISSN No:-2456-2165, Volume 4, Issue 3, March – 2019.

Salon management system web applications have become essential tools for streamlining operations, enhancing customer experience, and improving business efficiency in the salon industry. This literature review aims to provide an overview of existing research and development efforts in this field, highlighting key features, challenges, and emerging trends.

While existing research and development efforts have made significant strides in addressing key challenges and incorporating emerging technologies, there remains ample opportunity for further innovation and improvement in this field. Future research directions may include exploring the impact of AI technologies, improving data security and privacy measures, and investigating novel approaches to enhancing user experience in salon management systems.

CHAPTER 3

SYSTEM DEVELOPMENT

3.1 Existing System

Existing systems of salon management applications typically include features such as appointment scheduling, client management, employee management, inventory tracking, and sometimes integrated point-of-sale systems.

These systems aim to streamline salon operations, improve customer experience, and enhance overall efficiency.

Existing salon management applications focus on operational aspects, a proposed reporting system would enhance these capabilities by providing comprehensive insights and analytics to support data-driven decision-making and business growth.

3.1 Proposed System

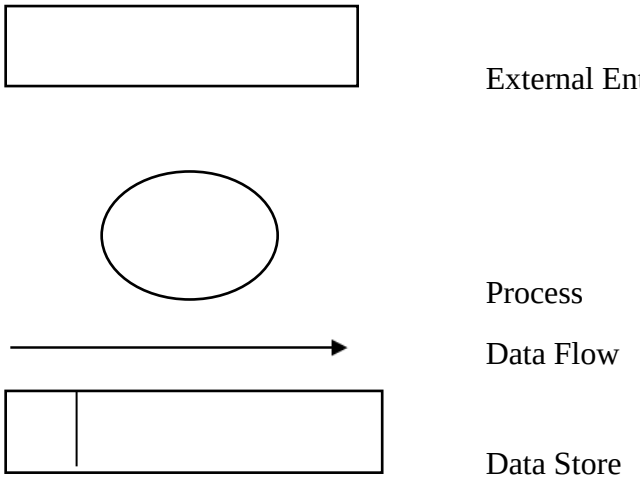
- Objective is to overcome the major limitation of the existing enabling effective management of the customer details thereby improving the performance.
- With improved computerization being involved in the maintenance of customer details, error and inconsistencies can be kept at par.
- Easy retrieval of data will be made possible by finding techniques.
- Validation of data will ensure only accurate, valid and complete data is stored in the database.
- Proper monitoring of the processes from customer registration to activation. Report generation will help make it easy to analyze the performance at the Bank.
- This will be much less time consuming comparing to existing system.

3.1 Data Flow Diagram

The entire system is projected with a physical diagram which specifics the actual storage parameters that are physically necessary for any database to be stored on to the disk. The overall systems existential idea is derived from this diagram.

The content level DFD is provided to have an idea of the functional inputs and outputs that are achieved through the system. The system depicts the input and output standards at the high level of the systems existence.

A DFD does not show a sequence of steps. A DFD only shows what the different process in a system is and what data flows between them. The following are some DFD symbols used in the project



3.1.1 Level 0 Data Flow Diagram

Level 0 Data Flow Diagram will explain the basic flow of data in a system which shows how the new or old user will interact with the system.

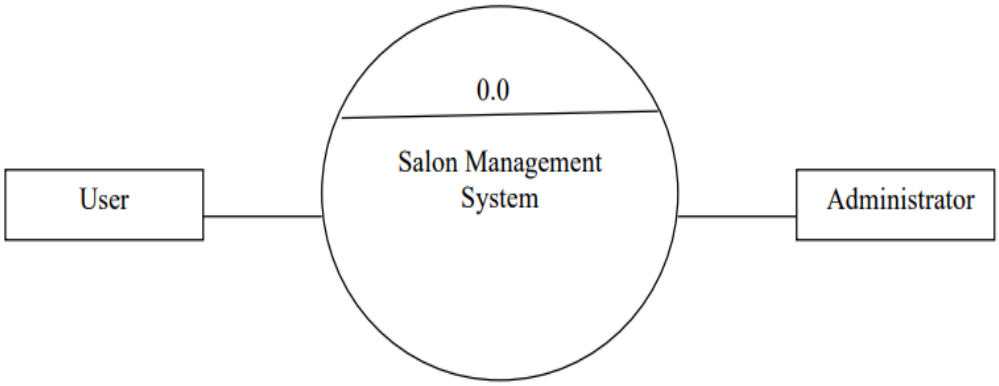


Fig. 3.1 Level 0 DFD of Salon Management System

Fig 3.1 elaborates the interaction between user and the system. If the user is new then user will first register to the system by providing name, username, email, password, phone. This Level 0 DFD provides a simplified overview of the main processes and interactions in the salon management system. It serves as a starting point for further elaboration and decomposition into lower-level DFDs, which would provide more detail about each process and its interactions.

3.1.2 Level 1 Data Flow Diagram

Level 1 Data Flow Diagram will explain the basic flow of data in a system which shows how the new or old user will interact with the system with different processes.

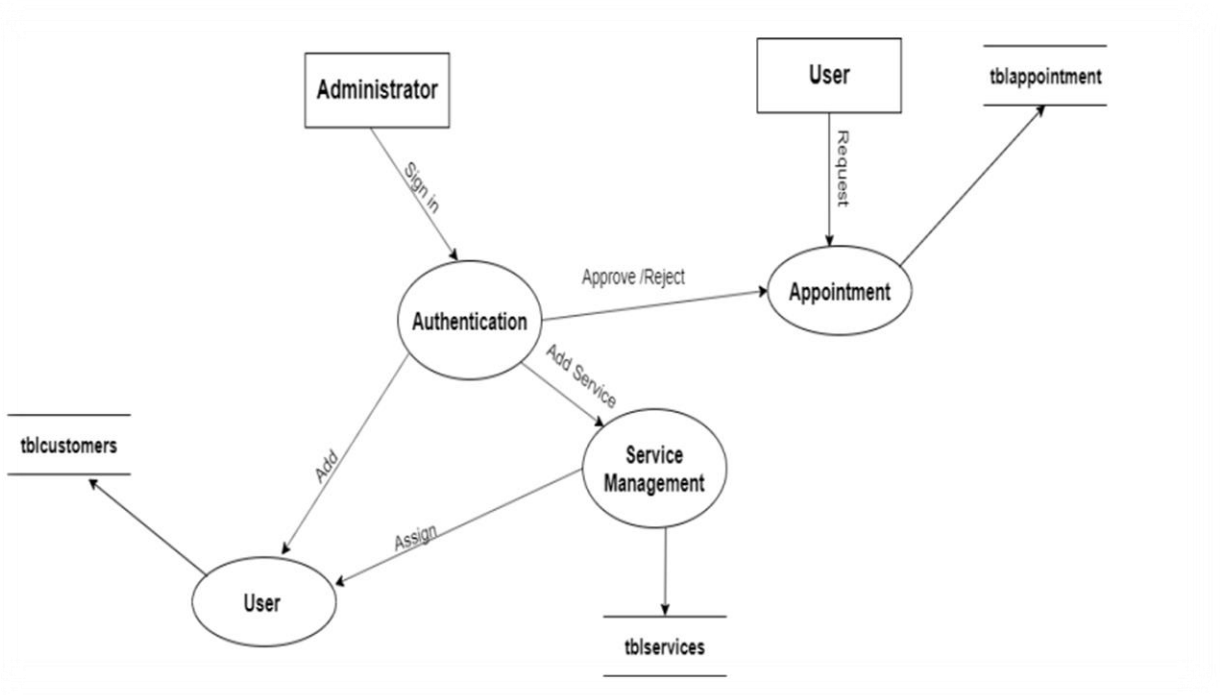


Fig. 3.2 Level 1 DFD of Salon Management System

Fig. 3.2 explains the entire flow of user and system with all processes involved in the system. If the user is new to the system, then register to the system by providing the details to it. And all the details of the user will be stored in the database. If the user is old, then user will log into the system by email and password which will be validated from the database. Then the user will provide the customization of domain and type of the service.

3.2 Data Dictionary

Legal character: [a to z| A to Z]
Digits: [0-9]
Special character: [@, $, #, +, -, /]

Table 1: Data Dictionary

1	Name	Legal Characters
2	Domain	Legal Characters
3	Email	Legal Characters+ Digits+Special Character
4	stylist_id	Digits
5	Schedule	String
6	Phone No.	Digits
7	category	Legal Characters
8	price	Decimal
9	duration	Digits

3.3 Sequence Diagram

Sequence Diagram is used to show the process of the system based on the different timeline.

3.3.1 Sequence Diagram of Registration Process

In this Diagram of Registration Process, it has 4 objects one actor, one boundary object, one control object, one store object.

