PROJECT PART 2

- **Team:** Meher Jain, Radhika Paryekarj, Subir Kumar Padhee
- **Title:** Hotel Management System
- **Project Summary:** A Hotel Management System in the form of a stand-alone application. It will allow customers, hotel administrative staff and other employees to access the hotel services, administrative activities and employee services respectively
- **Project Requirements:**

➢ **User Requirements**

User Requirement		
ID	Description	User
UR-01	As a new user, I should be able to sign-up in the system and create a role based profile	All Actors
UR-02	As an existing user, I should be able to login to the system	All Actors
UR-03	As a customer or receptionist, I should be able to make reservation	Customer, Receptionist
UR-04	As a customer, I should be able to cancel reservation	Customer
UR-05	As a customer, I should be able to order food	Customer
UR-06	As a customer or receptionist, I should be able to make payment	Customer, Receptionist
UR-07	As a customer, I should be able to give rating	Customer
UR-08	As a manager, I should be able to appraise employee	Manager
UR-09	As a manager, I should be able to approve leave request	Manager
UR-10	As a non-managerial employee, I should be able to apply for leave	Receptionist, Catering Staff, HR Staff, Housekeeping Staff
UR-11	As a housekeeping staff, I should be able to clean a room	Housekeeping Staff
UR-12	As a housekeeping staff, I should be able to manage supply inventory	Housekeeping Staff
UR-13	As a catering staff, I should be able to manage food inventory	Catering staff
UR-14	As a HR staff, I should be able to create pay slip	HR Staff
UR-15	As a HR staff, I should be able to organize training	HR Staff
UR-16	As an employee, I should be able to view my pay-slip	Receptionist, Catering Staff, HR Staff, Housekeeping Staff, Manager
UR-17	As an employee, I should be able to enroll for a training	Receptionist, Catering Staff, HR Staff, Housekeeping Staff

➢ **Business Requirements**

Business Requirement			
ID	Requirement	Topic Area	User
BR-01	Must be implemented in Java	Implementation	-
BR-02	Must be a stand-alone application	Implementation	-
BR-03	All employees must sign up using their hotel's (official) email ID	Authentication	Employees
BR-04	All employees' salaries must be disbursed on the first of each month	Payroll	Employees

➢ **Functional Requirements**

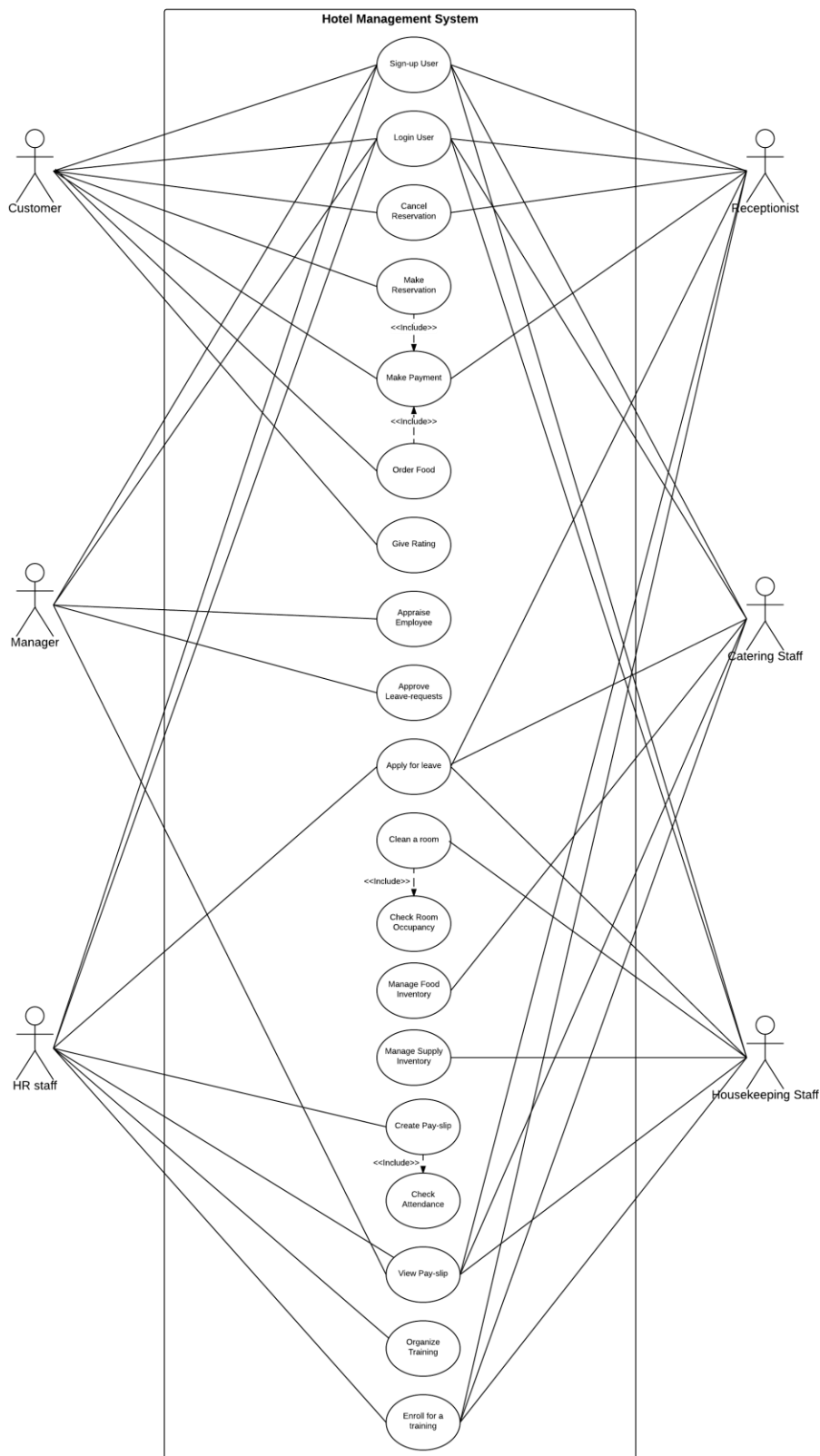| Functional Requirement		
ID	Requirement	Topic Area
FR-01	Password based authentication during user login	Authentication
FR-02	Automatically place order for items when the stock goes below preset threshold	Inventory
FR-03	On user login and logout record the respective date & time	Logging

