

# E BILL MANAGEMENT SYSTEM

TEAM UTKARSH



# INTRODUCTION

WELCOME TO OUR E-BILL MANAGEMENT SYSTEM, WHERE EFFICIENCY MEETS CONVENIENCE IN THE WORLD OF BILLING AND INVOICING. IN TODAY'S FAST-PACED DIGITAL AGE, BUSINESSES AND ORGANIZATIONS RELY HEAVILY ON STREAMLINED PROCESSES TO MANAGE THEIR FINANCIAL TRANSACTIONS EFFECTIVELY. OUR E-BILL MANAGEMENT SYSTEM PROVIDES A COMPREHENSIVE SOLUTION TAILORED TO MEET THE DIVERSE NEEDS OF BUSINESSES, WHETHER SMALL, MEDIUM, OR LARGE-SCALE ENTERPRISES.

OUR SYSTEM REVOLUTIONIZES TRADITIONAL BILLING METHODS BY OFFERING A USER-FRIENDLY PLATFORM THAT AUTOMATES THE ENTIRE BILLING LIFECYCLE, FROM CREATING INVOICES TO TRACKING PAYMENTS AND GENERATING REPORTS. WITH INTUITIVE FEATURES AND ADVANCED FUNCTIONALITIES, BUSINESSES CAN NOW STREAMLINE THEIR BILLING PROCESSES, REDUCE MANUAL ERRORS, AND IMPROVE OVERALL EFFICIENCY



# KEY FEATURES



## Invoice Creation

Easily create professional invoices customized to your business needs.



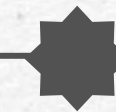
## Payment Tracking

Track payments in real-time and manage outstanding balances effortlessly.



## Reporting and Analytics

Gain valuable insights into your financial performance with comprehensive reporting and analytics tools.



## Security and Compliance

Ensure data security and compliance with industry standards to safeguard sensitive financial information