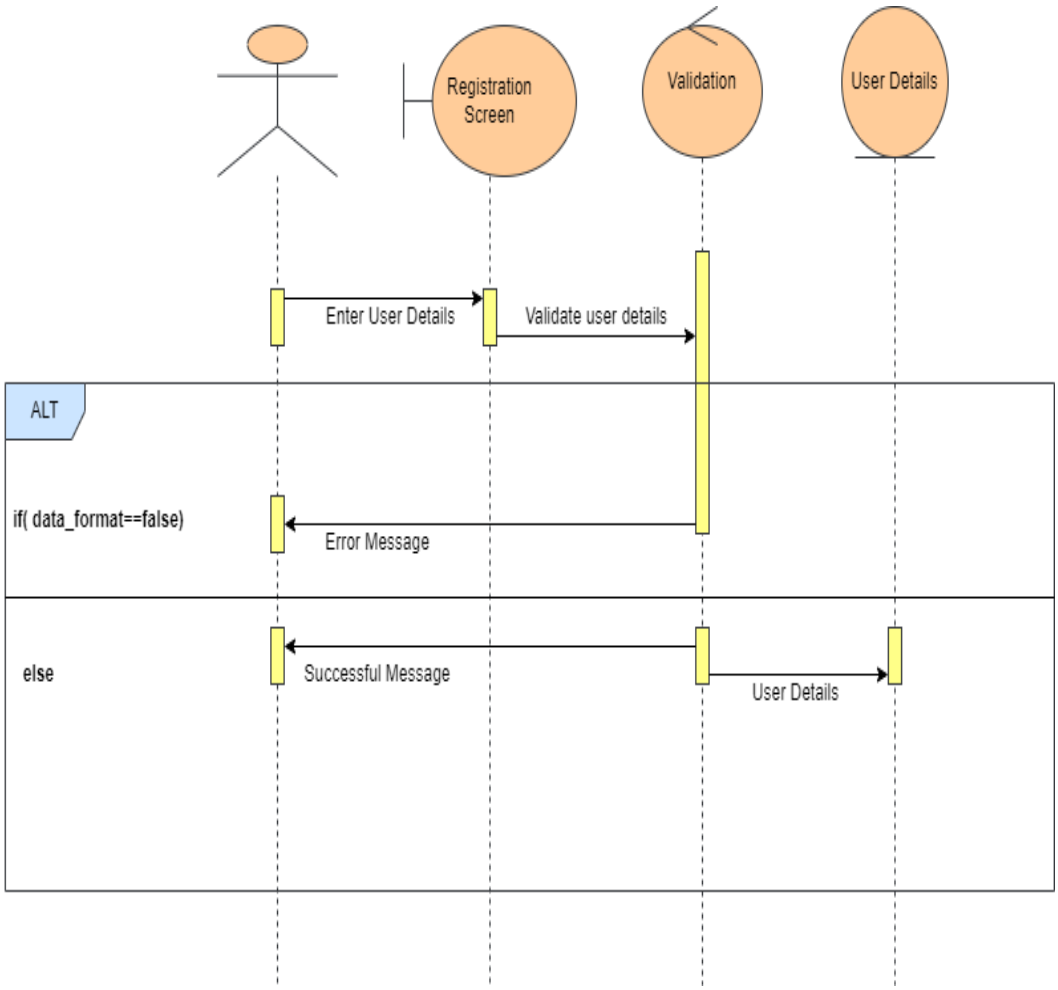


Fig. 3.3 Registration sequence diagram

Fig 3.3 explains about the process of registration where user send the details to the screen then validate those details. If details are not in correct format, then an error message is displayed. If details are in correct format, then successful message is displayed. Then details are stores in user database.

3.3.2 Sequence Diagram Of Add Bookings

Following sequence diagram Figure 3.4 illustrate the add booking for customer from booking dashboard.

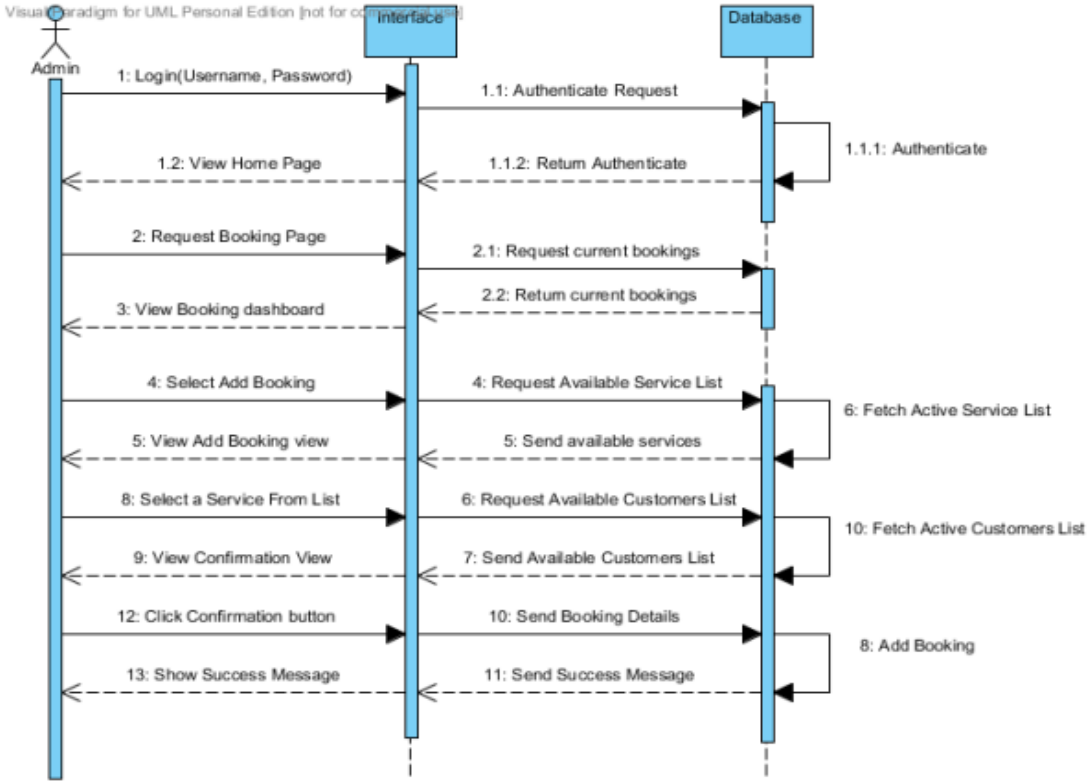


Fig 3.4 Sequence Diagram Of Add Bookings

3.3.3 Sequence Diagram Of Login Process

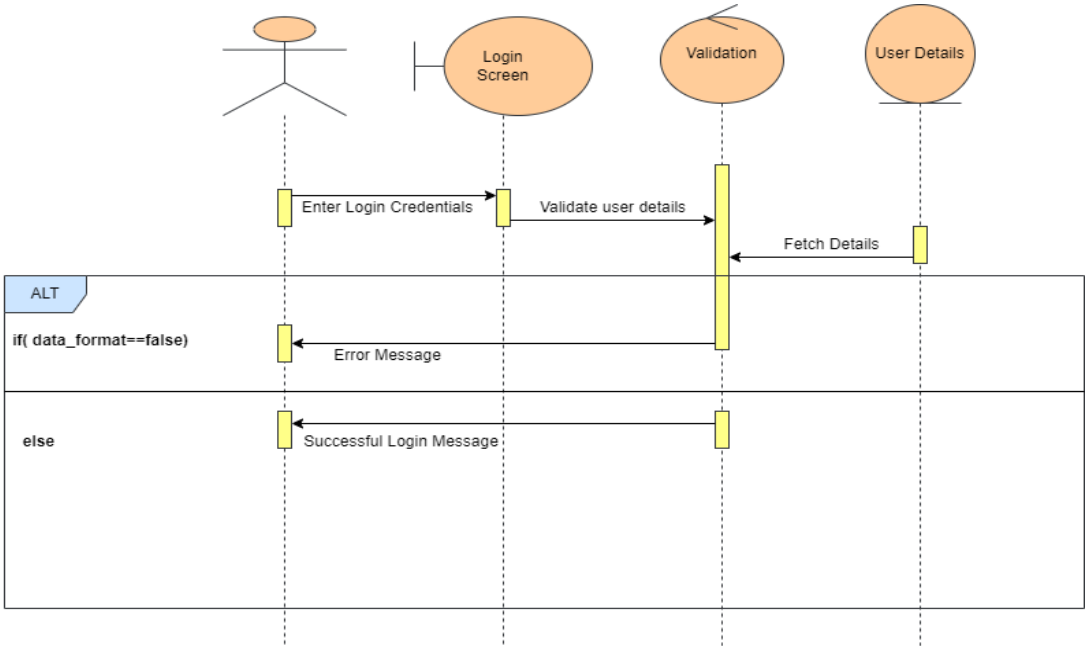


Fig. 3.3 Login sequence diagram

3.4 Unified Modeling Language Diagrams (UML):

The unified modeling language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules.

A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

User Model View

This view represents the system from the users perspective.

The analysis representation describes a usage scenario from the end-users perspective.

Structural Model View:

In this model the data and functionality are arrived from inside the system.

This model view models the static structures.

Behavioral Model View:

It represents the dynamic of behavioral as parts of the system, depicting the interactions of collection between various structural elements described in the user model and structural model view.

Implementation Model View:

In this the structural and behavioral as parts of the system are represented as they are to be built.

Environmental Model View:

In this the structural and behavioral aspects of the environment in which the system is to be implemented are represented.