➢ **Non-Functional Requirements**

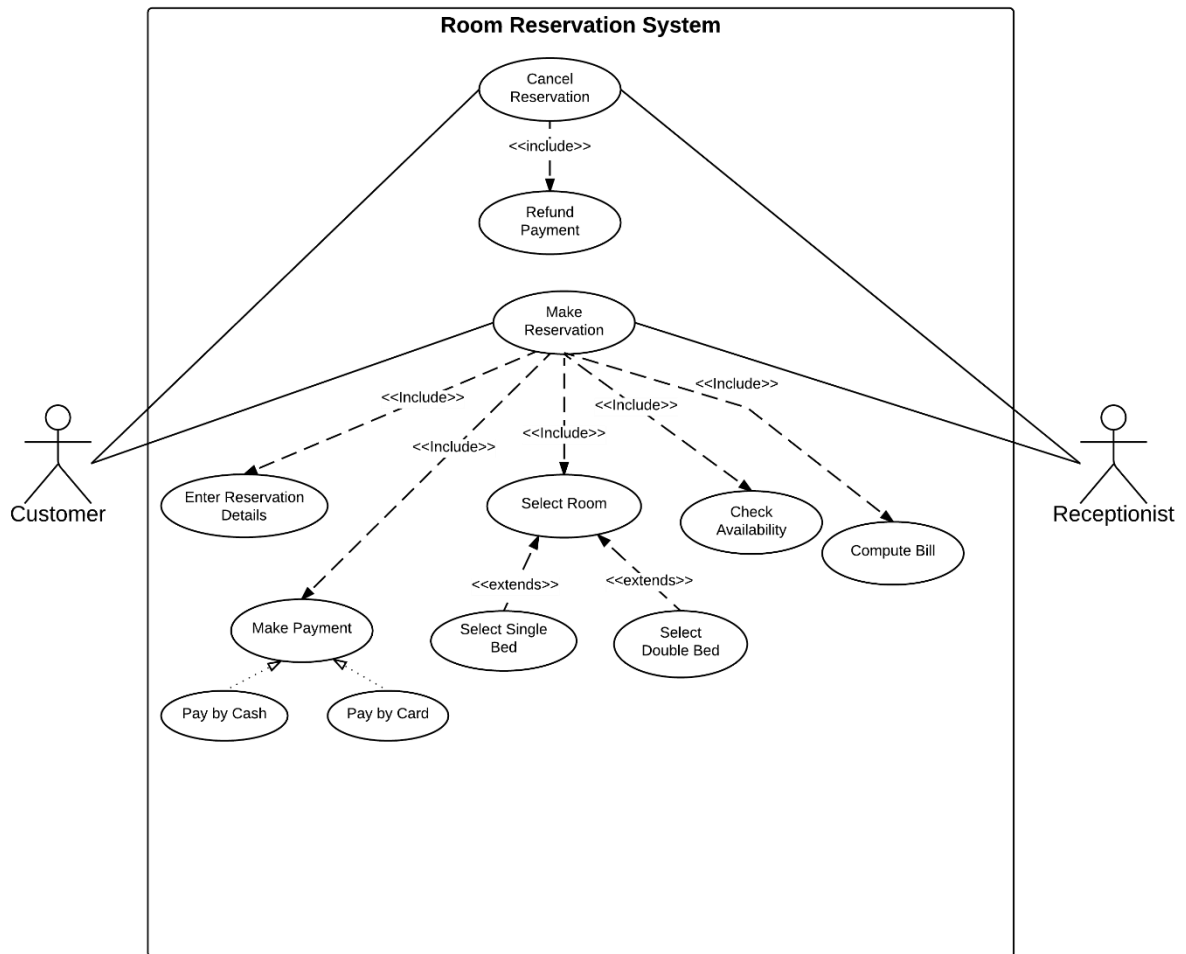| Non-Functional Requirement		
ID	Requirement	Topic Area
NFR-01	The system should be up 24x7	Performance
NFR-02	The system should perform backup on data once a week	Reliability
NFR-03	The user password should be encrypted	Security

➢ **Use Cases Diagrams**

➢ **Actors:**
Customer, Receptionist, Manager, HR Staff, Catering Staff, Housekeeping Staff

