

Online Restaurant Aggregator and Food Order System



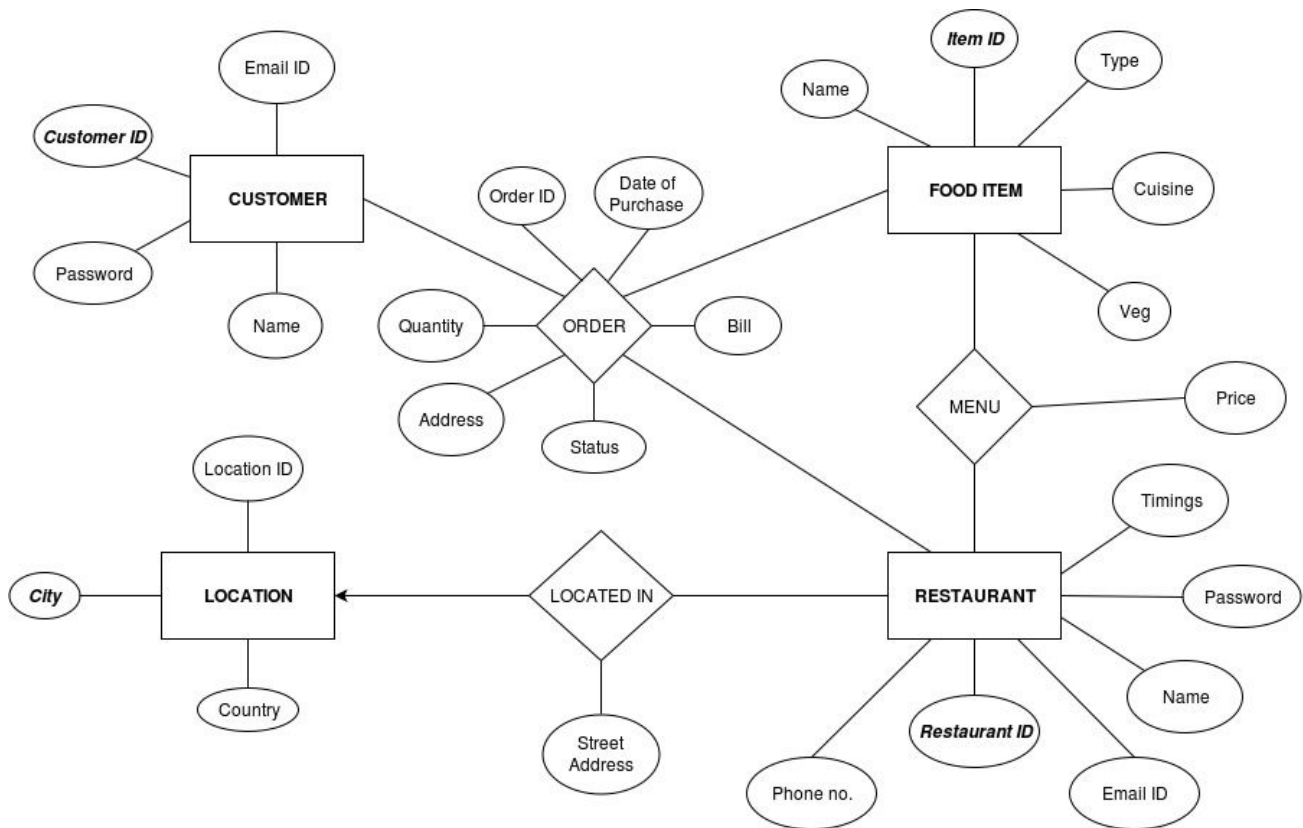
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