UML is specifically constructed through two different domains they are

UML Analysis modeling, which focuses on the user model and structural model views of the system?

.

3.4.1 Use Case Description Of Salon Owner

Primary Actor: Salon Owner/Manager

Goal in Context: The salon owner utilizes the owner module to manage various aspects of the salon business efficiently, including staff management, inventory control, financial tracking, and reporting.

Scope: Salon Management System

Level: User Goal

Preconditions:

- The owner must have access to the Salon Management System.
- The owner must be authenticated and authorized to access the owner module.
- The owner logs into the Salon Management System.
- The owner accesses the owner module from the dashboard.
- The owner views a summary dashboard displaying key metrics such as revenue, appointments booked, inventory status, and staff performance.

Following figure 3.1 illustrates the identified use cases for salon owner in the new system. It's simply describes the functionalities for owner in the system. In addition to the other users of system owner has additional use cases for system reports. Using system reports owner can get better decisions on the salon management.

.

3.4.2 Use Case Description of Admin

Primary Actor: Administrator

Goal in Context: The administrator utilizes the admin module to oversee and manage various administrative functions within the salon management system, including user management, system configuration, and access control.

Scope: Salon Management System

Level: User Goal

Preconditions:

- The administrator must have access to the Salon Management System.
- The administrator must be authenticated and authorized to access the admin module
- The administrator logs into the Salon Management System.
- The administrator accesses the admin module from the dashboard.
- The administrator views a summary dashboard displaying system health, user activity, and recent updates.
- The administrator navigates to the user management section to add, edit, or remove user accounts.

Technology and Data Variations List:

- The system should support user management functionalities, including adding, editing, and removing user accounts.
- Data related to user accounts, system configurations, and access control should be stored securely in a centralized database

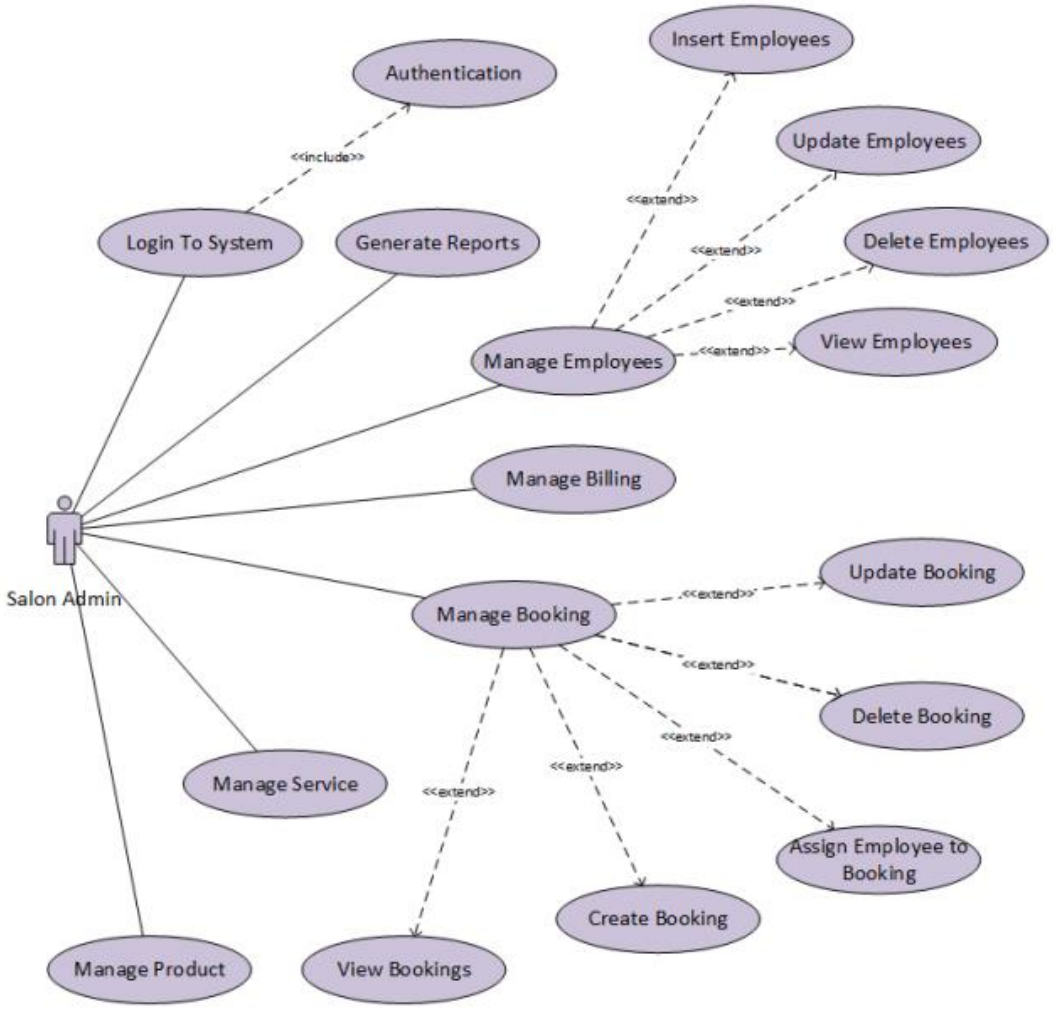


Figure 3.2: Use Case Diagram for Salon Admin

Following Figure 3.2 is for identified use cases for salon admin in salon. Its express the deferent use cases that individual branch (salon) on the system.

3.4.4 Use Case Description of Employee

Following Figure 3.3 is for identified use cases for employee in salon. Its express the deferent use cases that employee work on the system.

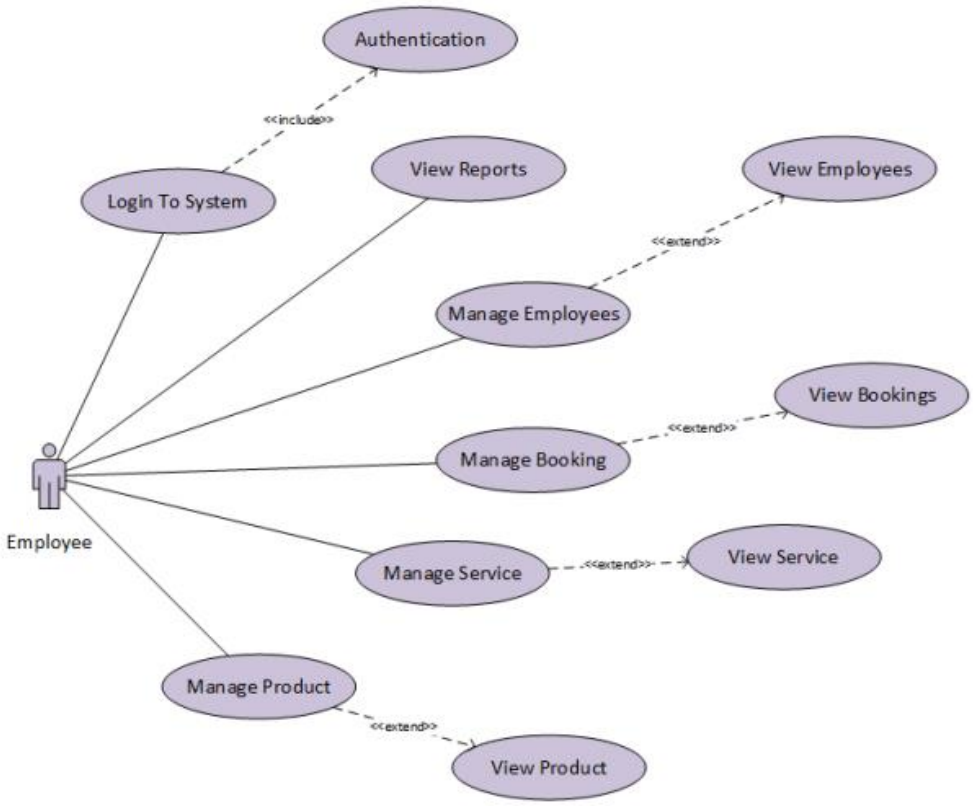


Figure 3.3: Use Case Diagram for Employee

3.4.5 Use Case Description of Login

Bellow table 3.1 is Use case description for the login use case.

Use Case	Login
Actor	All Employees
Overview	
Register employees can login to the system	
Precondition	
Employee must register with the system, Employee should have User Name and Password	
Flow of Events	
Enter employee Details, Validate employee details, Login to the system	
Post Condition	
Invalid employee will get the error message and reject login. Valid employee will get the main window of the system	

Table 3.1: Use case description for System Login

3.4.5 Use Case Description of Generate Salon's Reports

Table 3.2 is the use case description for the Generate Salon's Reports use case.

Use Case	Generate Salon's Reports
Actor	SBP/ Owner/ Salon Admin
Overview	
Generate Salon's Reports	
Precondition	
Employee should login to the system under authorized user type	
Flow of Events	
Generate salon report using veiled parameters	
Post Condition	
Relevant Report should be show.	

