GROUP NO: 7	LAUNDRY MANAGEMENT SYSTEM

INTRODUCTION

The Laundry Management System aims to simplify and optimize the laundry operations of businesses by leveraging the power of technology. By transitioning from manual processes to a digital solution, the system offers numerous benefits and advantages.

One of the key features of the system is its order management functionality. It allows businesses to efficiently handle customer orders from the point of submission to the final delivery. The system enables easy order creation, tracking, and status updates, providing transparency and ensuring a smooth work flow.

Furthermore, the Laundry Management System offers robust reporting and analytic capabilities. It generates comprehensive reports and analytic on various aspects of the laundry operations, such as order volume, revenue, customer trends, and resource utilization. These insights empower businesses to make informed decisions, identify areas for improvement, and optimize their overall performance.

1.1 Existing System

In many traditional laundry businesses, the management of laundry operations is often manual and time-consuming. This typically involves handling paper-based records, manually tracking orders and inventory, and relying on manual calculations for billing and reporting. Such a system is prone to errors, inefficiencies, and delays.

The lack of automation and digitization can result in difficulties in order management, inventory control, and accurate billing. Additionally, the reliance on manual processes makes it challenging to analyze data, identify trends, and make informed business decisions.

Moreover, the absence of a centralized database for customer information hinders effective customer management and personalized services. The Laundry Management System addresses these challenges by providing a comprehensive and automated solution that streamlines operations, enhances efficiency, improves customer satisfaction, and drives business growth.

1.2 Need For New System

The need for a Laundry Management System arises from the limitations and challenges faced by traditional laundry businesses. Manual processes and paper-based systems often lead to inefficiencies, errors, and delays in order tracking and management. With the growing demand for laundry services and increasing competition in the industry, businesses require a more streamlined and automated approach to stay competitive and meet customer expectations.

The new system aims to address these challenges by providing a digital solution that automates and streamlines various laundry management tasks. By implementing the Laundry Management System, businesses can improve ordertracking, optimize, inventory management, enhance customer communication, and generate accurate reports for business analysis.

1.3 Objective of New System

- ➤ Streamline order processing and tracking: The system will automate the order management process, allowing for easy tracking of orders from receipt to delivery.
- ➤ Efficient inventory management: The system will provide real-time inventory tracking, ensuring optimal stock levels, minimizing shortages, and facilitating timely replenishment.
- ➤ Improved customer experience: The system will enable customers to place orders online, track the status of their orders, and receive notifications for pick-up and delivery.
- ➤ Accurate billing and invoicing: The system will automate the billing process, ensuring accurate calculations based on predefined pricing rules and generating invoices for customers.

1.4 Problem Defination

- Manual and time-consuming processes: Traditional laundry operations involve a significant amount of manual work, leading to inefficiencies, errors, and delays.
- ➤ Lack of order tracking and transparency: Customers often face challenges in tracking the status of their orders and have limited visibility into the laundry process.
- ➤ Inefficient inventory management: Manual inventory management can result in inaccuracies, stock outs, and difficulties in tracking stock levels.
- ➤ Limited customer communication: Traditional laundry businesses often lack effective communication channels to update customers about order status, delays, or other important information.
- Inaccurate billing and reporting: Manual billing processes can lead to errors in calculations, inconsistencies, and difficulties in generating accurate reports.

1.5 Core Component

- Customer Module: Can Add , Update, and Delete Records.
- ➤ Admin Module: Manages Laundry Types and Customer
- Login: Allowed user to interact with the system by entering valid username and password
- Laundry Type: Allow user to select different types of Laundry
- ➤ Product List: Allow user to use number of product
- > Transaction: Show the status of the laundry

1.6 Project Profile

- Project Name: Laundry Management System
- > Type of Application: Web Application
- Team Size:3
- Front End:HTML, CSS, JAVASCRIPT AND BOOTSTRAP
- ➤ Backend:Python
- Database tools:Mysql
- Framework:Django
- > Tools used: Visual Studio Code, Microsoft Viso

1.7 Assumption and Constraint

Assumption:

- ➤ The laundry management system assumes that customers have access to a mobile device or computer and the internet to place orders and make payments.
- ➤ The system assumes that customers are willing to provide personal information such as name, address, and payment details for registration and order placement.
- ➤ The system assumes that staff members are trained and familiar with the software system, including how to manage customer data, track inventory, and process payments.
- ➤ The system assumes that laundry machines and equipment are functioning properly and that any maintenance or repairs are promptly addressed to minimize downtime.