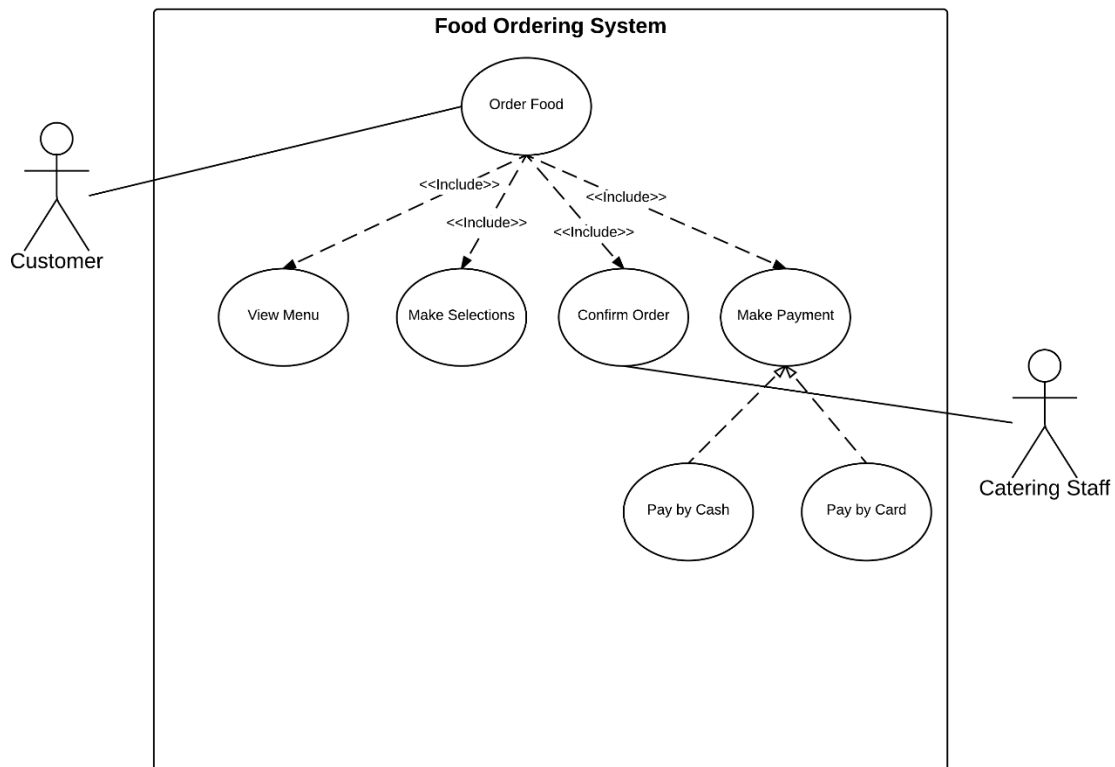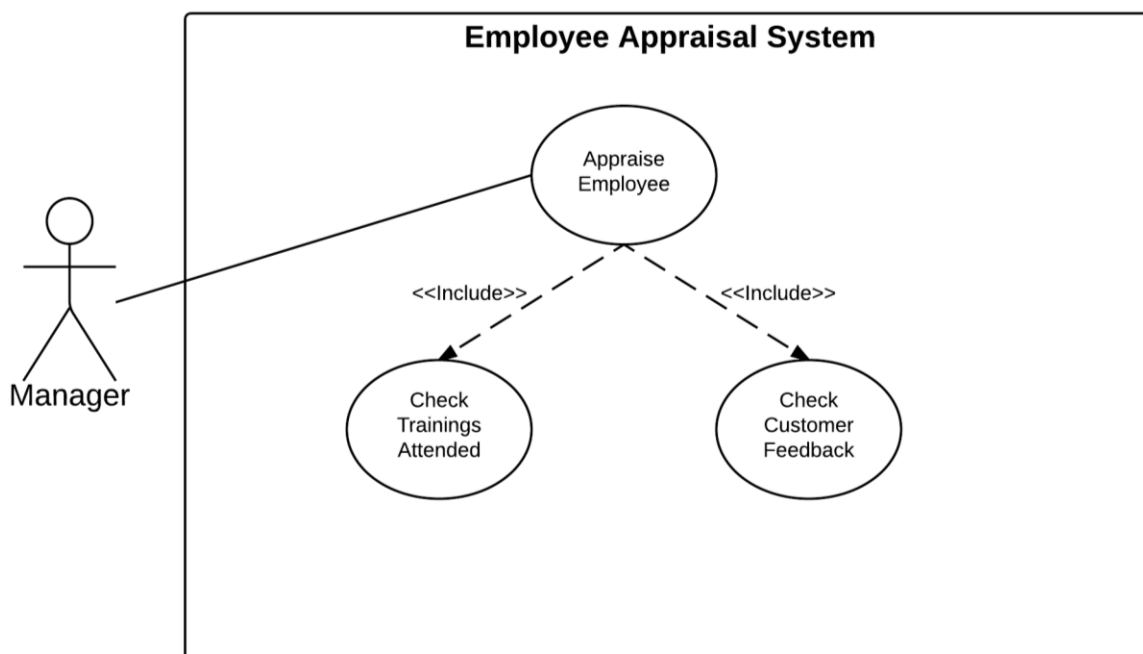➢ **Use Case Overview:**