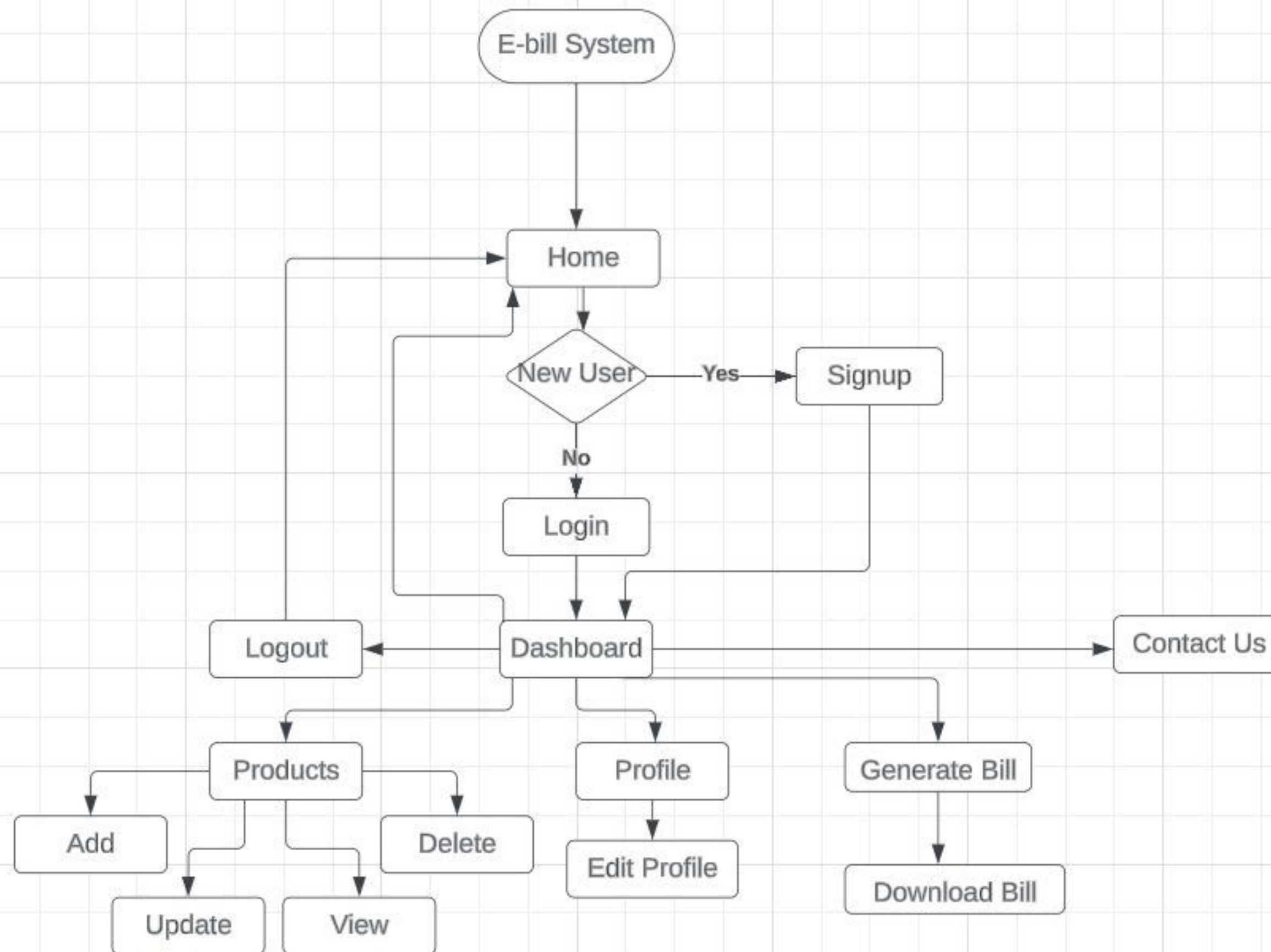
# OUR MOTIVATION

- Efficiency Improvement: The e-Bill Management System drives efficiency improvements by automating billing processes and reducing manual intervention. This results in smoother operations and reduced errors.
- Cost Savings: Transitioning to electronic billing systems leads to potential cost-saving benefits, including reduced paper usage and administrative overhead, contributing to overall financial efficiency.
- Convenience: The system enhances customer convenience by providing accessible and user-friendly billing interfaces, improving the overall experience for customers.





# FLOWCHART DIAGRAM





# OUR METHODOLOGY

## 1. Project initiation

We created our ebill management system to target shopkeepers who find it difficult to maintain their inventory and manually generate bills.

## 2. Technology Selection

We used MERN stack as our techstack for this project as it is simple to understand and use.

## 3. System Design

Using mongoose we easily define schema for our user and products in the mongoDB database. We designed our backend first and then frontend for easier project development.





# OUR METHODOLOGY

## 4. Backend Development

Using express.js and node.js we implemented RESTfuls API for user authentication, profile management, stock management, bill generation, etc. We secured our apis using JWT authentication and bcrypt for password hashing. After all this we integrated with our database for persistent data storage

## 5. Frontend Development


Using React.js and Css we ensure a responsive and intuitive user interface. We tried to keep the UI as user friendly as possible. To smooth the process of bill download and notification, we integrated third-party libraries like html2canvas and toastify.


## 6. Integration and Testing


We conducted unit testing of each component till satisfied. After this we integrated both our components to create a cohesive application and tested again on the whole application.




# SOME SCREENSHOTS







 Dashboard




Generate Bill



Add Product



Account >





Report Bug


Welcome, **Admin**


Logout

Inventory Stats
















 Total Products  
8

 Total Store Value  
\$8,132.00

 Out of Stock  
0

 All Categories  
5

Inventory Items

s/n	Name	Category	Price	Quantity	Value	Action
1	Manchurian	Snack	\$40	39	\$1560	  
2	Fried Rice	Rice	\$60	29	\$1740	  
3	Aloo Paranthe	Paranthe	\$25	35	\$875	  
4	Chilli Potato	Snack	\$50	10	\$500	  
5	Chowmein	Noodles	\$50	19	\$950	  