Control:

- Security controls are in place to protect customer data and prevent unauthorized access to the system.
- ➤ Payment controls are implemented to ensure that payments are processed securely and accurately, including multiple payment options, invoicing, and receipt generation.
- > Staff performance is regularly monitored and evaluated to ensure that staff members are performing their duties effectively and efficiently.
- ➤ Reporting and analytics features are in place to provide insights into the laundry business's performance, including customer data, staff performance, inventory management, and revenue streams.

1.8 Advantage and Limitation of Proposed System

Advantages:

- > Automation of manual tasks, reducing human errors and improving efficiency.
- > Enhanced order tracking and transparency for customers.
- Optimized inventory management, minimizing stockouts and ensuring timely replenishment.
- > Improved customer experience through online order placement and communication.
- Accurate billing and invoicing, reducing billing discrepancies and disputes.
- > Comprehensive reporting and analytics for informed decision-making.

Limitations:

- > The system's effectiveness depends on the accuracy and completeness of data entered into the system.
- > Technical constraints may arise based on the selected technology stack and infrastructure.
- Training and familiarization with the system may be required for smooth adoption.

2. REQUIREMENT AND DETERMINATION

2.1 Requirement Determination

During the requirement determination stage, the project team engages with stakeholders, including business owners, managers, and end-users, to gather information about their expectations and needs for the Laundry Management System. This typically involves conducting interviews, surveys, and workshops to capture the functional and non-functional requirements of the system.

Functional requirements specify what the system should do and include features such as order management, inventory tracking, customer management, billing, reporting, and scheduling. Non-functional requirements focus on the qualities and constraints of the system, such as performance, security, usability, scalability, and compatibility with existing systems.

2.2 Targeted Users

- ➤ Staff:Staff of Laundry has privileges to insert, view, update and delete customer records. Beside managing service and launder details, staff also has a privilege to calculate payment for each transaction made.
- Manager:Owner or manager of Laundry shop or company is a person who has privileges to view staff information and update their information.
- Administrator: Administrator is a person who has responsibility to maintain the system.

 Administrator has all privileges to this system and may grant the privileges to another system User.

3. System Design

3.1. Use Case Diagram

3.1.1 Fig Admin Use Case Diagram

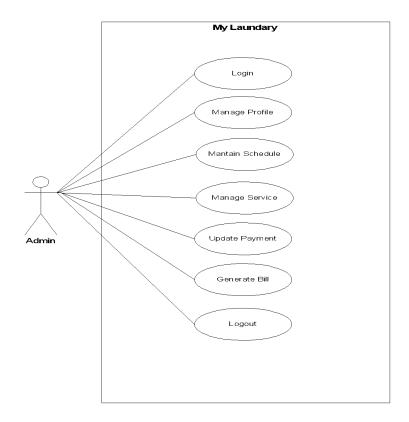


Fig 3.1.2 Customer Use Case Diagram

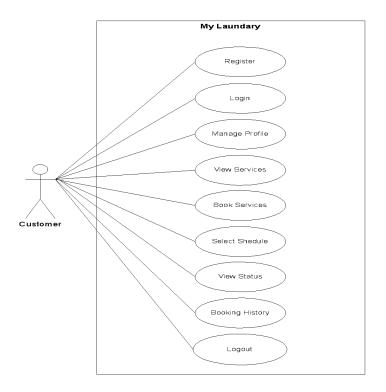
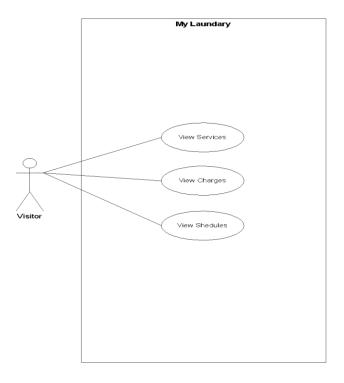
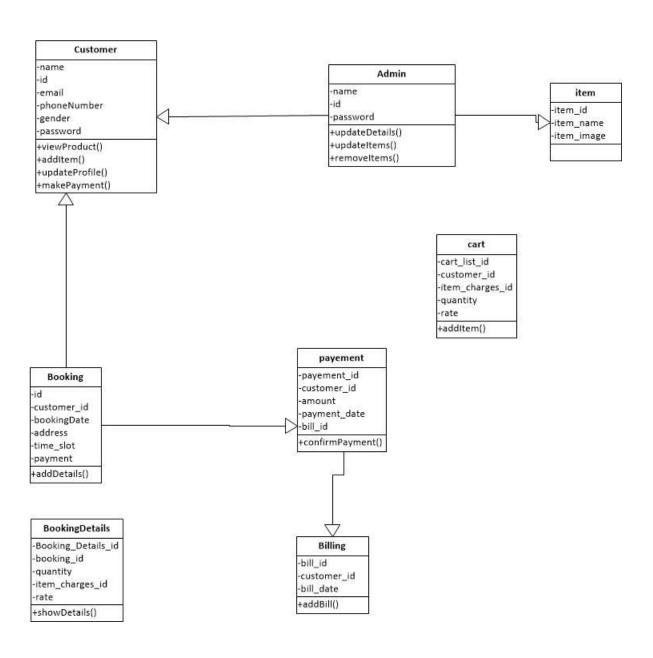


