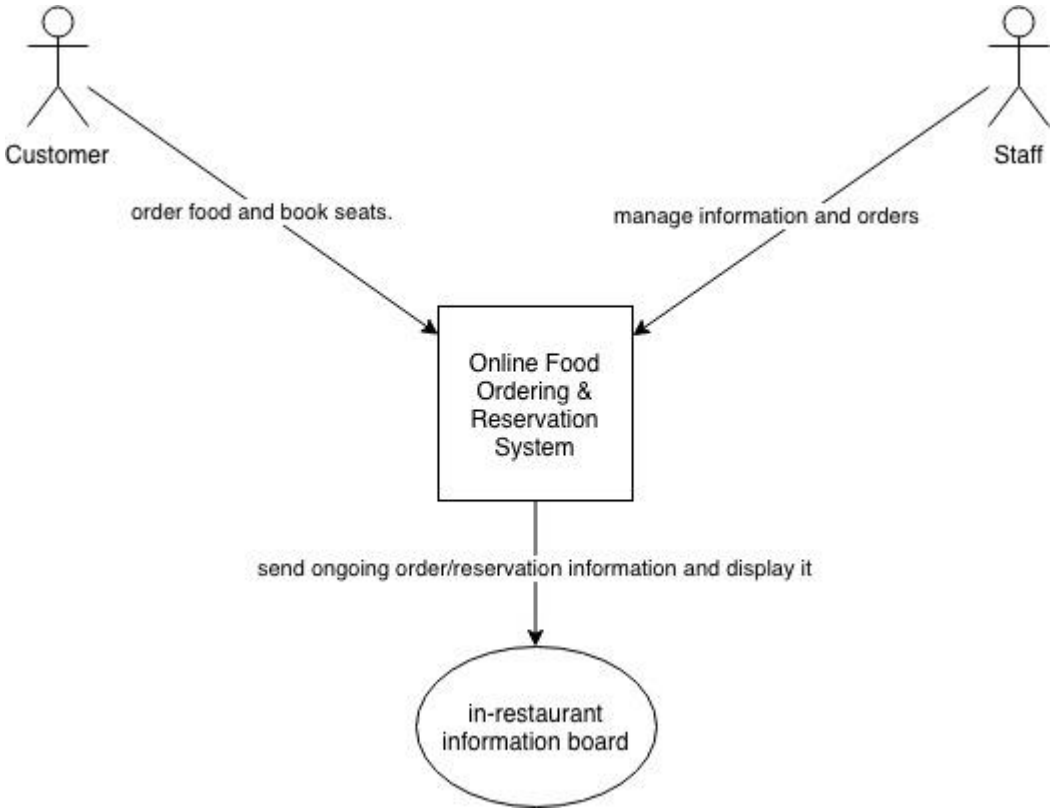
1. System Description:

A web based system designed for an imaginary restaurant that allows customers to order foods or book seats online. It can also help the restaurant mange its orders and other information.

2. Context Diagram



3. Functional Requirements and User Stories

a. Requirement Prioritization

List of project requirements:

1. A user shall be able to browse the menu and food information.
2. A user shall be able to order food for delivery.
3. A user shall be able to view seat availability and book seat online.
4. The system shall maintain a list of all orders.
5. The system shall be easy to understand and use.
6. A staff shall be able to edit menu information.
7. The system shall display food availability.
8. The restaurant shall be notified when a user ordered food.
9. The restaurant shall be notified when a user booked a seat.
10. A staff can cancel an order or seat reservation manually.

11. A user shall be able to register through a web form by providing a email address or a phone number.
12. A user shall be able to login into the system using a valid username and password
13. A user shall be able to reset password by provide a username, email address or a phone number.
14. A user shall be able to view information of an order that he or she has placed.
15. A user shall be able to cancel the order he or she has placed before been processed.
16. A user shall be able to choose dining-in, pick-up or delivery.
17. A user shall be able to view the status of order delivery.
18. The system shall be responsive.
19. The system shall be stable.
20. The system shall be able to be available at any time that user wish to use the ordering service. (**Availability**)
21. The system shall be able to prevent unauthorized access to sensitive user information including customer's name, phone number, and address. (**Security**)
22. The system shall be able to ensure that the restaurant receive notification after a user place an order successfully. (**Reliability**)

Functional Requirements:
Top 10 requirements:

Requirements	**Description**	**Priority**	**$100 Test by other two Groups**	
			Group 6	**Group 8**
R1	A user shall be able to browse the menu and food information.	High	15	20
R2	A user shall be able to order food for delivery and check the status of orders and delivery	High	12	18
R3	A user shall be able to view seat availability and book seat online.	High	13	10
R4	The restaurant shall be notified when a user ordered food.	High	11	8
R5	A staff shall be able to edit menu information.	Medium	8	4
R6	The system shall maintain a list of all orders	Low	5	6
R7	The system shall display food availability	High	5	6
R8	The restaurant shall be notified when a user booked a seat.	Medium	12	8
R9	Staff can cancel an order, food delivery and seat reservation manually.	Low	8	15
R10	A user shall be able to choose dining-in, pick-up or delivery.	Medium	10	5

We have different users with different priority (weights): **Admin** (0.15), **Customer** (0.35), **Staff** (0.30), and **Manager** (0.20). Calculates the overall priority of the requirements.