Prev

1

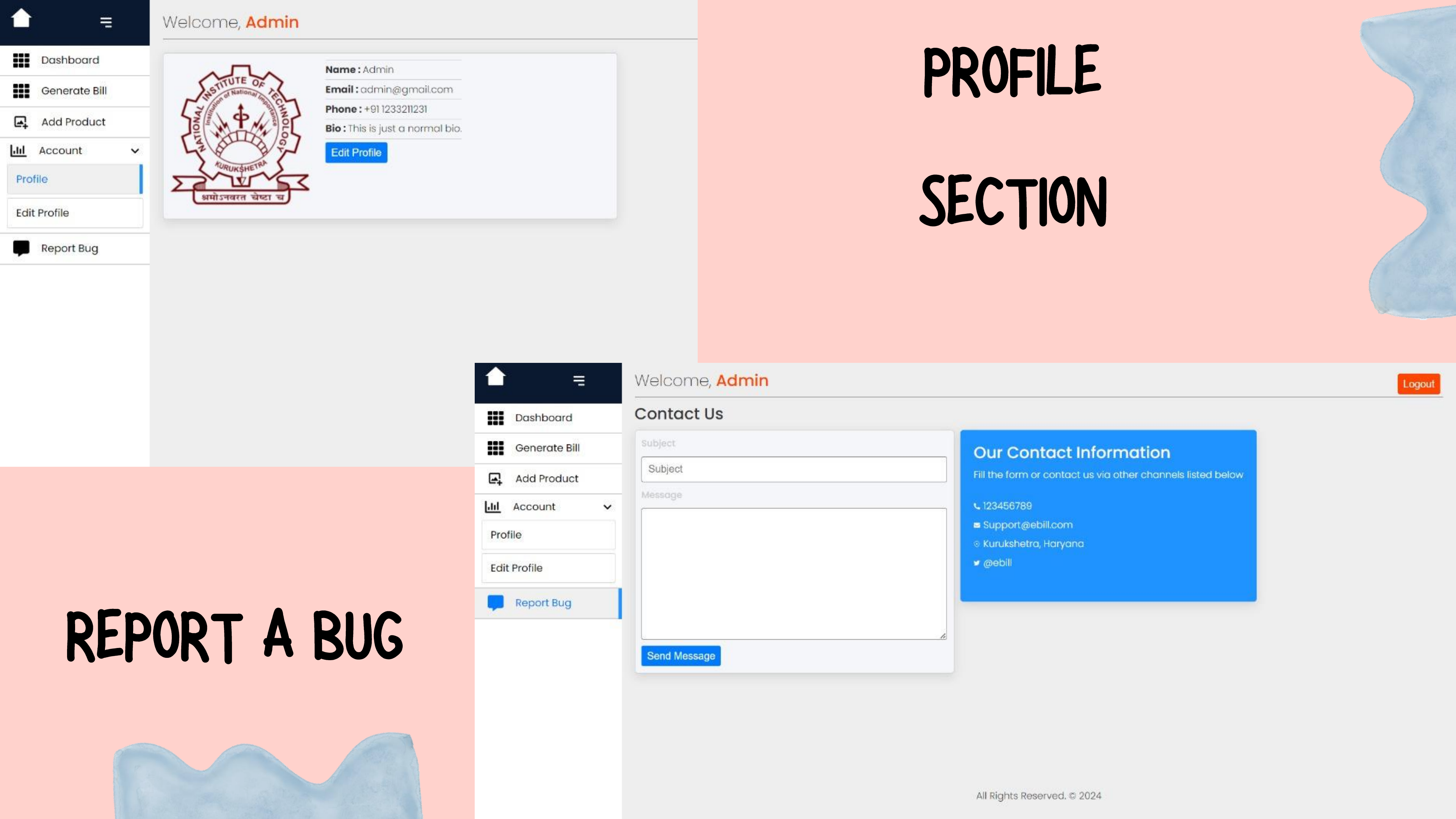
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Next