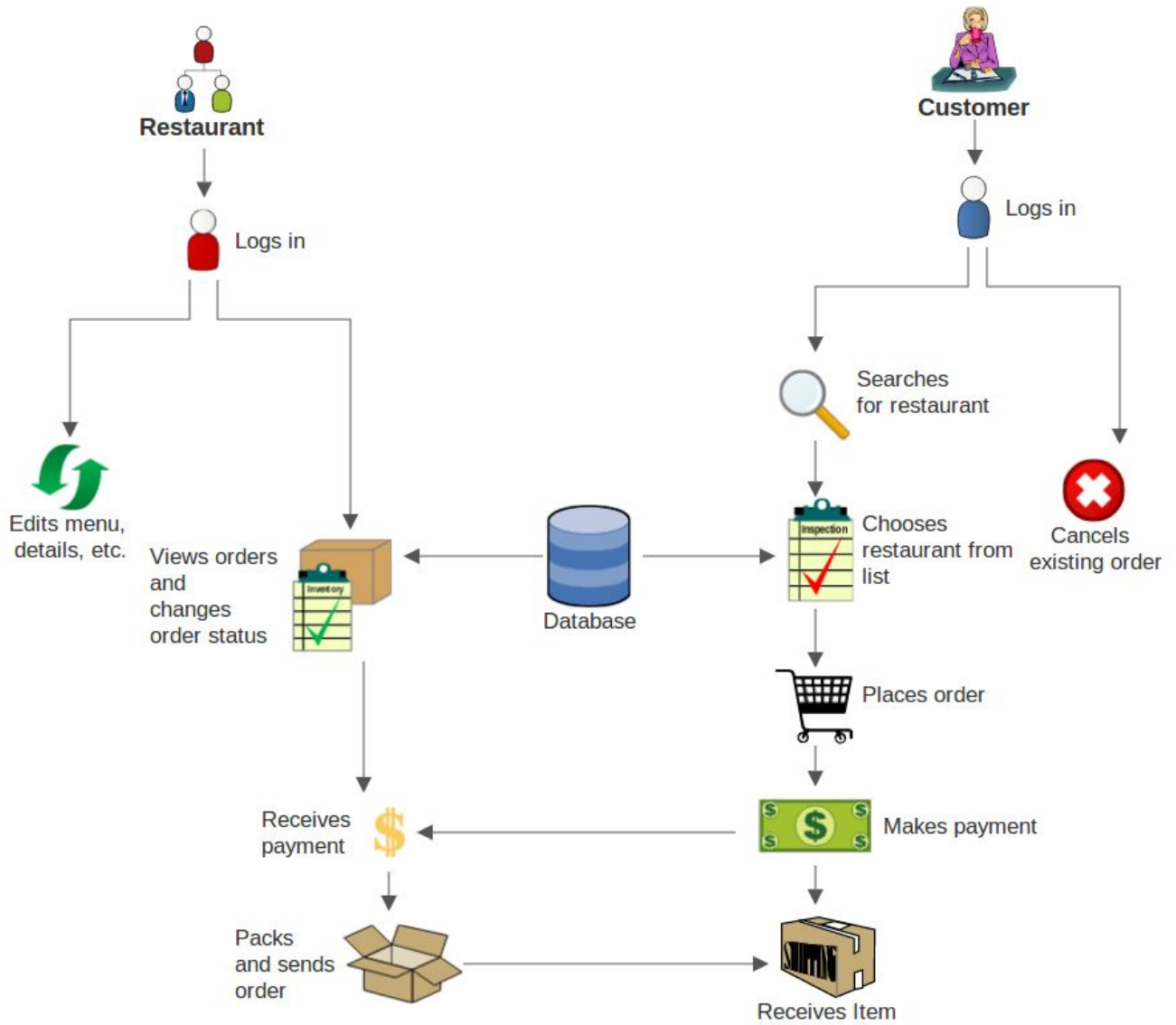
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Entity-Relationship Diagram