Fig 3.1.3 Vistor Use Case Diagram



3.2. Class Diagram

Fig 3.2.1 Class Diagram



3.3. Interactive Diagram

Fig 3.3.1 Registration Interactive Diagram

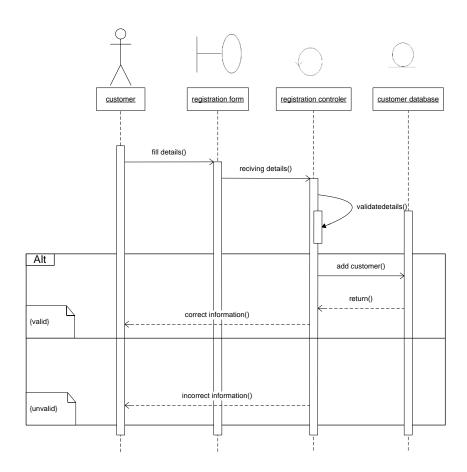


Fig 3.3.2 Login Interactive Diagram

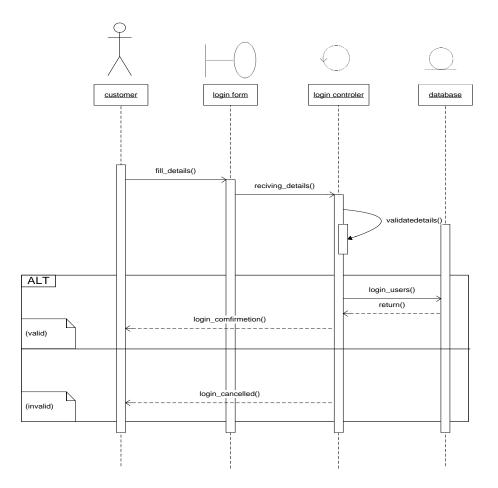
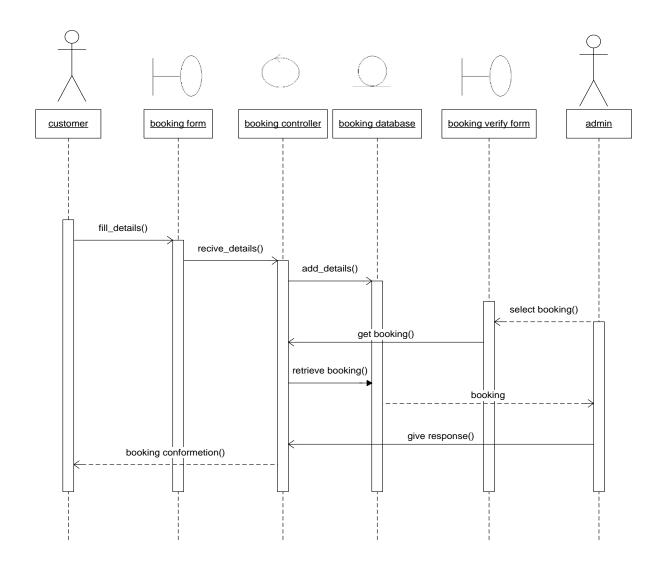
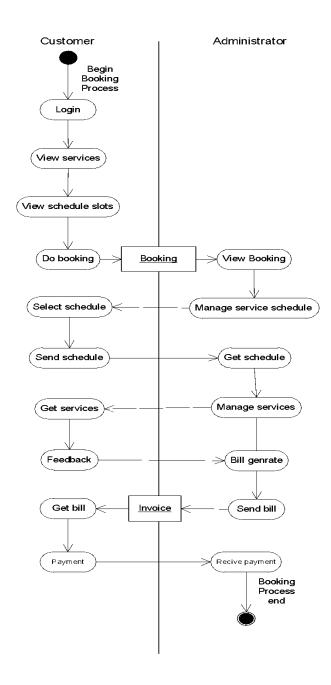


