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Submitted to:

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Introduction

A Restaurant Management System (RMS) is a versatile software solution designed to streamline and automate the various operations of a restaurant. By integrating key functions such as order management, billing, inventory control, table reservations, employee scheduling, and customer relationship management (CRM), the RMS addresses the daily challenges faced by restaurant owners and managers. This unified platform allows them to focus more on delivering exceptional food and service, ensuring that restaurant operations run efficiently and smoothly.

Order Management is a core feature of the RMS, enabling the quick and accurate placement, tracking, and modification of orders. This minimizes errors and enhances the overall dining experience by ensuring that all orders, whether placed in-person, online, or via phone, are processed seamlessly.

The **Inventory Control** module helps restaurants monitor stock levels, track ingredient usage, and receive alerts when supplies are running low. By maintaining optimal inventory levels, restaurants can reduce waste, avoid financial losses, and ensure they have the necessary ingredients on hand.

The **Billing and Payments** feature provides an intuitive interface for generating accurate bills, applying discounts, and handling various payment methods. Integration with accounting software further simplifies financial management by ensuring that all transactions are recorded accurately.

With the **Table Reservation** module, customers can easily make online or in-person reservations, allowing restaurants to manage seating arrangements more effectively and avoid overbooking. This ensures a pleasant dining experience with reduced wait times.

The **Employee Scheduling** feature automates staff scheduling, tracks work hours, and simplifies payroll processing. By optimizing staff allocation, restaurants can maintain service quality while reducing labor costs.

Finally, the **CRM** module enhances customer loyalty and satisfaction by collecting and managing customer data, such as contact information and dining history. This data can be used to personalize service, launch targeted marketing campaigns, and implement loyalty programs, creating a more rewarding customer experience.

In summary, the Restaurant Management System is designed to be user-friendly, enabling staff at all levels to efficiently operate the software. By centralizing and automating critical processes, the RMS improves operational efficiency, reduces errors, and enhances the overall customer experience, contributing to the long-term success and profitability of any restaurant. Whether for a small café or a large restaurant chain, the RMS is an essential tool for streamlining operations and driving business growth.

Role Overview

The project focused on developing a user-centric Restaurant Management System, emphasizing both UI/UX design and rigorous testing to ensure a seamless experience. The design process began with low-fidelity prototypes, which were then refined into high-fidelity versions to achieve an intuitive and visually appealing interface. The team prioritized creating a balance between aesthetics and usability, ensuring the system was easy to navigate for users.

In the testing phase, comprehensive checks, including unit, integration, and user acceptance testing, were conducted to ensure the system's reliability and bug-free performance. This thorough approach ensured that the final product was both robust and user-friendly, effectively meeting the restaurant's operational needs and enhancing overall efficiency and customer satisfaction.

UI/UX Designer

The UI/UX designer played a key role in shaping the user experience of the Restaurant Management System. The design process began with low fidelity sketches, which provided a basic outline of the system’s interface. These sketches were then developed into high fidelity prototypes, offering a detailed and polished view of the final product. The designer focused on creating a visually appealing and intuitive interface, ensuring that users could easily navigate the system, whether they were taking orders, managing inventory, or processing payments. The result was a user-friendly design that enhanced efficiency and satisfaction.

Low Fidelity

The initial hand-drawn sketches were essential for visualizing the application's layout and flow. They provided a clear understanding of where elements would be placed and how users would interact with them, allowing the design team to quickly explore and refine ideas before moving on to detailed prototypes. This process was crucial in establishing a user-friendly and intuitive interface.