(All primary keys are in bold and italics)

Workflow Diagram



List of tools used

1. Frontend tools

- a. HTML
- b. CSS
- c. Jinja 2 template Engine (dynamic HTML manipulation)
- d. Javascript (client-side scripting)
- e. Bootstrap (dynamic dialogs and menus)

2. Backend tools

- a. Flask web framework in Python
- b. Python Libraries:
 - I. pdfkit (for generating bill in PDF format)
 - II. pymysql (for scripting database operations)
 - III. hashlib (for hashing passwords)
 - IV. uuid (for creating unique IDs)
 - V. re (regular expression support)

Work timeline

The project was completed over a period of four weeks. A week-by-week timeline of the progress is given below.

Week 1:

- Understanding the specifications of the required system in terms of detailed ER and workflow diagrams.
- Database design.
- Researching various web frameworks like Django, Flask etc to decide which would be the most suitable for our purpose.

Week 2:

- Coding the website interface.
- Writing scripts to perform all the required database operations.

Week 3:

- Integration of the UI with the backend.
- Preliminary testing and error handling to mitigate major bugs and crashes.
- Experimenting with Zomato integration.

Week 4:

- Final testing, bug fixes and minor improvements for performance and ease of use.

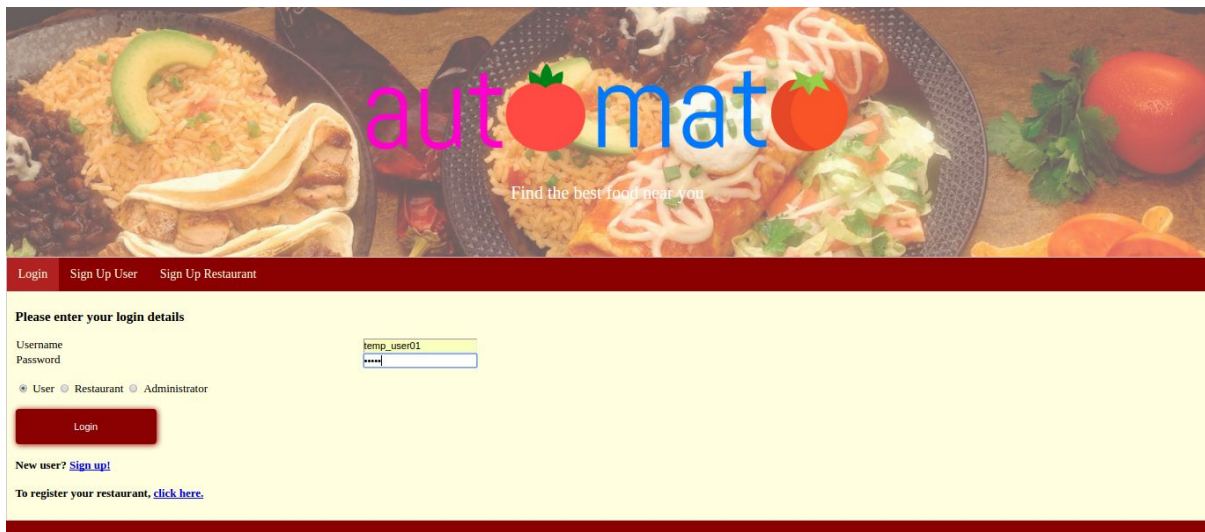
Description of the system

The entire system can be broken into the following sections/modules

1. Login / Sign up

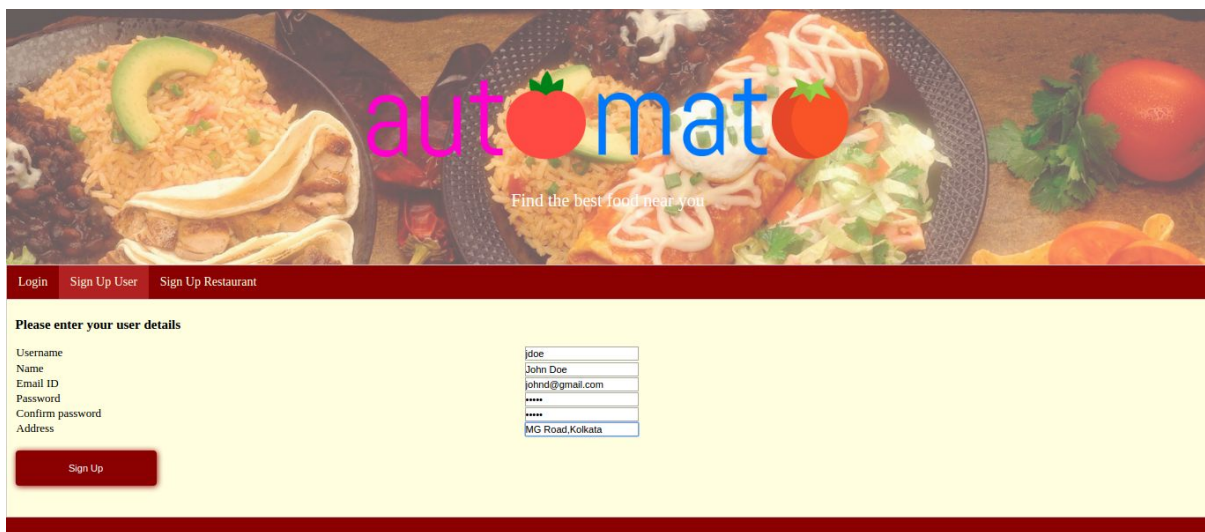
This is the first page of the web portal of the system. It is meant to log into the system for existing users (customers/restaurants). New customers and restaurants can sign up by providing the required credentials.