Table 3.2: Use case description for Generate Salon's Reports

3.4.5 Use Case Description of Create Bookings Use Case

Use Case	Create Bookings
Actor	SBP Owner / Salon Admin
Overview	
Create Bookings	
Precondition	
Employee should login to the system under authorized user type	
Flow of Events	
Create booking, open booking module and create booking under specific customer.	
Post Condition	

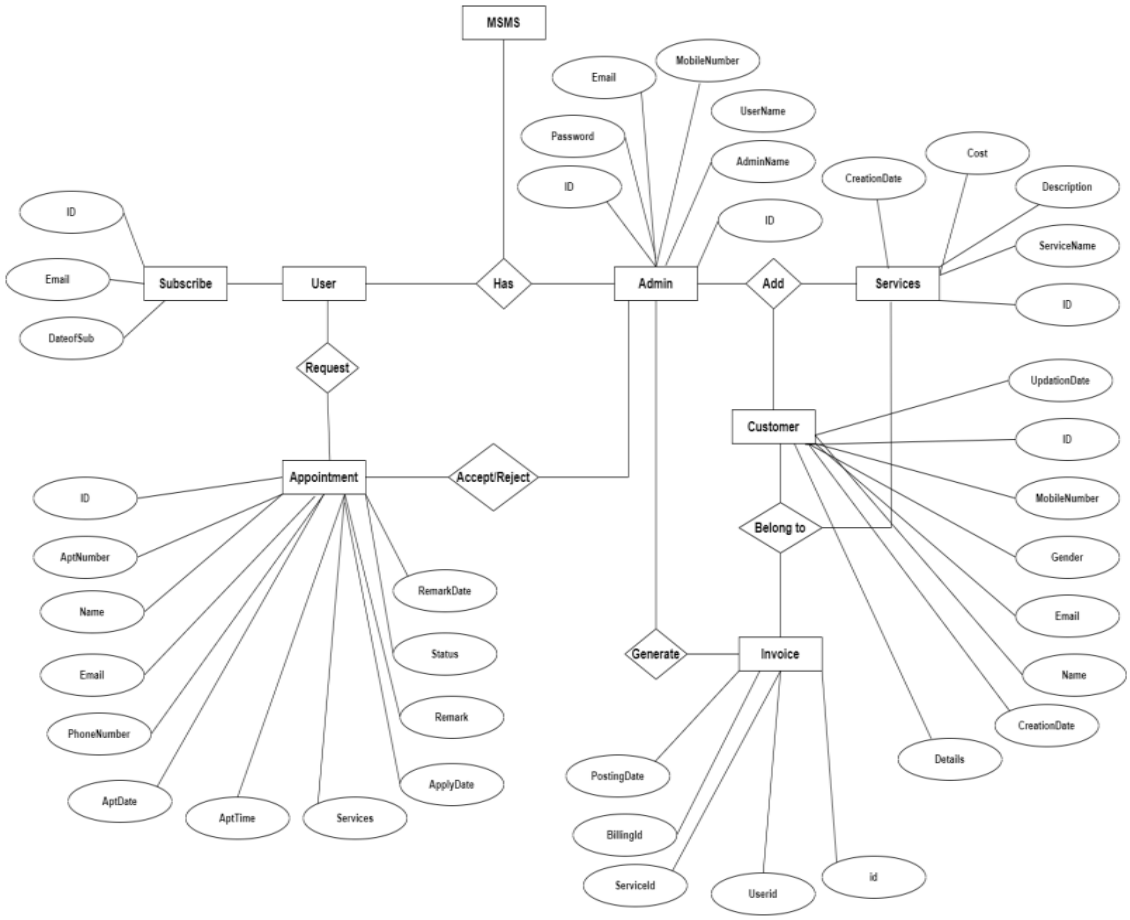
Table 3.3: Use case description for Create Bookings

3.5 Entity Relationship Diagram (ERD):

• This document is an entity-relationship diagram, or "ERD," for a system to manage Inventory Management System.

• An ERD is a model that identifies the concepts or entities that exist in a system and the relationships between those entities. Manage Pages Manage Appointment (Accept / reject) Update Own Profile Change Password Add new Customer Generate invoices Generate Reports

• An ERD is often used as a way to visualize a relational database: each entity represents a database table, and the relationship lines represent the keys in one table that point to specific records in related tables.



CHAPTER 4

PROPOSED WORK

4.1 Database Design

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective is to make database access easy, quick, inexpensive and flexible for the user. Relationships are established between the data items and unnecessary data items are removed. Normalization is done to get an internal consistency of data and to have minimum redundancy and maximum stability. This ensures minimizing data storage required, minimizing chances of data inconsistencies and optimizing for updates. The MS Access database has been chosen for developing the relevant databases.

Salon Management System (MSMS) contains 7 MySQL tables :

tbladmin table Structure : This table store the admin personal and login details

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	AdminName	char(50)	latin1_swedish_ci		Yes	*NULL*		
3	UserName	char(50)	latin1_swedish_ci		Yes	*NULL*		
4	MobileNumber	bigint(10)			Yes	*NULL*		
5	Email	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
6	Password	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
7	AdminRegdate	timestamp			Yes	current_timestamp()		

tblappointment table Structure : This table store the user appointment details.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	AptNumber	varchar(80)	latin1_swedish_ci		Yes	*NULL*		
3	Name	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
4	Email	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
5	PhoneNumber	bigint(11)			Yes	*NULL*		
6	AptDate	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
7	AptTime	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
8	Services	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
9	ApplyDate	timestamp			Yes	current_timestamp()		
10	Remark	varchar(250)	latin1_swedish_ci		No	*None*		
11	Status	varchar(50)	latin1_swedish_ci		No	*None*		
12	RemarkDate	timestamp			No	0000-00-00 00:00:00		ON UPDATE CURRENT_TIMESTAMP()

tblservices table Structure : This table store the services details.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	ServiceName	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
3	Cost	int(10)			Yes	*NULL*		
4	CreationDate	timestamp			Yes	current_timestamp()		

tblcustomers table Structure : This table store the customer details.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	*None*		AUTO_INCREMENT
2	Name	varchar(120)	latin1_swedish_ci		Yes	*NULL*		
3	Email	varchar(200)	latin1_swedish_ci		Yes	*NULL*		
4	MobileNumber	bigint(11)			Yes	*NULL*		
5	Gender	enum('Female', 'Male', 'Transgender')	latin1_swedish_ci		Yes	*NULL*		
6	Details	mediumtext	latin1_swedish_ci		Yes	*NULL*		
7	CreationDate	timestamp			Yes	current_timestamp()		
8	UpdationDate	timestamp			Yes	*NULL*		ON UPDATE CURRENT_TIMESTAMP()

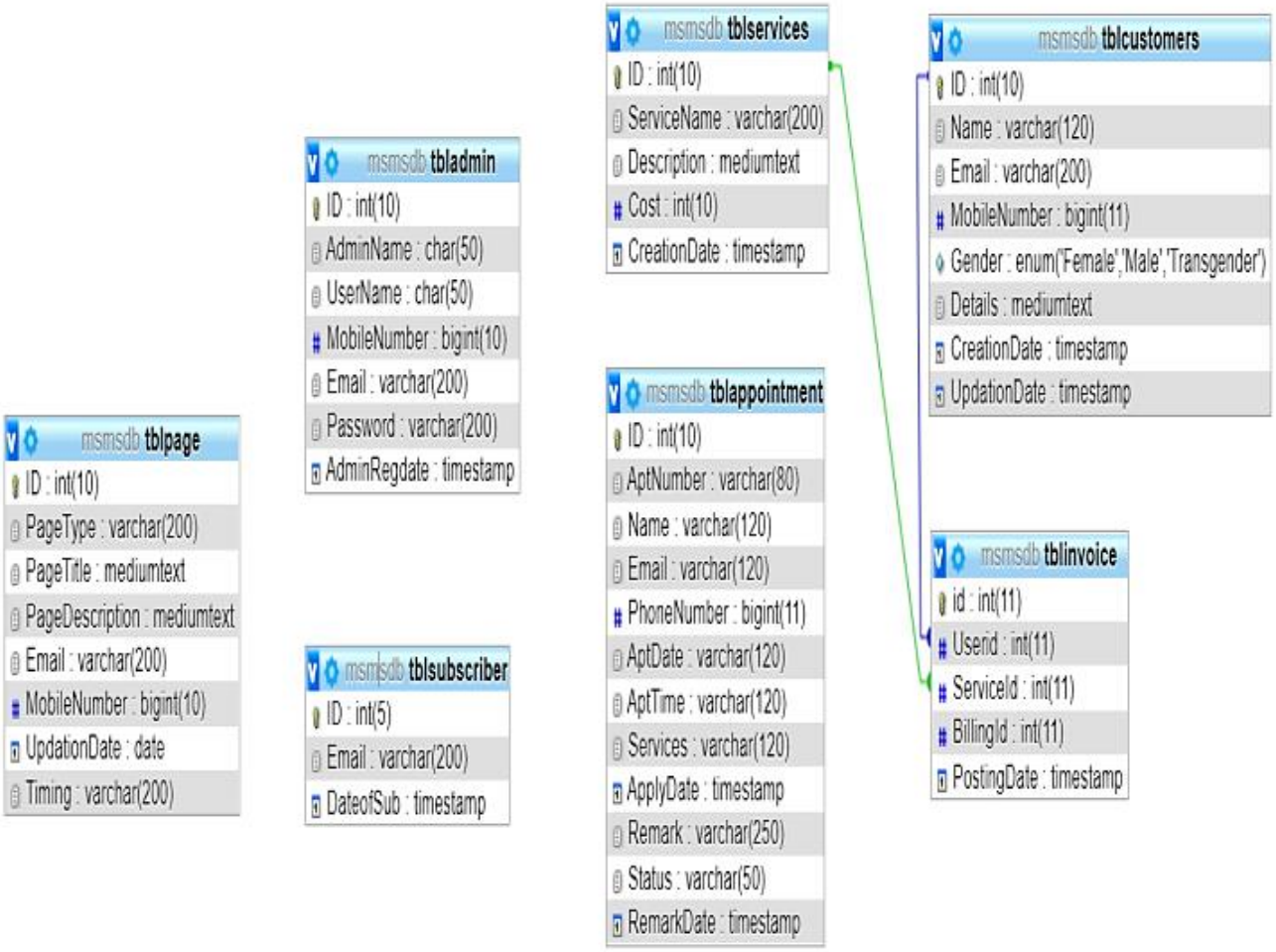
tblinvoice table Structure : This table store the customer invoice details.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)			No	*None*		AUTO_INCREMENT
2	Userid	int(11)			Yes	*NULL*		
3	ServiceId	int(11)			Yes	*NULL*		
4	BillingId	int(11)			Yes	*NULL*		
5	PostingDate	timestamp			Yes	current_timestamp()		