Figure 1


Already have ac? login
Sign UP
Create your amount
Email
First Name
lastname
Contact no
Password
Confirm Password
Register

Figure 2

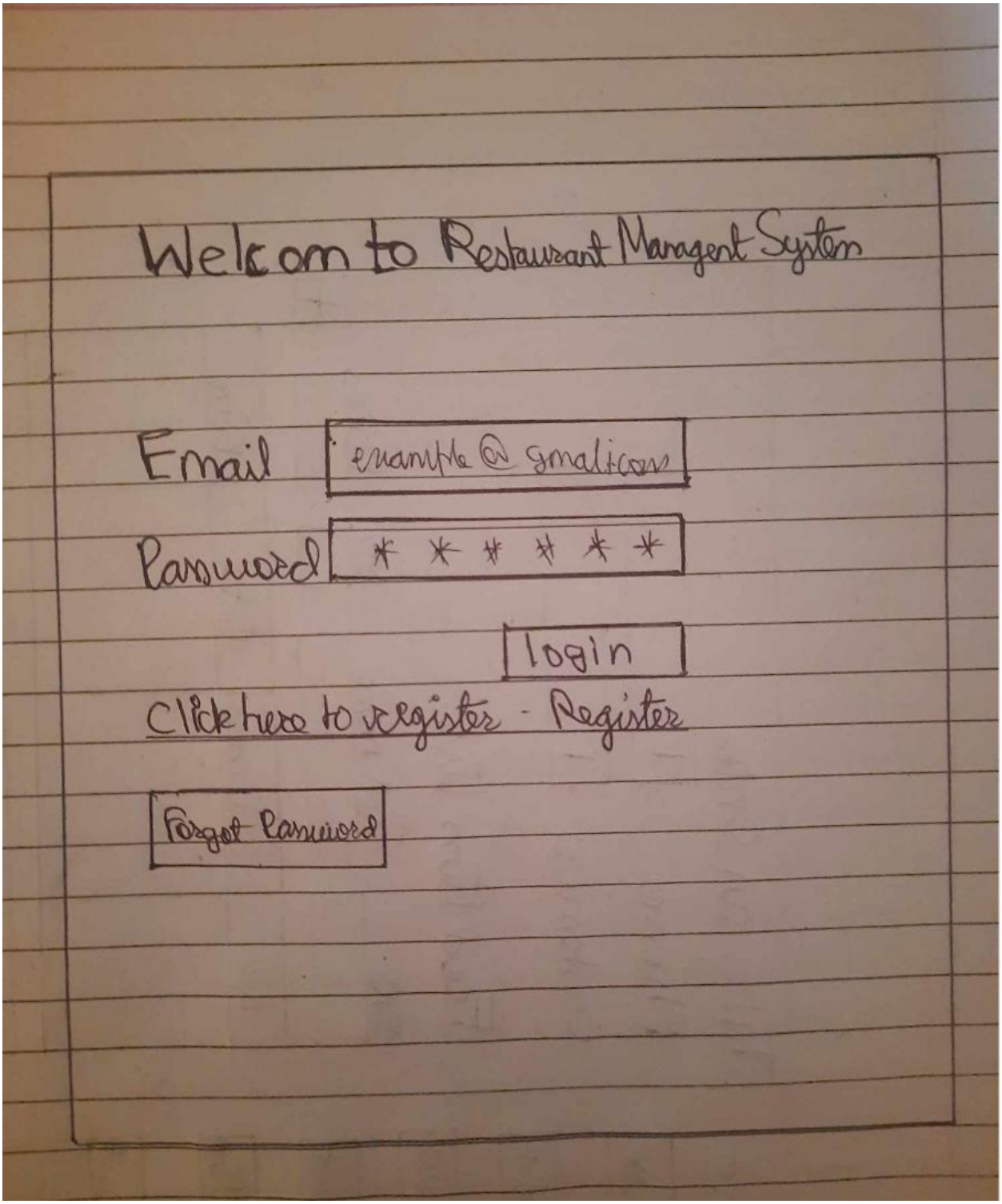
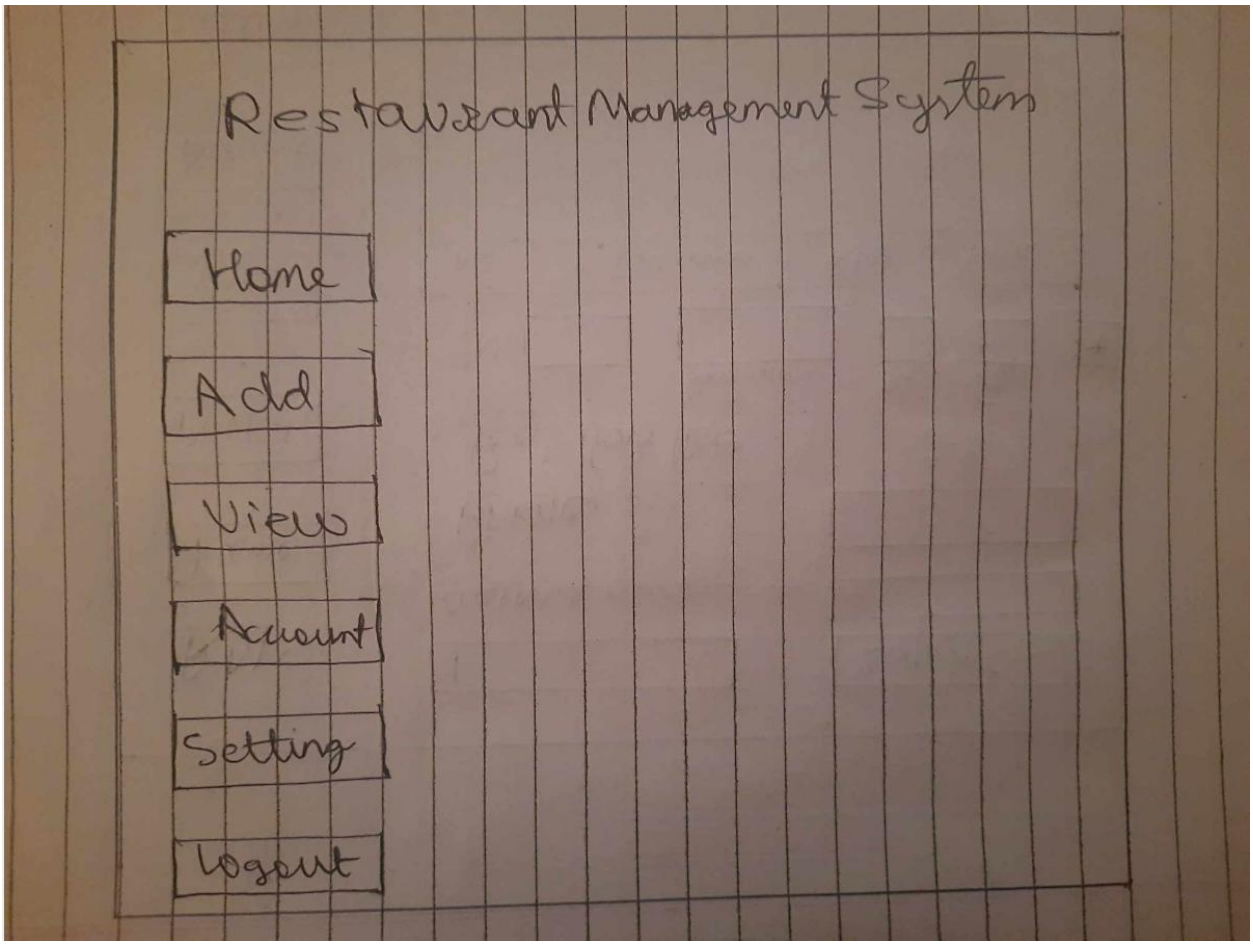