Fig 3.3.3 Booking Interactive Diagram



3.4. Activity Diagram

Fig 3.4.1 Activity Diagram of My Laundry



3.5. Data Dictionary

Fig 3.5.1 Admin Table

Field Name	Туре	Size	Constraint	Description
Admin_id	Int	11	Primary Key	Id of Admin
Admin_name	Varchar	50	Not Null	Name of Admin
Password	Varchar	8	Not Null	Password of Admin

Fig 3.5.2 Area Table

Field Name	Туре	Size	Constraint	Descriptiom
Area_pincode	Int	11	Primary Key	Id_area
Area_name	Varchar	50	Not Null	Name of the
				Area S
City_id	Int	11	Foreign Key	Reference to
				city Table

Fig 3.5.3 Billing

Field Name	Туре	Size	Constraint	Description
Bill_id	Int	11	Primary Key	Id of the Bill
Customer_id	Int	11	Foreign Key	Reference to
				Customer Table
Bill_date	Date		Not Null	Date of Bill

Fig 3.5.4 Billing_details

Field Name	Туре	Size	Constraint	Description
Bill_details_id	Int	11	Primary Key	Id of Bill details
Bill_id	Int	11	Foreign Key	Reference to Bill Table
Item_charges_id	Int	11	Foreign Key	Reference to item charges table
Quantity	Int	11	Not Null	Number of Quantity

Fig 3.5.5 Booking

Field Name	Туре	Size	Constraint	Description
Booking_id	Int	11	Primary Key	Booking Id
Customer_id	Int	11	Foreign Key	Reference to
				customer Table
Booking_Date	Date		Not Null	Date of the
				Booking
Address	Varchar	50	Not Null	Address of the
				Booking

Fig 3.5.6 Booking_details

Field Name	Type	Size	Constraint	Description
Booking_details_id	int	11	Primary Key	Booking Details
				Id
Customer_id	Int	11	Foreign Key	Reference to
				customer Table
Booking_id	Int	11	Foreign Key	Reference to
				Booking Table
Quantity	Int	11	Not Null	Number of
				Quantity
Item_charges_id	Int	11	Foreign Key	Reference to
				Item_Charges_id
Rate	Int	11	Not Null	

Fig 3.5.7 Cart List

Field Name	Туре	Size	Constraint	Description
Cart_list_id	Int	11	Primary	Id of the Cart
				List
Customer_id	Int	11	Foreign Key	Reference to
				Customer Table
Item_charges_id	Int	11	Foreign Key	Reference to
				Item charges
				Table
Item_id	Int	11	Foreign Key	Reference To
				Item Table
Quantity	Int	11	Not Null	Number of
				Quantity
Rate	Int	11	Not Null	Rate

Fig 3.5.8 City

Field Name	Type	Size	Constraint	Description
City_id	Int	11	Primary Key	Id of the city
City_name	Char	50		Name of the
				city

Fig 3.5.9 Customer

Field Name	Type	Size	Constraint	Description
Customer_id	Int	11	Primary	Id of thr
				customer
Name	Varchar	50	Not Null	Name of the
				customer
Phone Number	BIG INT	20	Not Null	Phone number
Email	Varchar	50	Not Null	Email id of the
				customer
Gender	Varchar	6	Not Null	Male, female
				or others
Password	Varchar	8	Not Null	Password of the
				Customer

Fig 3.5.10 Item

Field Name	Туре	Size	Constraint	Description
item_id	Int	11	Primary	Item id
item_name	Varchar	50	Not Null	Name of the item
item_image	varchar	50	Not Null	Image of the Item

Fig 3.5.11 Item Charges

Field Name	Type	Size	Constraint	Description
item_charges_id	Int	11	Primary	Id of charges
item_id	Int	11	Foreign Key	Reference to item table
service_type_id	Int	11	Foreign Key	Reference to service table
charges	Int	11	Not Null	Charges
unit_id	Int	11	Foreign Key	Reference to unit id
service_for_id	Int	11	Foreign Key	Reference to
				service_for_id