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(5)			No	*None*		AUTO_INCREMENT
2	Email	varchar(200)	utf8mb4_general_ci		Yes	*NULL*		
3	DateofSub	timestamp			No	current_timestamp()		

4.2 Class Diagram:

The class diagram shows a set of classes, interfaces, collaborations and their relationships.



The class diagram shows a set of classes, interfaces, collaborations and their relationships.

4.2 Technology Description

- **Selection of Operating System:** Our website is platform independent, so it does not depend on the operating system.
- **Selection of Software:** Visual Studio is used to create our software.

4.3 Approach Used

Developing a salon management system web application involves several key phases. First, gather requirements by meeting with salon owners and staff to understand their needs. Next, design the system architecture and user interface, considering factors like scalability and usability. Then, proceed with development, coding both the frontend and backend components using appropriate technologies and frameworks. Integrate third-party services as needed, such as payment gateways or SMS APIs.

Thoroughly test the application for functionality, usability, performance, and security. Once testing is complete, deploy the application to a production environment and provide training and support to salon staff. Maintain the application by applying updates and addressing user feedback to ensure it continues to meet the salon's needs over time. Throughout the process, communication with stakeholders is essential for success

4.4 Dependencies Required

For a web-based salon management system, you'll need a combination of frontend and backend technologies, as well as dependencies for specific functionalities. Here's an overview:

Frontend Dependencies:

- **HTML/CSS/JavaScript:** Fundamental for building the structure, styling, and interactivity of the web application.
- **Frontend Framework/Library:** Consider using a framework like React.js, Angular, or Vue.js to streamline development and manage components efficiently.
- **UI Framework/Library:** You might want to use UI frameworks like Bootstrap, Material-UI, or Semantic UI to ensure consistent and responsive design across different devices.
- **AJAX/HTTP Library:** Libraries like Axioms or Fetch API for making asynchronous HTTP requests to the backend server. And responsive Single Page Applications (SPAs) by allowing the mapping of components to different routes.

Backend Dependencies:

- **Server-Side Language**: Choose a language to handle server-side logic. Popular options include Node.js (JavaScript), Python (Django or Flask), Ruby (Ruby on Rails), or PHP (Laravel or Symfony).
- **Web Server:** Apache or Nginx to serve the web application.
- **Database:** Select a database system to store salon data. Options include relational databases like MySQL, PostgreSQL, or SQLite, or NoSQL databases like Mongo DB..
- **Web-vitals:** Version 2.1.4 is used in this project. Web Vitals is a set of metrics that help measure the performance and user experience of a web application. It includes tools and libraries for capturing and reporting essential performance metrics.

4.5 Algorithms And Flowcharts

The descriptions of major functionalities of the Mock Interview System are given below:

- **Sign up():**

This function will make the user to sign up to the system.

Algorithm

- 1 save the requested name, email and password to a constant variable
- write the regular expression to validate the password
- try to find the entered email in the database
- if user is not present in the database then go to line 5 else go to line 8.
- if password entered is validated properly and is right then go to line 6 else go line 7.
- save the details of the user to the database and print "successfully registered message".
- 7error message is given to the user.
- message printed "User already exists.

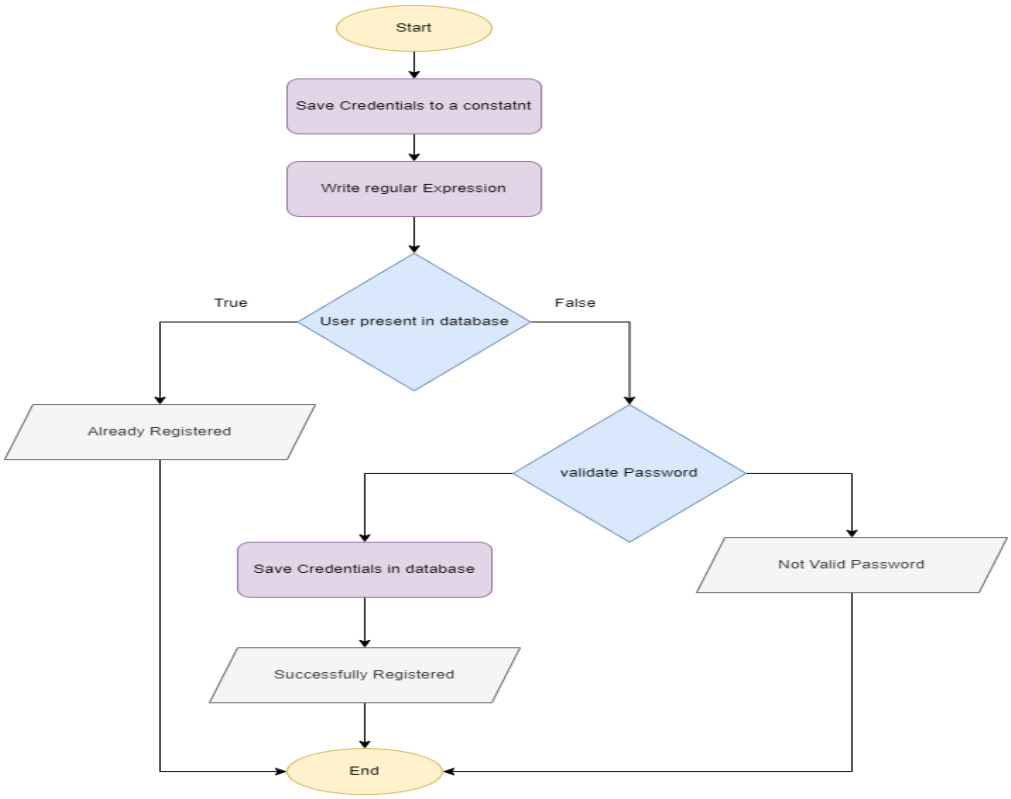


Fig. 4.2 Flowchart of signup process

- **LogIn():**
  This function will make the user to logged in to the system.

Algorithm

- 1 save the requested name, email and password to a constant variable
- try to find the entered email in the database
- if user found in database then go to line 5 else go to line 6.
- open dashboard of the user.
- error message is given to the user.