Welcom to Restaurant Maragent Systen
Email
example@gmail.com
Password
* * * * * *
login
Click here to register - Register
Forgot Password

Figure 3


Restaurant Management System
Home
Add
View
Account
Setting
Logout

High Fidelity

These high-quality, detailed images provide a clear representation of the system's final look, highlighting its color schemes, typography, and interactive elements. They showcase the fully realized design, ensuring that it is both visually appealing and functional. Each element has been carefully crafted to strike a balance between aesthetics and usability, offering a polished and engaging preview of the finished product.

Figure 4

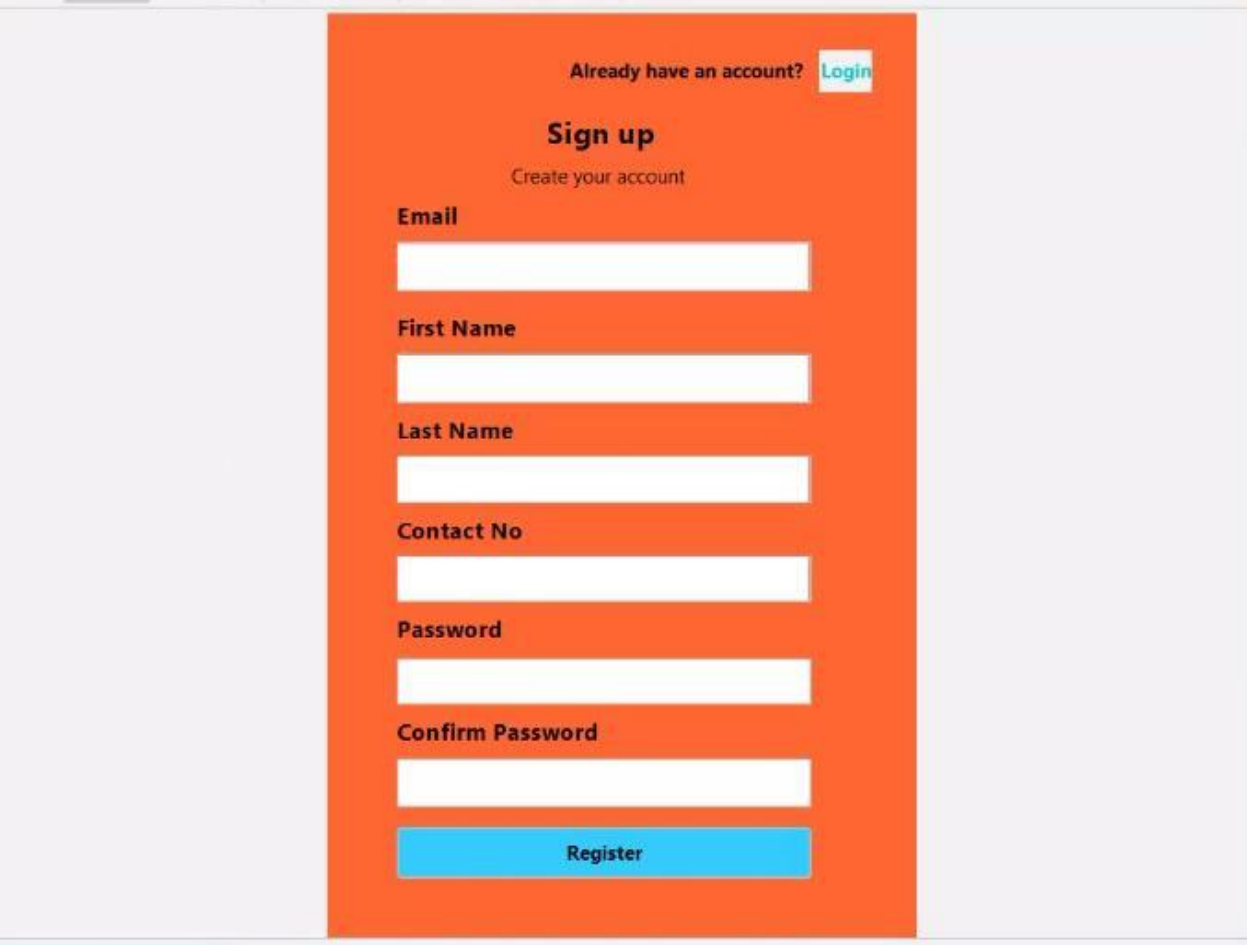


Figure 5

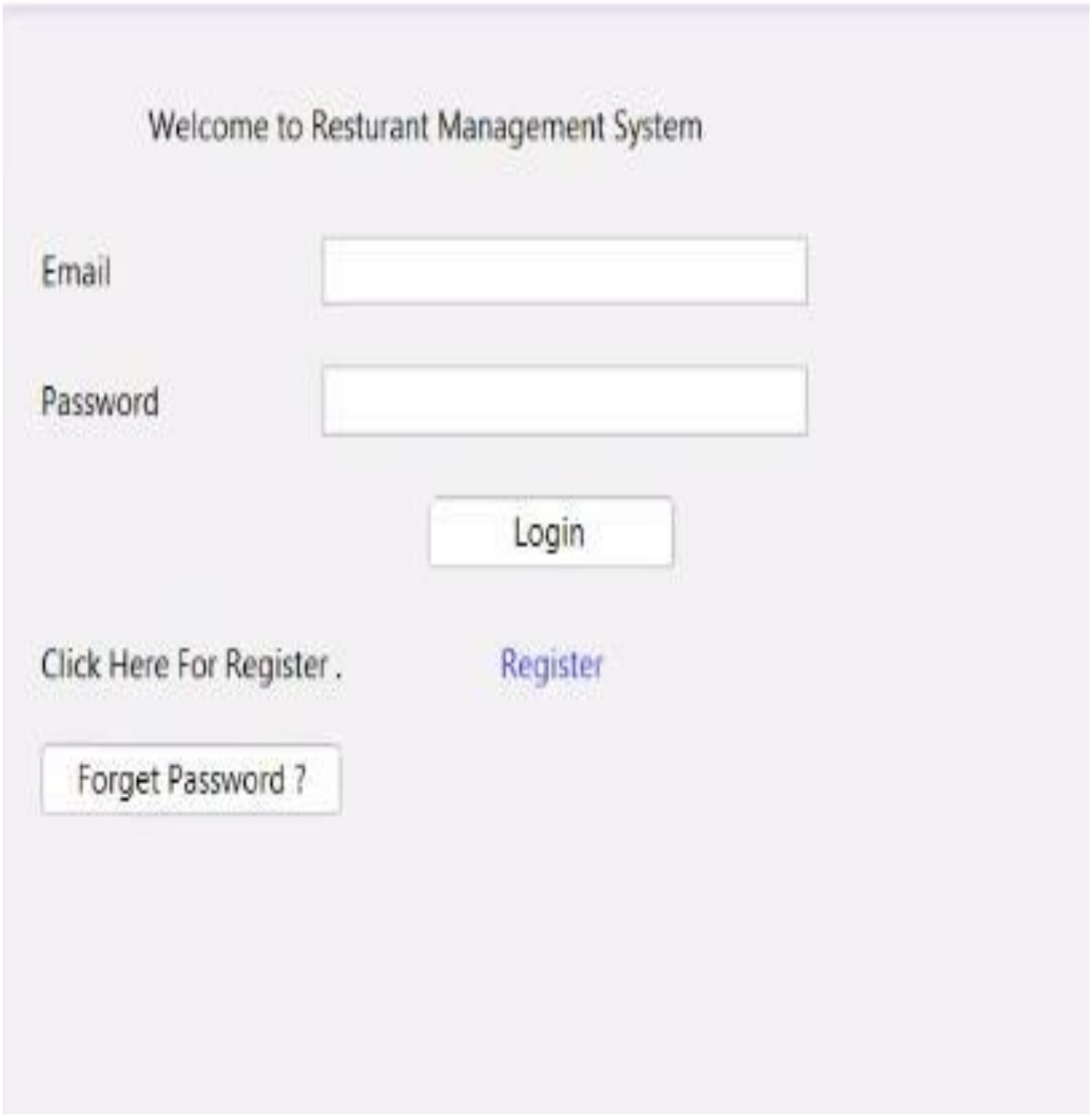
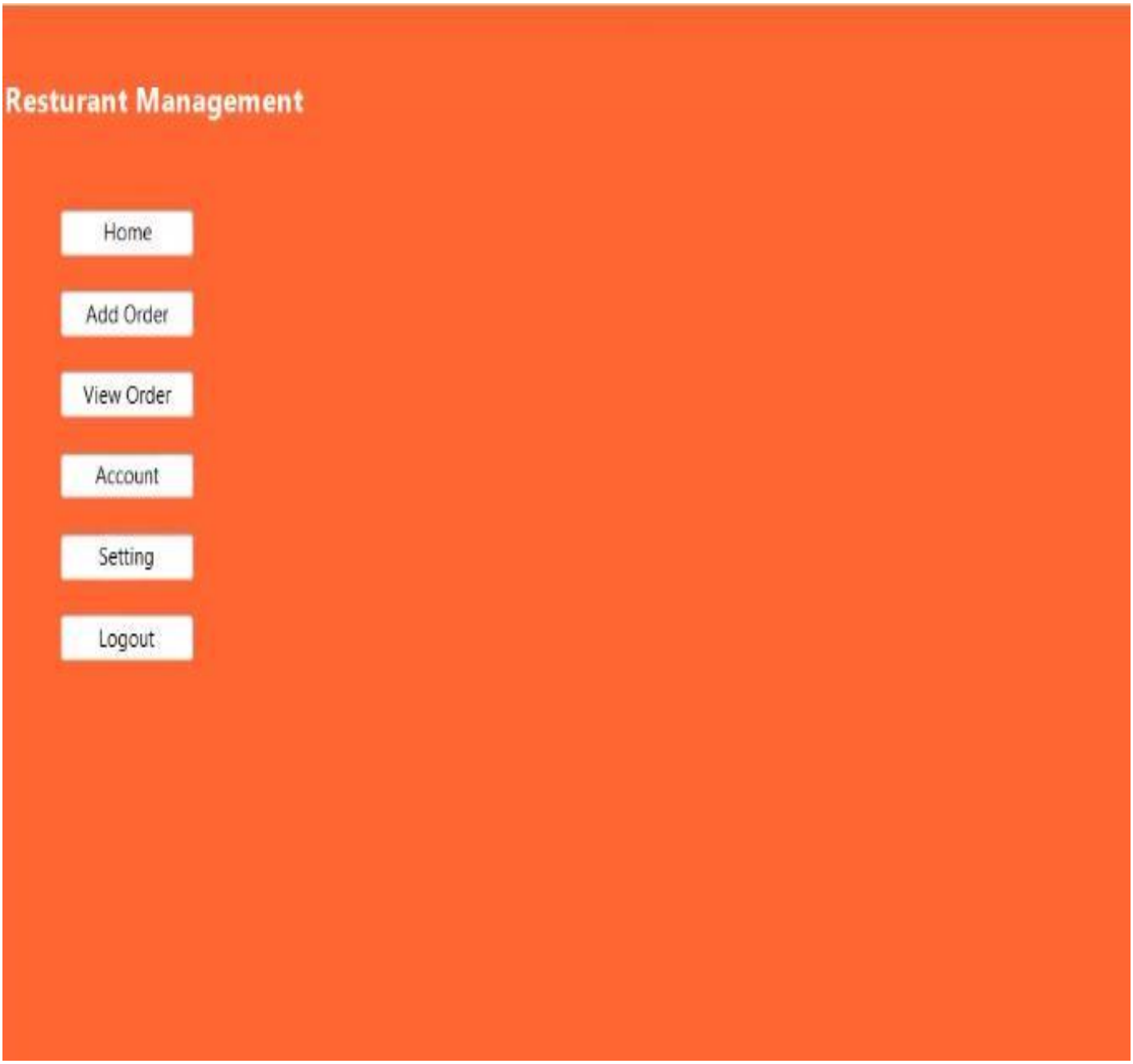