➢

Hotel Management System-Project Part-2

➢ **Sub-Diagrams**
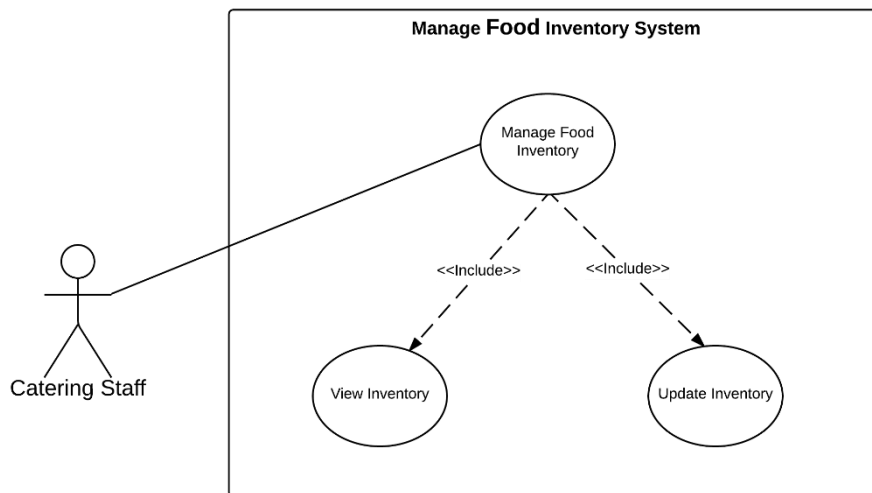- **Make Reservation Use Case**

- **Order Food Use Case**

Food Ordering System

Order Food

<<Include>> <<Include>> <<Include>> <<Include>>

View Menu | Make Selections | Confirm Order | Make Payment

Pay by Cash | Pay by Card

Customer

Catering Staff

- **Appraise Employee Use Case**

Employee Appraisal System

Appraise Employee

<<Include>> <<Include>>

Check Trainings Attended | Check Customer Feedback

Manager

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- **Manage Supply Inventory Use Case**

Manage Supply Inventory System

Manage Supply Inventory

HouseKeeping Staff

<<Include>>   <<Include>>

View Inventory   Update Inventory

- **Manage Food Inventory Use Case**

Manage Food Inventory System

Manage Food Inventory

Catering Staff

<<Include>>   <<Include>>

View Inventory   Update Inventory

Hotel Management System-Project Part-2
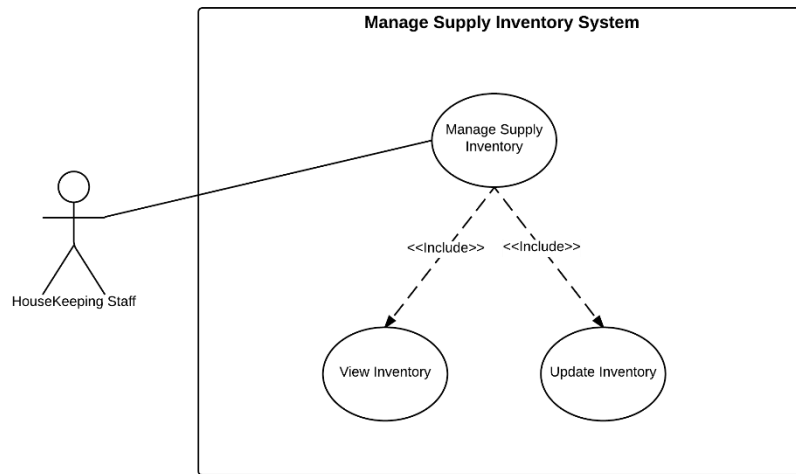
➢ Use Case Documentation

Use Case ID:	US-01
Use Case Name:	Signup User
Description:	User can sign up and enter information in the system

Actors:	Customer, Manager, Receptionist, HR, Catering Staff, Housekeeping		
Pre conditions:	User is not signed up in the system		
Post conditions:	User is signed up in the system		
Frequency of Use:	Frequently throughout the day by the user		
Flow of Events:		**Actor Action**	**System Response**
	1	Select Signup	Show create profile page
	2	Enter Details Agree to Terms & Condition	Verify the correctness of the details
	3	Click signup complete	Store the user information Notify User
	4	User is signed up in the system	
Variations:			
Exceptions:			
Developer Notes:			

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Use Case ID:	US-02	
Use Case Name:	Login User	
Description:	User can login to use the system	

Actors:	Customer, Manager, Receptionist, HR Staff, Catering Staff, Housekeeping		
Pre conditions:	User is signed up in the system		
Post conditions:	User is logged in the system		
Frequency of Use:	Frequently throughout the day by the user		
Flow of Events:		**Actor Action**	**System Response**
	1	Enter username & password Press login	Authenticate the user
	2	User logged in	
Variations:	1. User enters wrong username or password • System notifies the user, asks to enter the details again • System will block the user in case of three wrong login attempts in the past half hour		
Exceptions:			
Developer Notes:			

Hotel Management System-Project Part-2

Use Case ID:	US-03
Use Case Name:	Make Reservation
Description:	Customer can make room reservation

Actors:	Customer		
Pre conditions:	Customer is signed up in the system Customer is logged in to the system		
Post conditions:	Customer has room reservation		
Frequency of Use:	Frequently throughout the day by the customers		
Flow of Events:		Actor Action	System Response
	1	Click on Make Reservation	Show the room reservation page
	2	Enter reservation details	Check Availability Compute Bill Show Room Details
	3	Click on Confirm Reservation	Show the payment page
	4	Click on make payment and enter card details	Process Payment Update Room availability Notify customer Notify Receptionist
	5	Takes keys from the receptionist	
Variations:	1. Customer wants receptionist to make reservation • Receptionist makes the reservation for the customer 2. Requested Room not available • Customer is notified and can modify the details		
Exceptions:	4. Payment Fails • Customer is notified and given option for repayment 3. Customer decline to confirm reservation • Use Case Unsuccessfully ended		
Developer Notes:			