Flowchart

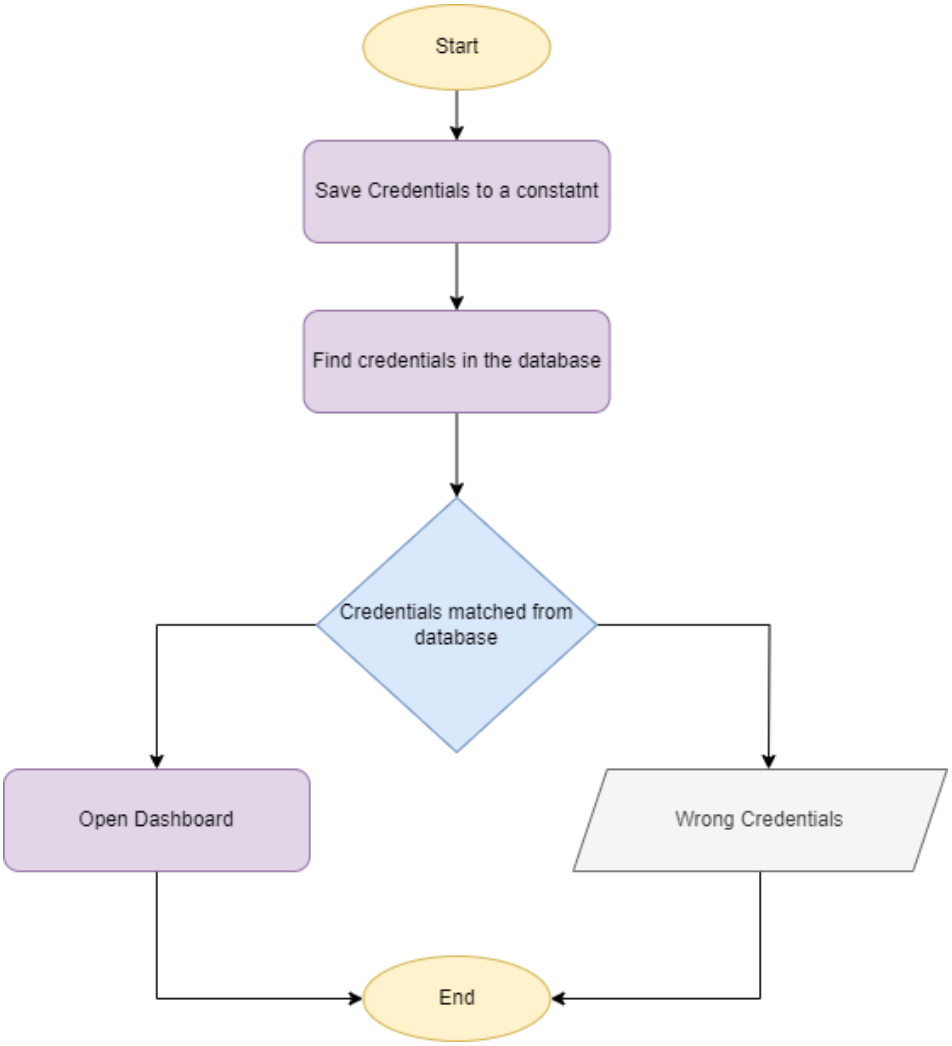


Fig 4.3 Flowchart of Login

CHAPTER 5

RESULT

5.1 Screens And Explanations

This chapter will include all the screens available in the project such as home page, registration page, login page, start new interview, interview customization, interview screen and response screen along with detailed explanation of each screen and its functionality. Screens available in the system are as follows:

Screen 1: Home Page

Screen 1 is the home page of the website which displays the basic information about the home page of the salon management system web application offers a welcoming introduction to the platform.. Contact information and a footer with essential links complete the page, creating a compelling overview of the platform's capabilities and encouraging user engagement.

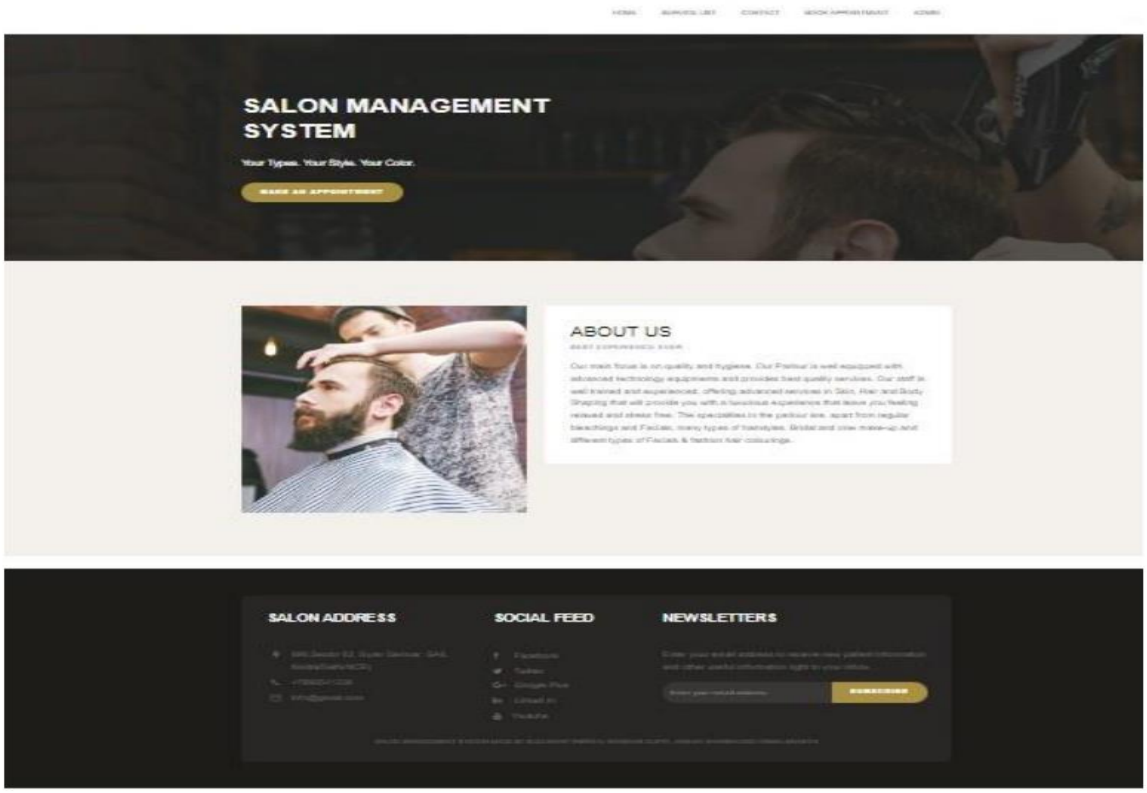


Fig.5.1 Home Page

Screen 2: Sign In Screen

Screen 2 is the log in and the registration page. The admin sign-in page of the salon management system web application serves as the gateway for administrators to access the system's backend functionalities.

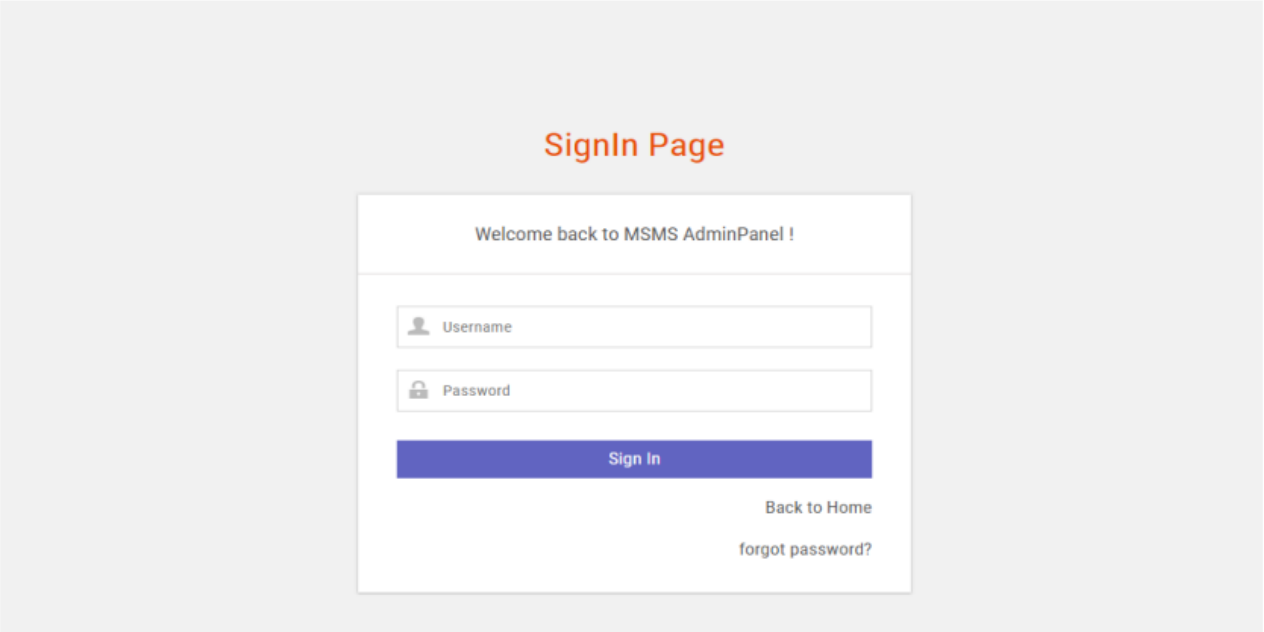
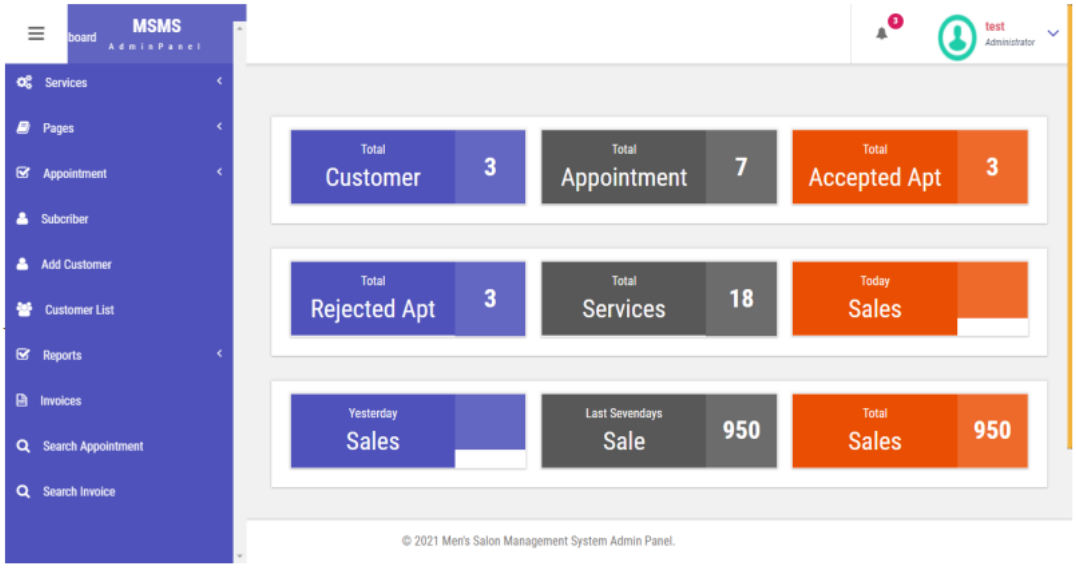