Welcome to Resturant Management System
Email
Password
Login
Click Here For Register .
Register
Forget Password ?

Figure 6


Resturant Management
Home
Add Order
View Order
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Tester

The tester played a critical role in ensuring the reliability and performance of the Restaurant Management System. Their primary responsibility was to rigorously test the system, identifying any bugs or usability issues that could impede the user experience. Testing was conducted across multiple phases, including unit testing, integration testing, and user acceptance testing, ensuring that the system met all specified requirements and performed consistently under various conditions.

Figure 7

Test 1: Signup page					
Condition: All the entry boxes need to be filled with correct Credentials					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	There should be no duplicate entry in database, No same email should exist	FirstName: Nischal LastName: Dahal nschldhl61@gmail.com Password: ******** confirmPassword: ********	Account Registered Successfully.	Account Registered Successfully	Success
2.	Already used email in the email textfield	FirstName: Nischal LastName: Dahal Email: nschldhl61@gmail.com Password: ******** confirmPassword: ********	Error: Register unsuccessful	Error: email is already registered	Success
3.	Confirm Password not matching	FirstName: Nischal LastName: Dahal nschldhl61@gmail.com Password: ******** confirmPassword: ****	Error: Register unsuccessful.	Passwords and ConfirmPassword not matching	Success

Figure 8

Test 2: Login page					
Condition: All the entry boxes need to be filled with correct Credentials					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	There should be registered email	Email : nschldhl61@gmail.com Password: ********	Account Registered Successfully.	Registered Successfully	Success
2.	There should be no registered email or invalid password	Email : nschldhl611@gmail.com Password: *********	Account Registered Not Successful.	Invalid email or password	Success

Figure 9

Test 3: Add order page					
Condition: All the entry boxes need to be filled					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	All details should be filled and saved	Name : lorem Phonenumber : 9090909090 S.NO : 1 Food name: M0MO Qty : 12 Price : 120	Success	Order saved successfully	Success

Figure 10

Test 4: Update order page					
Condition: Searching by phone number and updating order details					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	Search by phone number, display customer details	Phonenumber: 9090909090	Customer details are displayed, and fields are editable	Customer details displayed and editable	Success
2.	Attempt to search without entering a phone number	Phonenumber: (empty)	Prompt: "Please enter a phone number"	Prompt: "Please enter a phone number"	Success
3.	Attempt to Search non existent phonenumber	Phonenumber : 2821212122	Phone does not exist	No customer found with this phonenumber	Success
4.	Attempt to upate order details with data	Phonenumber : 9090909090 Food Name : pizza Qty : 1 Price : 100	Details Updated Successfully	Updated successfully	success
5.	Attempt to upate order details without data	Food Name : Qty : Price : 100	All fields must be filled	All fields must be filled	Success

Figure 11

Test 5: Delete action					
Condition: Searching by phone number and deleting					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	Search by empty phone number	Phonenumber: (empty)	Phonenumber required	Please enter a phonenumber	Success
2.	Search by phone number and click delete button	Phonenumber: 9090909090	Details deleted successfully	Customer and their details deleted successfully	Success
3.	Attempt to search after deleting	Phonenumber: 9090909090	No customer found	No customer found with this phonenumber	Success

Figure 12

Test 6: Password Change					
Condition: Entering all details correctly					
Test No.	**Test Condition**	**Test Record**	**Expected Output**	**Actual Output**	**Remarks**
1.	Entering correct details	Email: nschldhl61@gmail.com Old Password: ******** New Password: ******** Confirm Password: ********	Password Changed	Password Changed Successfully	Success
2.	New Password and Confirm Password do not match	Email: nschldhl61@gmail.com Old Password: ******** New Password: ******** Confirm Password: *******	Error: "New password and confirm password do not match"	Error: "New password and confirm password do not match"	Success
3.	Attempting to change password with empty fields	Email: (empty) Old Password: (empty) New Password: (empty) Confirm Password: (empty)	Error: "Failed to check details, please check your details"	Error: "Failed to check details, please check your details"	Success
4.	Attempting to change password with incorrect password	Email: nschldhl61@gmail.com Old Password: njny891ohnk New Password: ******** Confirm Password: ********	Error: "Failed to check details, please check your details"	Error: "Failed to check details, please check your details"	Success

Conclusion

The Restaurant Management System developed for this project is a robust and comprehensive tool crafted to enhance and streamline various restaurant operations. Emphasizing detailed UI/UX design, the system offers a user-friendly interface that makes it easy for staff to navigate and perform tasks efficiently. Rigorous testing has ensured that the system is reliable and free from critical bugs, enhancing its performance under real-world conditions. By addressing essential operational needs such as order management, inventory control, and customer relationship management, the RMS not only optimizes internal processes but also significantly boosts customer satisfaction. The result is a valuable asset for any restaurant, whether small or large, aiming to improve efficiency, reduce errors, and deliver a superior dining experience.