Login screen



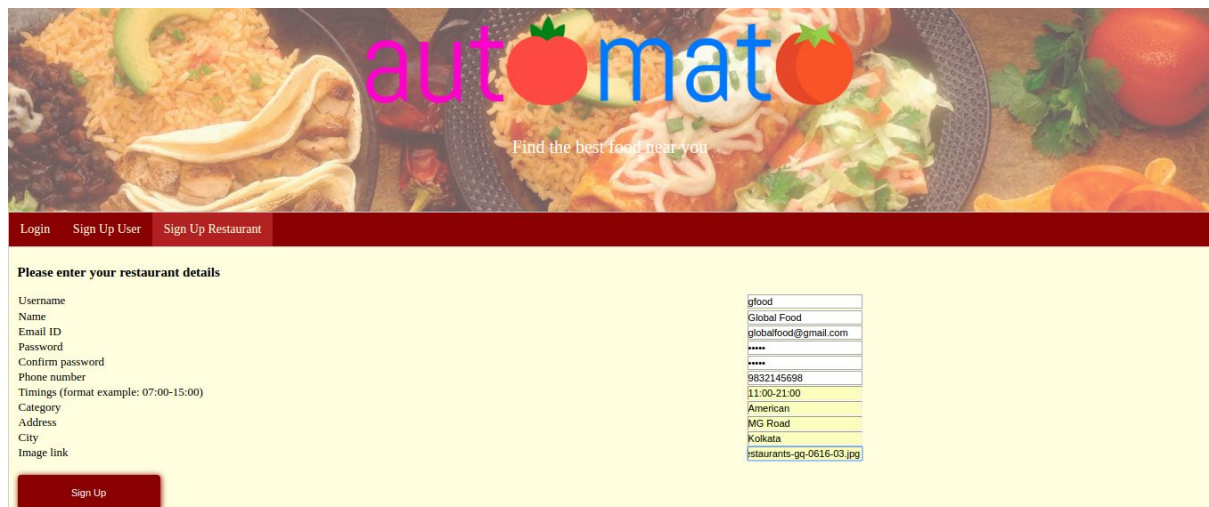
The login screen features a header with the 'automat' logo and the tagline 'Find the best food near you'. Below the header is a navigation bar with links for 'Login', 'Sign Up User', and 'Sign Up Restaurant'. The main content area is titled 'Please enter your login details' and contains a form with fields for 'Username' (filled with 'temp_user01') and 'Password' (masked with '****'). There are radio buttons for 'User' (selected), 'Restaurant', and 'Administrator'. A 'Login' button is positioned below the form. At the bottom, there are links for 'New user? Sign up!' and 'To register your restaurant, click here.'.

User Sign up



The user sign up screen features the same header and navigation bar as the login screen. The main content area is titled 'Please enter your user details' and contains a form with fields for 'Username' (filled with 'jdoe'), 'Name' (filled with 'John Doe'), 'Email ID' (filled with 'johnd@gmail.com'), 'Password' (masked with '****'), 'Confirm password' (masked with '****'), and 'Address' (filled with 'MG Road, Kolkata'). A 'Sign Up' button is positioned below the form.