Fig 3.5.12 Payement

Field Name	Type	Size	Constraint	Description	
Payment_id	Int	11	Primary	Payment id	
Customer_id	Int	11	Foreign Key	Reference to Customer_i	
Amount	Int	11	Not Null	Amount number	
Payment Date	Date		Not Null	Date of the payement	
Bill_id	Int	11	Foreign Key	Reference to Bill table	

Fig 3.5.13 Service for

Field Name	Type	Size	Constraint	Description
Service_for_id	Int	11	Primary	Service id
Service_name	Varchar	50	Not Null	Name of the Service

Fig 3.5.14 Service Type

Field Name	Туре	Size	Constraint	Description
Service_id	Int	11	Primary	Service id
Service_type	Varchar	50	Not Null	Type of the Service

Fig 3.5.15 Unit

Field Name	Туре	Size	Constraint	Description
Unit_id	Int	11	Primary	Unit id
Unit_name	Varchar	50	Not Null	Name of the Unit

4 Development

4.1. Coding Standards

Group No: 7

When establishing coding standards for a laundry management website, it's important to prioritize readability, maintainability, and consistency in the codebase. Here are some guidelines for creating coding standards:

1. Naming Conventions:

- Use meaningful and descriptive names for variables, functions, and classes to enhance code readability.
- Follow a consistent naming convention, such as camel case or snake case, throughout the codebase.
- Avoid using abbreviations or acronyms that may be unclear to others. Opt for descriptive names instead.

2. Indentation and Formatting:

- Use consistent indentation (e.g., tabs or spaces) to enhance code readability and maintain a neat structure.
- Use clear and consistent formatting, such as placing opening and closing braces on separate lines, to improve code clarity.

3. Comments and Documentation:

- Include comments to explain the purpose and functionality of code blocks,
 especially for complex or non-obvious sections.
- Document function signatures, input parameters, and return types to aid in understanding and proper usage of functions.
- Document any assumptions, limitations, or dependencies to provide context for future maintainers.

4.2. Screen Shots

Fig4.2.1 HOME PAGE

My Laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact

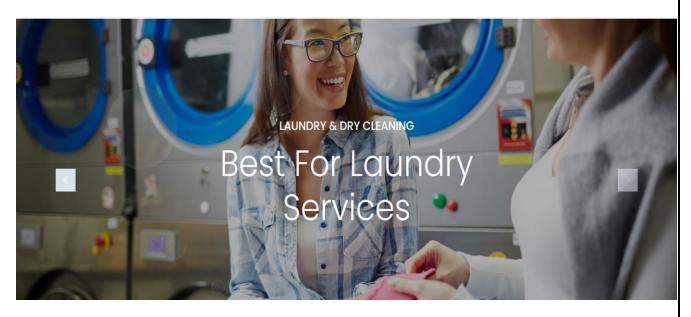
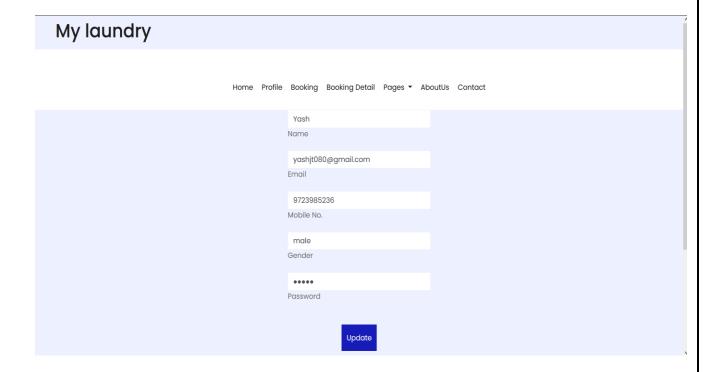


Fig 4.2.2 Profile Page



Shirt - Iron - Men

Fig 4.2.3 Booking Details Page

My Laundry Home Profile Booking Booking Detail Pages - AboutUs Contact Sort by -

Shirt - Wash and Iron - Men

70 +

Fig 4.2.4 BOOKING DETAILS

My laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact



Shirt

70

Service type: Wash and Iron Service For: Men

Unit: KG





Share on: f y in @

Fig 4.2.5 Cart Page

My laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact

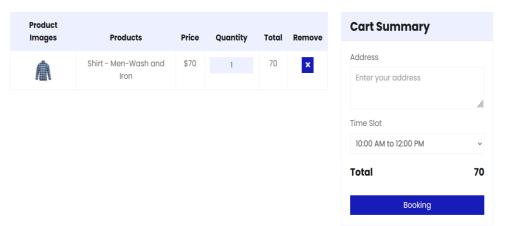


Fig 4.2.6 Booking Details

My laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact

Bookings

ID	Date	Address	Time	Status
85	June 22, 2023, midnight	shree sharan flat	10:00 To 12:00	Pending

Address

Shop No.14 Sindhi market Dinanath Store.