Hotel Management System-Project Part-2

Use Case ID:	US-04
Use Case Name:	Cancel Reservation
Description:	Customer can cancel room reservation

Actors:	Customer		
Pre conditions:	Customer is signed up in the system Customer is logged in to the system Customer has room reservation in the hotel		
Post conditions:	Customer has cancelled reservation		
Frequency of Use:	Frequently throughout the day by the customers		
Flow of Events:		**Actor Action**	**System Response**
	1	Click on Cancel Reservation	Cancel Reservation Refund Payment Notify Customer Update Available rooms
Variations:			
Exceptions:			
Developer Notes:			

Hotel Management System-Project Part-2

Use Case ID:	US-05
Use Case Name:	Order Food
Description:	Customer wants to view food menu and order food.

Actors:	Customer		
Pre conditions:	Customer wants to order food Customer is logged in to the system		
Post conditions:	Customer successfully orders food		
Frequency of Use:	Frequently-many times a day		
Flow of Events:		**Actor Action**	**System Response**
	1	Click on Order Food button.	Display the menu that allows selecting dish, quantity and confirming order.
	2	Make selections and click on Confirm Food order	Create an order of Food items Confirm the order with the catering staff (if they can serve the order) – elicit their approval or rejection Compute bill Add to the customer's account Notify catering staff to deliver food
			Catering Staff Delivers Food

Variations:	2. Customer is not put up in the hotel
	    Bill is not added to account
	    Customer makes the payment		

Exceptions:	1. Requested food not available in the requested quantity		
Developer Notes:			

Use Case ID:	US-06
Use Case Name:	Make Payment
Description:	Customer can make payment for his/her hotel bill

Actors:	Customer		
Pre conditions:	Customer is signed up in the system Customer is logged in the system		
Post conditions:	Customer has made payment		
Frequency of Use:	Frequently throughout the day by the customers		
Flow of Events:		**Actor Action**	**System Response**
	1	Select make payment	Show payment page
	2	Enter payment details	Process payment Notify customer
Variations:	2. Payment fails Customer is given option for repayment		
Exceptions:			
Developer Notes:			

Use Case ID:	US-07
Use Case Name:	Give Rating
Description:	Customer can give rating to provide feedback to hotel

Actors:	Customer		
Pre conditions:	Customer is signed up in the system Customer is logged in the system		
Post conditions:	Customer has given rating		
Frequency of Use:	Frequently throughout the day by the customers		
Flow of Events:		**Actor Action**	**System Response**
	1	Select Give Rating	Display Give Rating Page
	2	Enter employee name	Save Rating & Feedback for the selected employee
	3	Select the Rating	
		Enter Feedback	
Variations:			
Exceptions:			
Developer Notes:			

Use Case ID:	US-08
Use Case Name:	Appraise employees
Description:	Manager can appraise employees by checking attended training list and customer rating

Actors:	Manager	
Pre conditions:	Employee appraisal is due for the year Manager is already signed up in the system Manager is already logged in the system	
Post conditions:	Appraisal done for the employees	
Frequency of Use:	Once a year for every employee	
Flow of Events:		**Actor Action**	**System Response**
	1	Query the system for number of trainings pending for a particular employee	Furnish the information by reading from the records
	2	Query the system for customer ratings for a particular employee	Furnish the information by reading from the records
	3	Update employee appraisal	Store the update in the records
Variations:		
Exceptions:		
Developer Notes:		

Hotel Management System-Project Part-2

Use Case ID:	US-09
Use Case Name:	Approve leave request
Description:	Manager approves leave requests of employees by accessing leave availability of the employee

Actors:	Manager	
Pre conditions:	At least one employee should have requested for a leave Manager is already signed up in the system Manager is already logged in the system	
Post conditions:	Manager approves the leave request	
Frequency of Use:	Sporadic. Could be multiple times a day or even once a week	
Flow of Events:	**Actor Action**	**System Response**
	1 Query the system for number of available leaves for a particular employee	Furnish the information by reading from the records
	2 Approve leave	Update in the records so that employee can know
Variations:	2. Manager rejects the leave request	
Exceptions:		
Developer Notes:		

Use Case ID:	US-10
Use Case Name:	Apply for leave
Description:	A non-managerial employee should be able to apply for leave

Actors:	Receptionist, HR Staff, Catering Staff, Housekeeping		
Pre conditions:	User is already signed up in the system User is already logged in the system User should have positive leave balance		
Post conditions:	User has applied for leave		
Frequency of Use:	Sporadic. Could be multiple times a day or even once a month		
Flow of Events:		**Actor Action**	**System Response**
	1	Apply for leave	Notify the Manager about the leave application
Variations:			
Exceptions:			
Developer Notes:			

Use Case ID:	US-11
Use Case Name:	Clean Room
Description:	Housekeeping Staff can clean a room