Req	**Admin (0.15)**	**Customer (0.35)**	**Staff (0.30)**	**Manager (0.20)**	**Priority**
R1	0.10	0.20	0.10	0.10	0.14
R2		0.30			0.07
R3		0.30			0.10
R4	0.20		0.25	0.25	0.15
R5	0.30			0.15	0.10
R6	0.10		0.15	0.10	0.08
R7	0.05	0.10	0.10	0.05	0.12
R8	0.25		0.20	0.25	0.15
R9	0.05		0.20	0.10	0.09
R10		0.10			0.03
Total	1	1	1	1	

b. User Stories

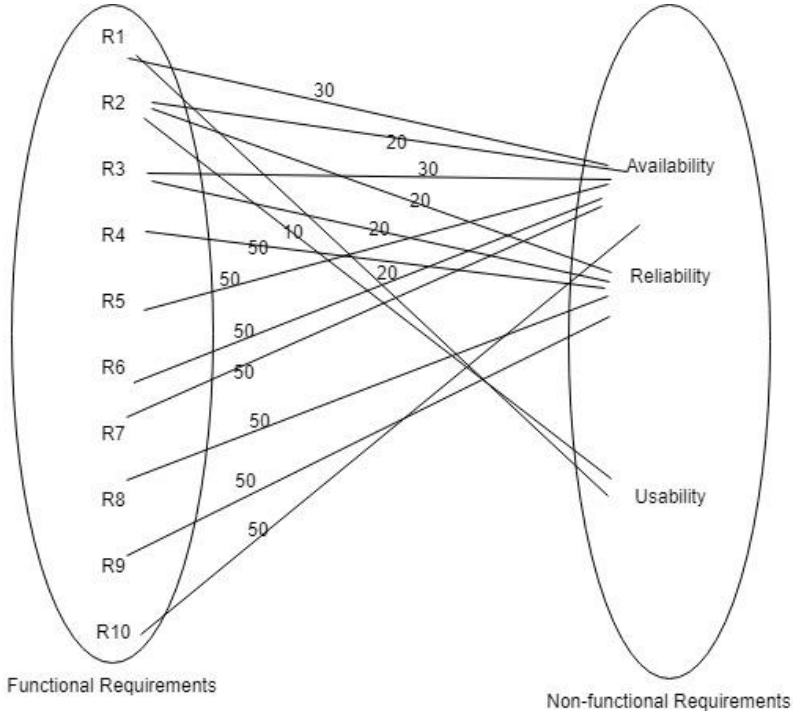
1. As a user, I want to clearly see the details of every food in the menu such as prices, calories, ingredients, so I can compare to each other, choose the best choice I wish to order.
2. As a staff, I want to be able to edit customers' order, prevent the mistakes are made by us. For example, a customer reserve a table in the restaurant, but the reservations are full then we need to cancel.
3. As a staff, I want to see the orders I need to prepare so I can schedule my work sequence more efficiently.
4. As a staff, I want to edit the menu, so customers can see what is new.
5. As a user, I want to be able to edit my orders like change the items of food and units after I place an order.
6. As a user, I want to be able to cancel my orders if I place an order mistakenly.
7. As a user, I want to be able to browse food by category or by rating.

4. Non-functional Requirements

a. Requirement Prioritization

We have four non-requirements:

1. **Availability**
2. **Reliability**
3. **Usability**



Priority (Availability) = (0.14 + 0.07 + 0.10+0.10+0.08+0.12+0.03) + $\log_2(230)^7$= 55.24
Priority (Reliability) = (0.07+0.10+0.15+0.15+0.09) + $\log_2(190)^5$ = 38.46
Priority (Usability**)** = (0.14+0.07) + $\log_2(30)^2$ = 10.01

b. Justification for non-functional requirements

Availability
The system shall be able to be available at any time that user wish to use the ordering service.

Reliability
The system shall be able to ensure that the restaurant receive notification without delay after a user place an order successfully.

Usability
The users shall be able to easily learn how to use the system and operate the system.

5. **Additional Requirements:**
From Group 6: For R7, we think you can display the available food and hide those food that are not available, so customers don't have to see which is available

6. Acknowledgement
GA/TA: Anjali Shah
Groups: Group 6 and Group 8