Fig.5.2 Admin SignIn Page Screen

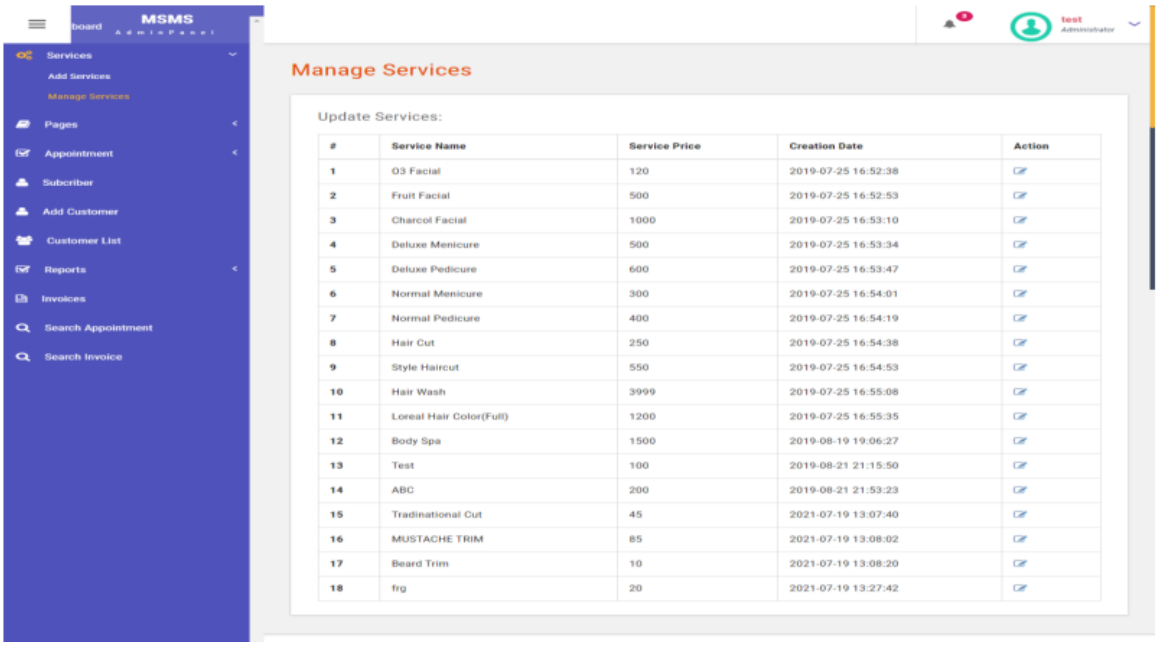
Screen 3: Dashboard Screen

Screen 3 is the page The dashboard of the salon management system web application serves as a centralized hub where salon administrators and staff can access key information and perform various tasks efficiently.



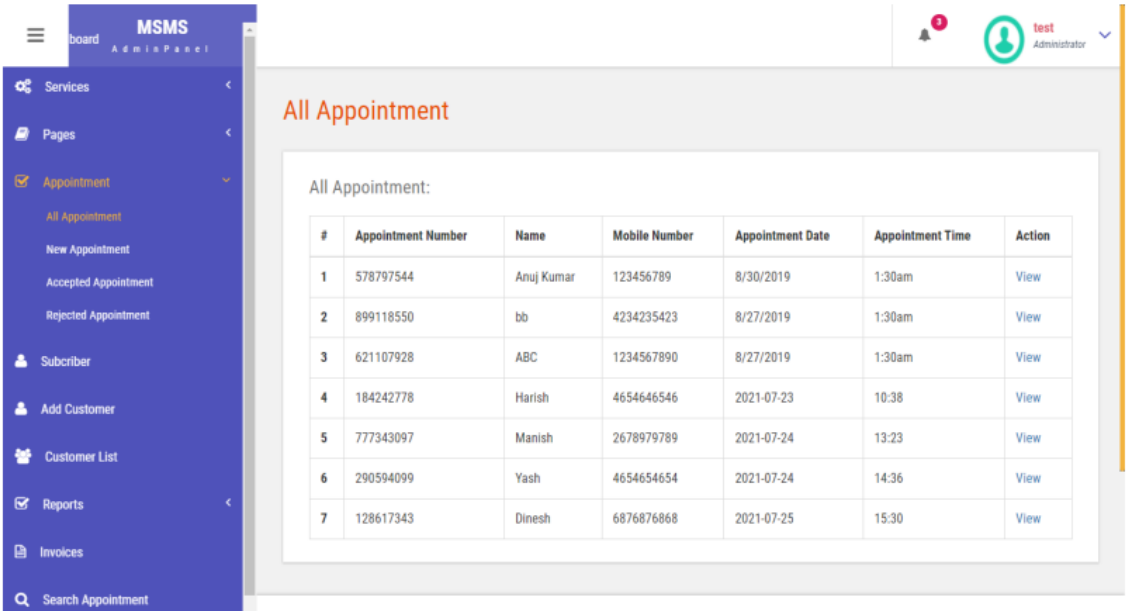
Screen 4: Manage Services Screen

Screen 4 is It includes features such as appointment scheduling, client and employee management, inventory tracking, billing and invoicing, reporting and analytics, marketing and promotions, point of sale functionality, website integration, and mobile accessibility..



Screen 5: Appointment Details

Screen 5 is the screen of the appointments feature serves as a centralized tool for managing the salon's schedule. Staff members can view their upcoming appointments, check availability, and make adjustments as needed.



Screen 6: Invoice Details Screen

Screen 6 will show the invoice details page of a salon management system web application provides a comprehensive summary of all financial transactions associated with a specific invoice. It typically includes details such as the invoice number, date of creation, client information (name, contact details), and a breakdown of services rendered or products sold.

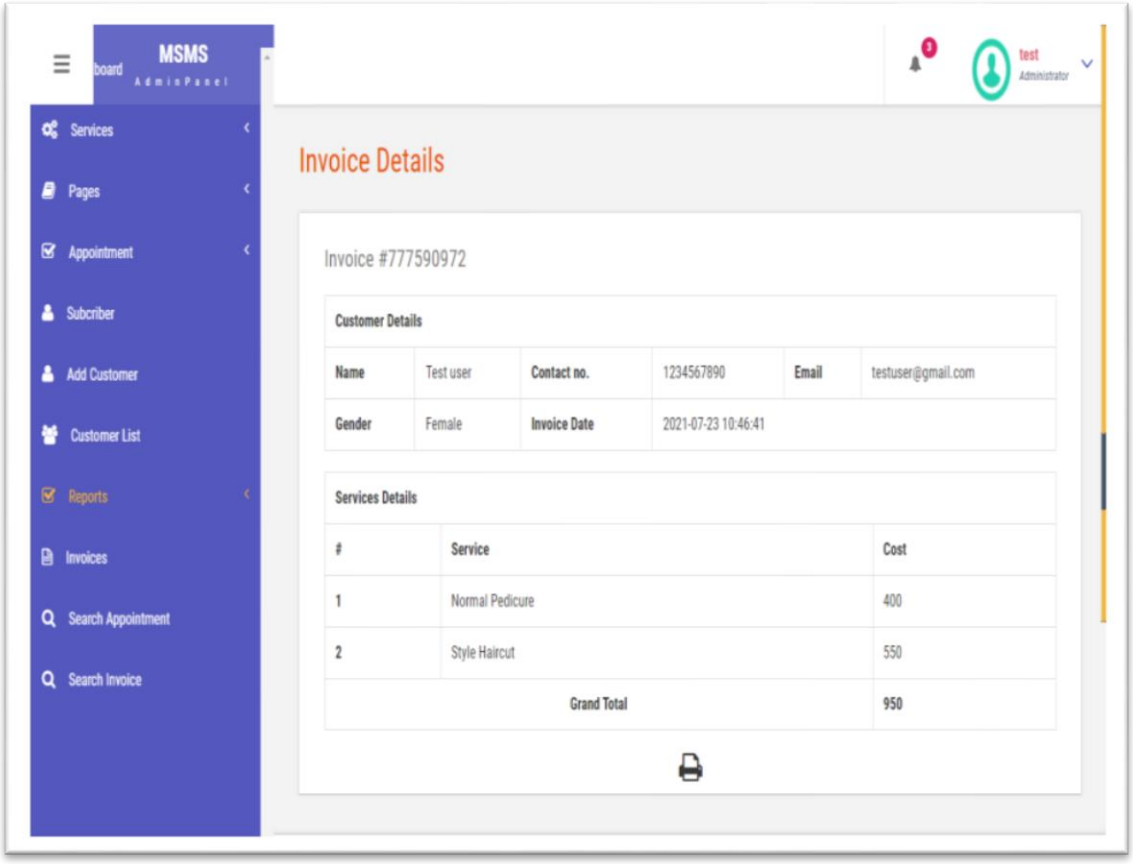


Fig. Screen 6 Invoice Details

CHAPTER 6

DISCUSSIONS

The Discussions section of this report delves into crucial aspects of the Salon Management System. Salon management system web applications offer numerous benefits for salon owners and clients alike, but they also pose challenges related to internet dependency, customization limitations, data security, and integration complexity. However, with ongoing advancements in technology and a focus on user experience, the future prospects for salon management systems are promising, paving the way for greater efficiency, innovation, and growth in the salon industry.