Actors:	Housekeeping Staff	
Pre conditions:	Housekeeping is signed up in the system Housekeeping Staff is already logged in the system	
Post conditions:	Housekeeping Staff cleans unoccupied rooms	
Frequency of Use:	Frequently throughout the day by the Housekeeping staff	
Flow of Events:	**Actor Action**	**System Response**
	1 Check Room Occupancy	System displays all unoccupied rooms
	2. Cleans the room	
Variations:		
Exceptions:		
Developer Notes:		

Hotel Management System-Project Part-2

Use Case ID:	US-12
Use Case Name:	Manage Supply Inventory
Description:	Housekeeping Staff can view and update the supply inventory

Actors:	Housekeeping Staff	
Pre conditions:	Housekeeping Staff is signed up in the system Housekeeping Staff is logged in the system	
Post conditions:	Housekeeping Staff updates inventory System places order if supplies go below a threshold and notifies the Housekeeping Staff	
Frequency of Use:	Frequently throughout the day by the Housekeeping staff	
Flow of Events:		**Actor Action**	**System Response**
	1	Click on Manage Supply Inventory Button	Get Supply Inventory from database Display the Supply Inventory
	2	View Supply Inventory	
		Enter Information to be updated	Take input from the user.
		Click on Update Supply Inventory Button	Update the supply inventory table in the database. Check if supplies are below the threshold. Place order for supplies below the threshold Notify the Housekeeping Staff
Variations:		
Exceptions:		
Developer Notes:	If supplies go below a threshold, the system automatically places an order for that particular supply.	

Hotel Management System-Project Part-2

Use Case ID:	US-13
Use Case Name:	Manage Food Inventory
Description:	Catering Staff can view and update the food inventory

Actors:	Catering Staff	
Pre conditions:	Catering Staff is signed up in the system Catering Staff is logged in the system	
Post conditions:	Catering Staff updates inventory System places order if supplies go below a threshold and notifies the Catering Staff	
Frequency of Use:	Frequently throughout the day by the Catering staff	
Flow of Events:	**Actor Action**	**System Response**
	1 Select Manage Food Inventory	Get Food Inventory from database Display the Food Inventory
	2 View Food Inventory	
	3 Enter Information to be updated	Take input from the user
	4 Click on Update Food Inventory Button	Update the food inventory table in the database. Check if supplies are below the threshold. Place order for food supplies below the threshold Notify the Catering Staff
Variations:		
Exceptions:		
Developer Notes:	If supplies go below a threshold, the system automatically places an order for that particular supply.	

Use Case ID:	US-14
Use Case Name:	Create Pay-Slip
Description:	HR staff can create pay slips

Actors:	HR Staff		
Pre conditions:	HR staff is signed up in the system HR staff is logged in the system		
Post conditions:	HR staff creates pay slip		
Frequency of Use:	Frequently throughout the day by the Housekeeping staff		
Flow of Events:		**Actor Action**	**System Response**
	1	Check staff attendance	System displays attendance of all staff
	2	Create Pay Slip	Inputs information from the actor and creates pay slip for the employee
Variations:			
Exceptions:			
Developer Notes:			

Use Case ID:	US-15
Use Case Name:	Organize training
Description:	HR staff organizes role based training workshop, so that new employees can undergo training

Actors:	HR staff	
Pre conditions:	There are new employees who need to undergo training HR staff is already signed up in the system HR staff is already logged in	
Post conditions:	A new training is organized (scheduled)	
Frequency of Use:	Quarterly or as and when need arises.	

Flow of Events:		Actor Action	System Response
	1	Query the system for number of employees (in a particular role) who need training	Furnish the information by reading from the records
	2	Schedule a training	Update the records so that concerned employees know that a training is due

Variations:	
Exceptions:	
Developer Notes:	

➢ **Activity Diagrams**:

➢ <u>**Use Case Name: Make Reservation [Use Case ID #US-03] (By- Meher Jain)**</u>

Description: This activity diagram allows the customer to make reservation in the hotel and pay for the bill. It goes through all the activities involved in the process of making reservation.
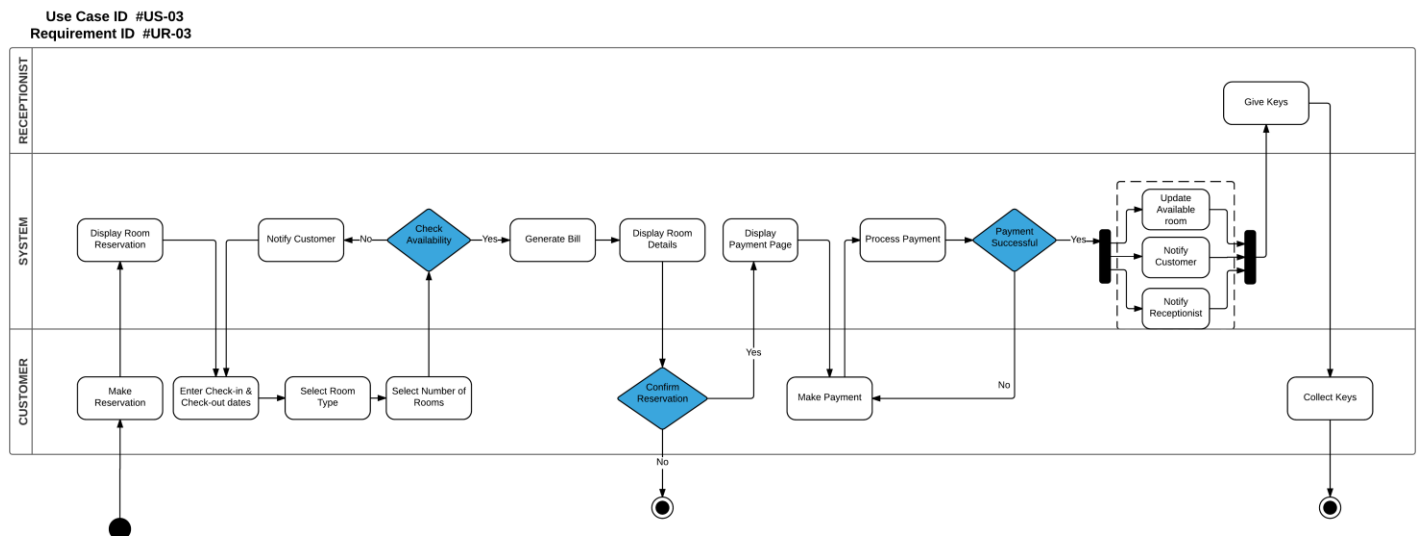
Hotel Management System-Project Part-2