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OUR

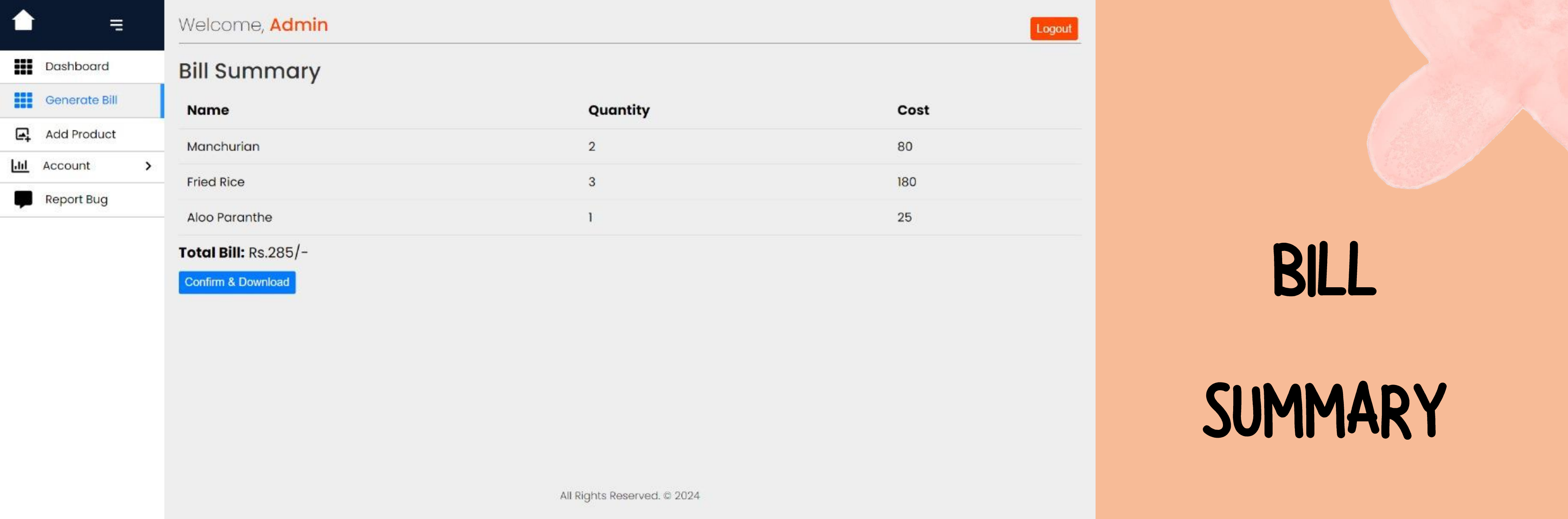




# PROFILE SECTION

# REPORT A BUG





Bill Summary

Name	Quantity	Cost
Manchurian	1	40
Fried Rice	1	60
Aloo Paranthe	5	125
Chilli Potato	10	500
Chowmein	1	50
Momos	3	150
Coca Cola	2	40
Maggie	1	13

Total Bill: Rs.978/-



### Add New Product

Product Image

Supported Formats: jpg, jpeg, png

Choose File

No file chosen

No image set for this product.

Product Name:

Product name

Product Category:

Product Category

Product Price:









Product Price

Product Quantity:

Product Quantity

Product Description:

H1H2Sans SerifNormalBBIUS”

A

Save Product

ADD  
PRODUCT



# CONCLUSIONS

- 1.Efficiency and Time Savings:** By digitizing and automating billing processes, the e-Bill Management System reduces manual efforts involved in generating, distributing, and processing bills. This results in significant time savings for both businesses and customers, as billing tasks can be completed more quickly and efficiently.
- 2.Cost Reduction:** With streamlined billing processes and reduced reliance on paper-based documentation, the e-Bill Management System helps businesses save on printing, postage, and storage costs associated with traditional paper billing methods.
- 3.Improved Accuracy and Data Integrity:** Manual billing processes are prone to errors such as incorrect calculations, billing discrepancies, and data entry mistakes.
- 4.Enhanced Customer Experience:** Customers benefit from the convenience and accessibility of electronic billing options offered by the system. They can view and pay bills online, receive notifications and reminders, and access billing history and account information conveniently from any device with internet access. This improves overall customer satisfaction and loyalty.
- 5.Environmental Sustainability:** By reducing paper usage and promoting electronic billing and payment methods, the e-Bill Management System contributes to environmental sustainability efforts. It helps minimize the consumption of natural resources, reduce greenhouse gas emissions associated with paper production and transportation, and mitigate environmental impact.





# FUTURE SCOPE



## NLP

NLP algorithms can help validate and verify the accuracy of extracted information by comparing it against reference data or predefined patterns.

## Automation in bill sending


Once bills are generated, the system automatically schedules their delivery based on predefined criteria such as billing cycles, due dates, or customer preferences. Bills can be sent via email, postal mail, depending on customer preferences and the available delivery options.

## Improve Reporting and Analytics

Automated bill sending systems often provide reporting and analytics features to track billing metrics, monitor payment trends, and analyze customer behavior.

## QR generation for payments

QR will be generated along with the bill generation and sent to the customer mobile number and after the confirm payment the bill will be automatically send.





WEBSITE

LINK

# OUR TEAM

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The background is a light gray textured paper. It is decorated with various watercolor-style elements: a pink flower-like shape in the top left, a cluster of small brown dots in the top left, a large orange shape in the top center, a blue squiggly line in the top right, a large pink shape in the top right, a yellow shape in the top right, a blue wavy shape on the left, a series of orange lines on the right, a blue spiral in the bottom right, a large orange shape in the bottom center, a pink shape in the bottom left, and a blue shape in the bottom left.

**THANK YOU  
VERY MUCH**