 $@ \textbf{My Laundry}. \ \textbf{All Rights Reserved}. \ \textbf{Designed by Patel Yash Jatinbhai, Dhrumit Berani, and } \\$ Premkumar Umeshkumar Bhai.









Group No: 7

Fig 4.2.7 About us page

My laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact

About Laundry Management System

Welcome to Laundry Management System, Bengaluru's premier laundry app powered by cutting-edge technology and exceptional services. We are dedicated to revolutionizing the way you experience laundry services, making it convenient, efficient, and affordable.

At Laundry Management System, we understand the importance of clean and fresh laundry in your everyday life. Our goal is to provide you with a seamless laundry experience that saves you time and effort. With our easy-to-use app, you can schedule laundry pickups, track the progress of your laundry, and have it delivered right to your doorstep.

What sets us apart is our commitment to quality and customer satisfaction. Our team of professionals ensures that your garments are treated with the utmost care, using state-of-the-art facilities and industry-leading practices. We take pride in delivering laundry that is not only clean but also impeccably folded and ready to use.

Laundry Management System offers a range of services to meet your specific needs. Whether you require regular laundry, dry cleaning, or special care for delicate items, we have got you covered. Our prompt and reliable service ensures that you never have to worry about laundry again.

We believe that laundry should be affordable for everyone. That's why we offer competitive prices without compromising on the quality of our services. We also provide the flexibility of reprocessing or refunds if you're not completely satisfied with the results.

Experience the convenience, reliability, and affordability of Laundry Management System. Join thousands of satisfied customers who have made us their preferred laundry service provider in Bengaluru. Download our app today and let us take care of your laundry needs!

Group No: 7

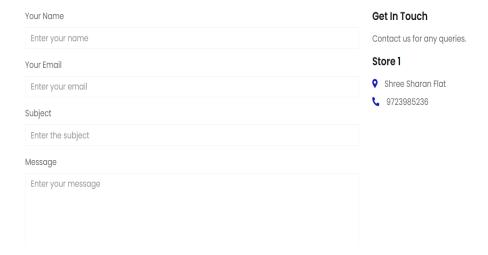
Laundry Management System

Fig 4.2.8 CONTACT PAGE

My laundry

Home Profile Booking Booking Detail Pages ▼ AboutUs Contact

— Contact For Any Queries —

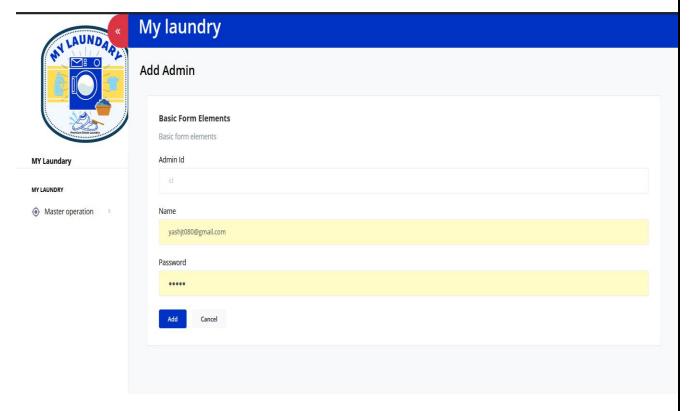


My laundry Admin Table Add Booking Admin Id Name Password Action MY Laundary mehul Delete | Edit mehul123 MY LAUNDRY Master operation Delete | Edit shubham shubham1 Delete | Edit dhairy dhairy12 prem123 prem Delete | Edit yash Delete | Edit yashjt080@gmail.com 12345

Fig 4.2.9 Admin Dashboard Admin Details

localhost:8000/myadmin/#ui-basic

Fig 4.2.10 Admin Add Page



My laundry Area Table Area Table MY Laundary Pincode Area Name City Actions MY LAUNDRY 38002 maninagar 1 Master operation 380008 Bapunagar 1 380060 sciencity