➢ **Use Case Name: Manage Supply Inventory [Use Case ID #US 12] (By- Radhika Paryekar)**
Description:
This use case will allow the housekeeping staff to view and update the food Inventory. Also, if the supplies go below a preset threshold the system will automatically place an order and notify the housekeeping staff.
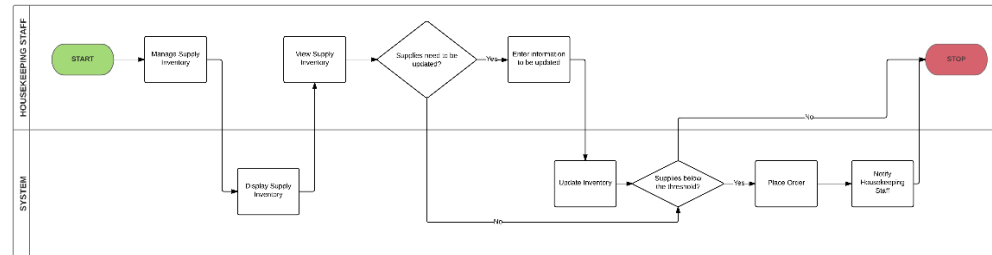
➢ **Use Case Name: Manage Food Inventory [Use Case ID #US 13] (By- Radhika Paryekar)**
Description:
This use case will allow the catering staff to view and update the food Inventory. Also, if the supplies go below a preset threshold the system will automatically place an order and notify the catering staff.

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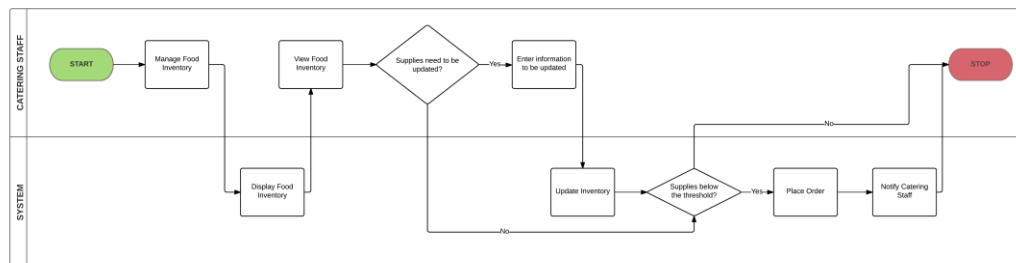
➢ **Use Case Name: Order Food [Use Case ID #US 05] (By- Subir Kumar Padhee)**