Restaurant Sign up



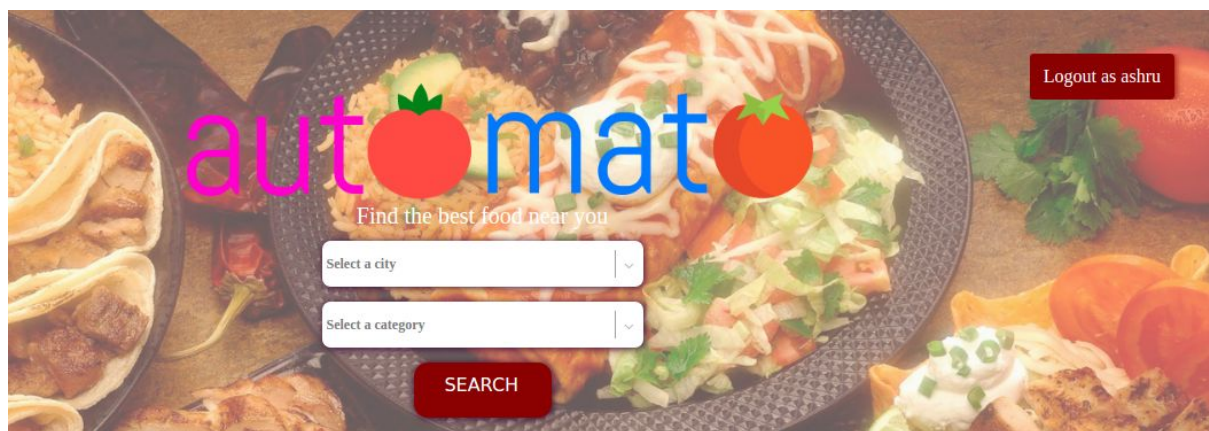
Please enter your restaurant details

Username	gfood
Name	Global Food
Email ID	globalfood@gmail.com
Password	*****
Confirm password	*****
Phone number	9832145698
Timings (format example: 07:00-15:00)	11:00-21:00
Category	American
Address	MG Road
City	Kolkata
Image link	restaurants-gg-0616-03.jpg

[Sign Up](#)

2. Select Restaurant (for Customer only)

This page shows up when a customer successfully logs into the system. This page shows the restaurants from which the user can order for food. Initially all the restaurants registered in our system is shown. But the user can customize it and can only view the restaurants of a particular city or cuisine/category or both.



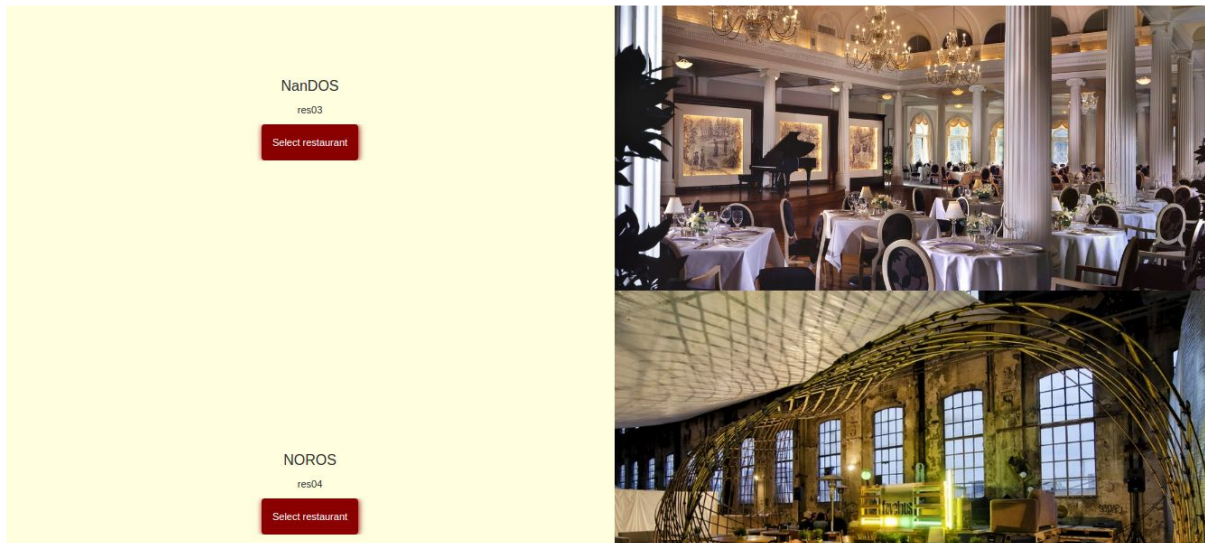
[Logout as ashru](#)

Find the best food near you

Select a city

Select a category

[SEARCH](#)



The next section in this page shows the current orders placed by the user. The order id, name of the restaurant and the current order status are shown to the user. At any point of time if an order is not delivered yet, the user can choose to cancel the order.