6.1 Performance

Responsiveness: One aspect of performance is how quickly the application responds to user actions. Users expect a snappy and responsive interface, especially when scheduling appointments, viewing client information, or processing payments. Slow response times can frustrate users and negatively impact their experience.

Scalability: The application should be able to handle increasing numbers of users, appointments, and transactions without significant degradation in performance. Scalability ensures that the system can grow with the business and accommodate peak usage periods without crashing or becoming unresponsive.

Reliability: The system should be reliable and available whenever salon staff needs to access it. Downtime or system failures can disrupt operations, lead to missed appointments, and affect customer satisfaction. High availability and fault tolerance are essential for ensuring uninterrupted service.

Response Time: Performance testing should measure the response time for key operations within the application, such as loading the appointment calendar, searching for client records, or generating reports. Short response times contribute to a smooth and efficient user experience, while long response times can lead to frustration and decreased productivity.

Database Performance: The performance of the database backend is critical for the overall performance of the application. Database queries should be optimized for efficiency, indexes should be used appropriately, and database connections should be managed effectively to minimize latency and maximize throughput.

Security Performance: While not traditionally considered a performance metric, the effectiveness of security measures can indirectly impact performance. Security controls

such as encryption, authentication, and access controls should be implemented in a way that minimally impacts system performance while effectively protecting sensitive data

6.2 Limitations Of The System

Internet Dependency: Since salon management systems are web-based, they rely on a stable internet connection. Interruptions or slow internet speeds can hinder access to the system, affecting productivity and causing inconvenience for salon staff.

Limited Customization: Off-the-shelf salon management systems may offer limited customization options. While they provide a range of features and functionalities, they may not fully align with the unique needs and preferences of every salon. Customization options may be limited to branding and basic configurations.

Initial Setup and Training: Implementing a new salon management system requires time and resources for initial setup and staff training. Salon staff may need to familiarize themselves with the new software, which can temporarily disrupt workflow and productivity during the transition period.

Integration Challenges: Integrating a salon management system with existing software or hardware infrastructure can be challenging. Compatibility issues may arise when attempting to connect the system with third-party services, such as payment processors or accounting software. This can require additional development effort and technical expertise

Data Security Concerns: Salon management systems store sensitive client information, including personal details and financial data. Ensuring the security and privacy of this data is essential to protect against data breaches and unauthorized access. However, maintaining robust security measures requires ongoing vigilance and investment in cyber security practices.

Cost Considerations: While salon management systems can provide long-term cost savings through improved efficiency and productivity, there are upfront costs associated with purchasing and implementing the software. Additionally, subscription fees or licensing costs may be required for ongoing access to the system, which can impact the salon's budget.

Scalability Issues: Some salon management systems may have limitations in scalability, particularly for small salons that experience rapid growth or expansion. As the salon grows and the volume of clients and transactions increases, the system may struggle to accommodate higher demands, leading to performance issues or the need for upgrades.

User Experience Challenges: Despite efforts to design intuitive user interfaces, some salon management systems may still face usability challenges. Complex workflows, cluttered interfaces, or unfamiliar terminology can make it difficult for salon staff to navigate the system efficiently, leading to frustration and reduced productivity.

Maintenance and Support Dependence: Ongoing maintenance and technical support are essential for ensuring the smooth operation of a salon management system. Dependence on software vendors or service providers for updates, bug fixes, and troubleshooting can pose a risk if adequate support is not available or if the vendor discontinues support for the product

6.3 Testing Of System

Testing is asset of activities that can be planned in advanced and conducted systematically. For this reason a template for software testing a set into which we can specific test case design techniques and testing methods should be defined for the software process.

6.3.1 Types Of Testing

Alpha Testing: -

Testing after code is mostly complete or contains most of the functional and prior to end user being involved. More often this testing will be performed in house or by an outside testing firm in close cooperation with the software engineering department.

Beta Testing: -

Testing after the product is code complete. Betas are often widely distributed or even distributed to the public at large in hopes that they will buy the final product when it is released.

Functional Testing: -

Testing two or more modules together with the intent of finding defects, demonstrating that defects are not present, verifying that the modules performs its intended functions as stated in the specification and establishing confidence that a program does what it is supposed do.

Configuration Testing: -

Testing to determine how well the product works with a broad of the hardware/peripheral equipment configurations as on the different operating systems and software.

Pilot Testing: -

Testing that involves the users just before actual release to ensure that users become familiar with the release contents and ultimately accept it. Typically involves many users, is conducted over a short period of time and is tightly controlled.

System Integration Testing: -

Testing a specific hardware/software installation. This is typically performed on a COTS system or any other system comprised or the disparate parts where custom configurations and /or unique installation are the norm .

Software Testing: -

The process of exercising software is with the intent of ensuring that the software system meets its requirements and the user expectations and doesn't file in an unacceptable manner .

Security testing: -

Testing of database and network software in order to keep company data and resources from mistaken/ accidental users, hackers and other malevolent attackers.

Installation Testing: -

Testing with the intent of determining if the product will install on a variety of platforms and how easily it installs.

Compatibility Testing: -

Testing used to determine whether other system software components such as browsers, utilities and competing software would conflict with the software being tested.

CHAPTER 7

CONCLUSION

In conclusion, the development of a comprehensive salon management system with modules including a dashboard, customer registration, services management, invoicing, and reporting holds immense potential for revolutionizing salon operations and enhancing the overall customer experience.

The dashboard serves as a centralized hub, providing salon owners and staff with real-time insights into key performance indicators, appointment schedules, and revenue trends. This enables informed decision-making and efficient resource allocation, leading to improved business performance.

Customer registration functionality streamlines the process of onboarding new clients, capturing essential information, preferences, and contact details. By maintaining a centralized database of client profiles, salons can personalize services, send targeted promotions, and foster long-term customer relationships.

Services management modules empower salon staff to efficiently manage appointments, allocate resources, and track service availability. This ensures optimal utilization of salon resources while minimizing scheduling conflicts and maximizing revenue potential.

The invoicing module automates the billing process, generating accurate invoices based on services rendered, products sold, and applicable taxes or discounts. By streamlining billing and payment processing, salons can improve cash flow, reduce administrative overhead, and enhance customer satisfaction.

Reporting functionalities provide salon owners with actionable insights into business performance, client demographics, service utilization, and revenue trends. By analyzing these reports, salons can identify areas for improvement, optimize service offerings, and develop targeted marketing strategies to attract and retain customers.

The dashboard module provides a centralized platform for monitoring key performance metrics, appointment schedules, and revenue trends in real-time, facilitating informed decision-making and efficient resource allocation.

Customer registration functionality streamlines the client onboarding process by capturing essential information and preferences, enabling personalized service delivery and fostering strong customer relationships.

The services management module empowers salon staff to effectively manage appointments, allocate resources, and optimize service offerings, ensuring a seamless and efficient salon experience for both clients and staff.

The invoicing module automates billing processes, generating accurate invoices based on services rendered and facilitating streamlined payment processing, thereby enhancing financial management and improving cash flow.

In conclusion, a well-designed salon management system with modules encompassing dashboard, customer registration, services management, invoicing, and reporting offers numerous benefits for salon owners and staff, including enhanced operational efficiency, improved customer engagement, and increased profitability. By leveraging technology to streamline salon operations and deliver personalized experiences, salons can differentiate themselves in a competitive market landscape and achieve sustainable growth in the long term.

CHAPTER 8

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8.1 Online Websites

The following are the Salon Management System websites that we had analyzed for ours:

- https://www.greetai.co/practice
- https://beta.interviewai.in/
- https://www.acetheinterview.app/
- https://geekflare.com/ai-powered-interview-preparation-platforms/
- https://interviewly.ai/
- https://www.myamcat.com/products/mock-ai

8.2 Reference Books

Following are the books that we had referred for our project Salon Management System:

- "Saloon Management System: A Modern Approach" by Stuart Russell and Peter Norvig

  This comprehensive textbook provides insights into various aspects of artificial intelligence, including machine learning and natural language processing.

- "Building Scalable and Responsive Web Applications with JavaScript" by Adam Freeman

  Ideal for those working with ReactJS, this book covers building scalable and responsive web applications, which aligns with the frontend development aspect of your project.