Fig 4.2.11 Area Table

My laundry

Add Area
Add Area
Add Area
Pincode
pincode

Area Name

areaname

City id

atmedatad

Add Area

Cancel

Fig 4.2.12 Add Area Table

4.2.13 Update Area Table

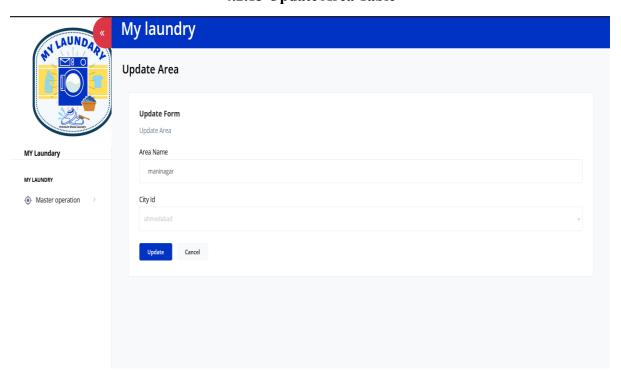
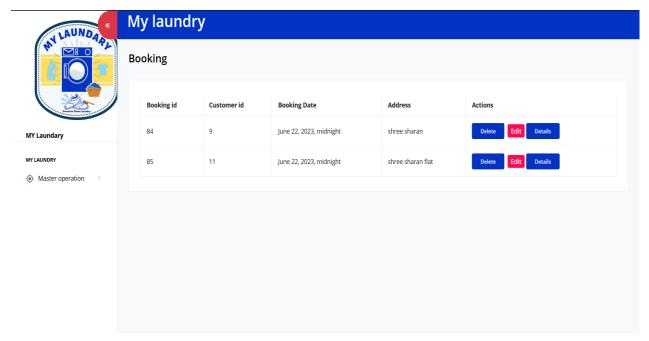


Fig 4.2.14 Booking Page



My laundry

Booking Detail

Booking detail id booking id Quantity Item charges id Rate

40 84 1 1111 55 Delete II Edit

Fig 4.2.15 Booking Details Page

My laundry Item Add Item Item id Item Name Item Image MY Laundary 104 Shirt A MY LAUNDRY T-shirt 107 Master operation Inner tshirt 108 Delete Edit 110 ٨ 111 Trousers Leggings Delete Edit 1011

Fig 4.2.16 Item Page

MY Laundary

Item

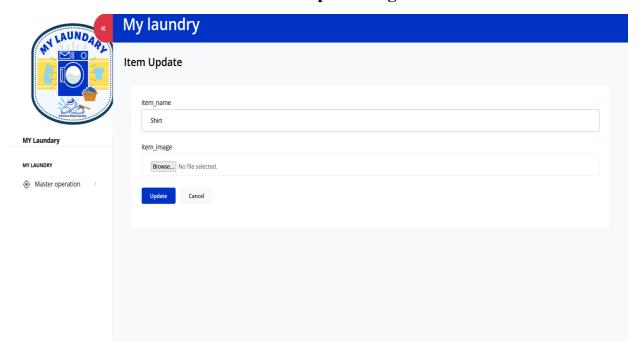
Item Image Browse... No file selected.