Your Orders				
Order ID	Restaurant	Address	Status	Actions
12	FooBar	MS-16/25,Bengal Ambuja, City Centre, Durgapur-713216	Order Placed	Cancel
10	FooBar	MS-16/25,Bengal Ambuja, City Centre, Durgapur-713216	Order Placed	Cancel
11	FooBar	MS-16/25,Bengal Ambuja, City Centre, Durgapur-713216	Prepared	Cancel

The next and also the bottommost section highlight the favorites of the user. The food items ordered most by the user are being shown in this section.

Your Favourites	
Item	Restaurant
Fries	FooBar
Burger	FooBar
Coke	FooBar

3. Selecting the food to order using menu

On selecting a restaurant by the user, the menu of the selected restaurant is being shown to the user. The user then selects the items required by selecting the required checkboxes and putting required quantities. On clicking the Place order button the order is placed and the system shows the billing page.

Select	Quantity	Item ID	Item Name	Price
<input type="checkbox"/>	1	4	Fries	100
<input type="checkbox"/>	1	3	Burger	150
<input type="checkbox"/>	1	5	Coke	40

Place Order

4. Generate Bill

On placing order the bill is calculated and shown to the customer. Prices of each item selected and the total is shown.

On clicking “Print as PDF” a pdf copy of the bill is generated and can be downloaded and saved by the user.

ORDER

12

Item ID	Item Name	Quantity	Price
3	Burger	2	150
5	Coke	1	40
Total			340

Print as PDF

ORDER

12

Item ID	Item Name	Quantity	Price
3	Burger	2	150
5	Coke	1	40
Total			340

5. Restaurant Home page

This page serves as the introductory page that is shown when a restaurant logs into the system. It contains all the options that are available to a restaurant account. This includes -

1. The **orders** tab: Used for viewing the information on all the orders that are being served by the restaurant. This tab can also be used for changing the status of any particular order from 'Order Placed' to 'Prepared' and then finally 'Delivered' or for cancelling an order.

On clicking the "Save" button, the status of the corresponding order gets updated and on clicking the "Cancel" button, the order gets terminated. A cancelled order does not further appear on the restaurant's order list.

FooBar

YOUR ACCOUNT

Pending Orders

Order ID	Address	Status	Actions
4	A-Zone Durgapur	Prepared	<div><div>Select status...</div><div>Update Status</div><div>Cancel Order</div></div>
10	MS-16/25,Bengal Ambuja, City Centre, Durgapur-713216	Order Placed	<div><div>Select status...</div><div>Update Status</div><div>Cancel Order</div></div>
11	MS-16/25,Bengal Ambuja, City Centre, Durgapur-713216	Prepared	<div><div>Select status...</div><div>Update Status</div><div>Cancel Order</div></div>
9	ABC	Order Placed	<div><div>Select status...</div><div>Update Status</div><div>Cancel Order</div></div>

2. The **edit details** tab: This tab displays the existing details of the restaurant (name, address, email ID, phone no., opening and closing times, etc.) as well as provides the option to change the current details. Clicking the “Save changes” button updates the information.

Restaurant Details

Restaurant Name:	tempr1
Email ID:	tempr1
Phone No.:	23
Start Timings -	11:00
End Timings -	21:00
Category:	American
Address:	tempr1

Save Changes

3. The **edit menu** tab: This tab provides the options to manage the list of food items available in the restaurant and their prices. On clicking the

“delete” button, the corresponding food item is deleted from the menu of the restaurant. The restaurant can add a new item by specifying its name and price. The new item is added to the menu by clicking on the “Add Item” button.

Restaurant Menu

Item	Price
kebab	200 <div>Delete</div>
chicken	80 <div>Delete</div>
dal	50 <div>Delete</div>

Add New Item

Item Name:

Price (in Rs.):

Add Item

Scope of further work

1. The system can be extended to provide a mobile application frontend, for example, on Android.
2. On the backend, we can use an existing API like Zomato to scrape restaurant data rather than manual entry into database. Note that this option was explored for the project but we later reconsidered it due to increased complexity and constraint of time.
3. An email/SMS notification system can be implemented to notify users when there is a change of status in any of their orders, or to notify restaurants of order cancellations.
4. A review/feedback system can be implemented so that restaurants that receive better ratings are pushed to the top of the search results.