MY Laundary

Add Item Cancel

Fig 4.2.17 Item Add Page

4.2.18 Item Update Page



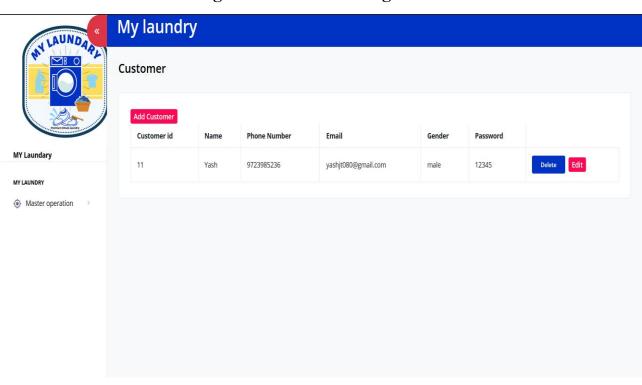


Fig 4.2.19 Customer Page

MY Laundry

MY Laundary

MY Laundary

MY Laundary

phone Number

phone number

phone number

phone number

phone number

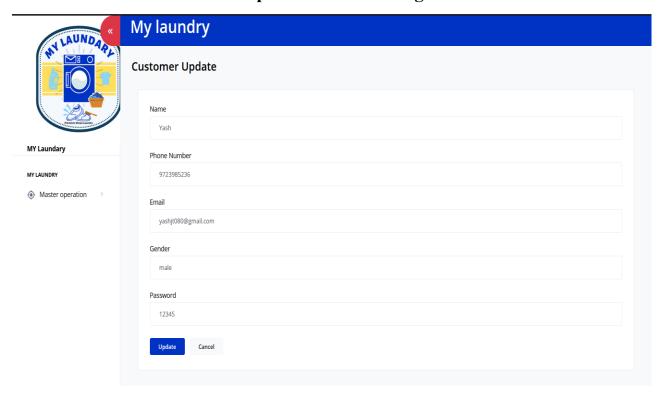
phone number

Add Area

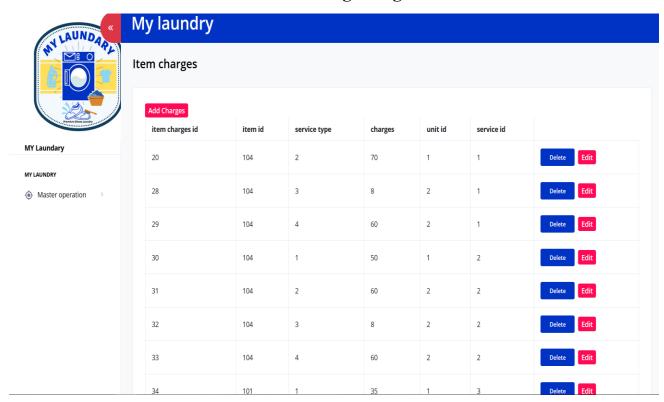
Cancel

Fig 4.2.20 Add Customer Page

4.2.21 Update Customer Page



4.2.22 Item Charges Page



My laundry

Add Item Charges

Item
Shirt
Service type
Wash
Charges
theres
theres
Charges
theres
ther

Fig 4.2.23 Add Item charges page

MY Laundary

Item Charges Update

Item ID

104

Service Type ID

2

Charges

70

Unit ID

1

Service For ID

1

Update

Cancel

Fig 4.2.24 Item charges Update

MY Laundary

MY Laundary

MY Laundary

Men

Delete Edit

Women

Delete Edit

Kides

Delete Edit

Fig 4.2.25 Service For Page

MY Laundary

MY LAUNDRY

Master operation

Add Service For ID

Service For Name

Add Service For Cancel

Fig 4.2.26 Add Service Page

My laundry

Update Service For

Service For Name
Men

Men

Update Cancel

Fig 4.2.27 Update Service for Page

5. Proposed Enhancements

Group No: 7

- > User Registration and Login: Implement a user registration and login system that securely stores user information, including name, contact details, and delivery address.
- order Tracking Dashboard: Create a user-friendly dashboard where customers can view their active orders, order history, and real-time order status updates. Include relevant information such as estimated completion time, current progress, and pickup details.
- Order History and Reordering: Design a section where users can access their previous orders, view order details, and have the option to reorder a specific order with a single click.
- Preferences Management: Develop a section where users can manage their preferences for laundry services. This includes options for selecting detergent type, folding preferences, fabric softener choices, special instructions, etc.
- Notifications and Alerts: Implement a notification system that sends timely alerts to users regarding their order status changes, such as order received, laundry in progress, ready for pickup, etc. Notifications can be delivered via email, SMS, or within the user account dashboard.
- > Security and Privacy: Ensure that the user account system is secure, protecting customer information and adhering to privacy regulations. Implement necessary measures such as encryption, secure authentication, and data protection practices.

Group No: 7

Conclusion

In conclusion, the proposed enhancements for a laundry management system website aim to improve the overall user experience and streamline the laundry ordering process. By implementing user accounts and order tracking functionality, customers can benefit from convenience, transparency, and personalized service.

The order history and reordering feature enables users to easily access their previous orders, view order details, and conveniently place repeat orders with a single click. This functionality simplifies the reordering process, saving time and effort for customers.

Overall, these proposed enhancements for a laundry management system website contribute to a more user-centric experience, delivering convenience, transparency, and personalized service. By implementing user accounts, order tracking, order history, preferences management, personalized offers, and robust security measures, the website can create a competitive advantage, foster customer loyalty, and enhance customer satisfaction in the laundry management process.

Group No: 7

Bibliography

https://www.djangoproject.com

Django for APIs: Build web APIs with Python & Django

For Designing:

https://www.canva.com

https://www.flaticon.com

https://studio.polotno.com