Description: This activity diagram depicts the use-case where in a customer can order food. It is a precondition that the user (the customer) is logged into the system. The following diagram includes the variations that are possible in execution, namely 1) the order can't be completed by the catering staff and 2) the customer is not put up in the hotel and has to pay the bill instantly. These variations have not been depicted in the sequence diagram for this use-case.
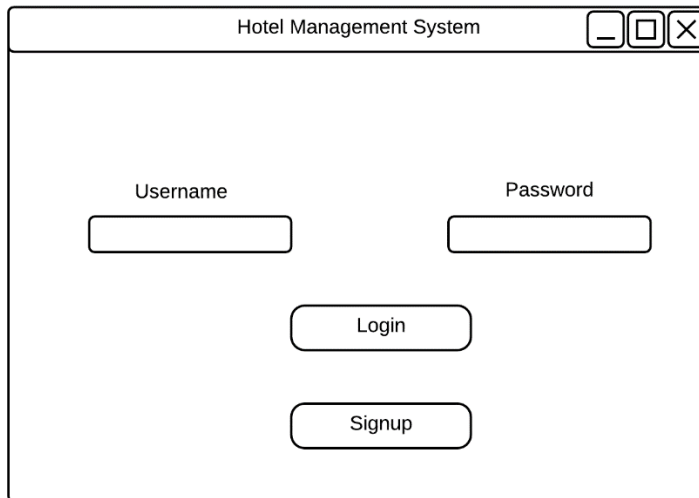
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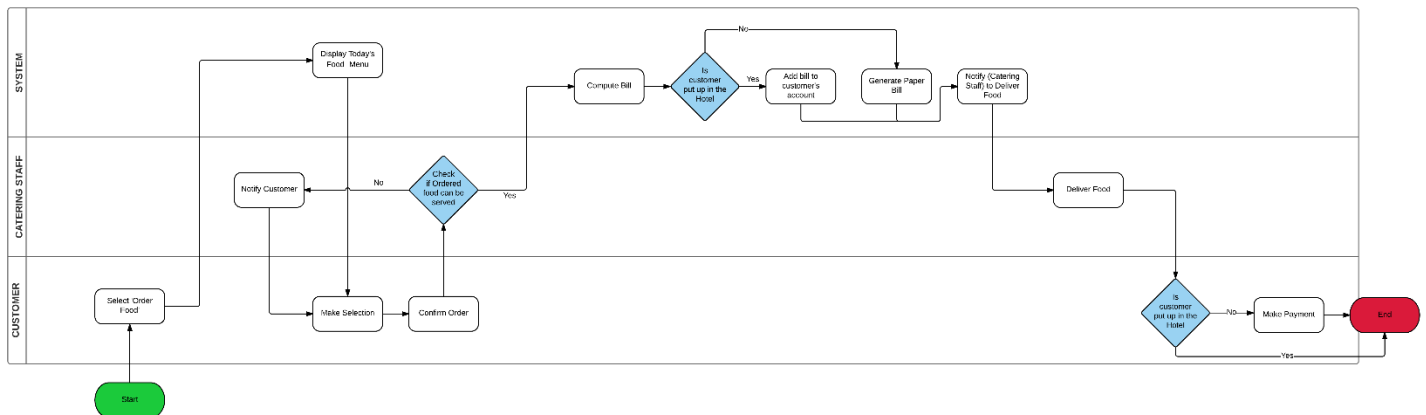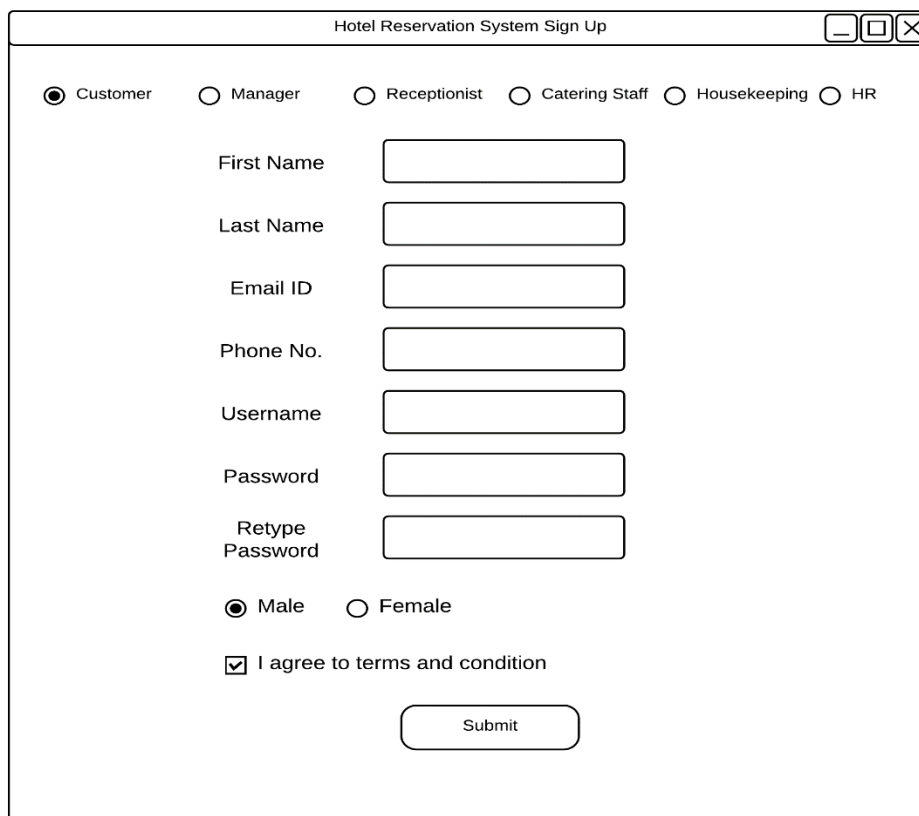
➢ **UI Mockups**

• **Home Page for all Users:**

Hotel Management System	_ □ ☒

Username   Password

[   ]   [   ]

[Login]

[Signup]

• **Sign Up page for all Users**

Hotel Reservation System Sign Up	_ □ ☒

◉ Customer   ○ Manager   ○ Receptionist   ○ Catering Staff   ○ Housekeeping   ○ HR

First Name   [   ]

Last Name   [   ]

Email ID   [   ]

Phone No.   [   ]

Username   [   ]

Password   [   ]

Retype
Password   [   ]

◉ Male   ○ Female

☑ I agree to terms and condition

[Submit]

- **Customer Home Screen and Navigation Pages from Home Screen**

Customer Home Screen

- Make Reservation
- Order Food
- View Bills
- Give Rating

Make Reservation

Check-in Date | Check-out Date

Room Type | ⦿ Single Bed ◯ Double Bed

No of Occupant | 0

Show Available Rooms | Confirm Reservation | Make Payment

Checkout Time is 12:00 PM

Give Rating

Emplyoee Role

Rating (out of 5) | -

Additional Feedback

Order Food

⦿ Take-away/ In-room

◯ Dine in

Confirm Order

Item 2

This is a description of the item. Gives the guest an idea of how the item is cooked and how would it taste $ price | 1

Item 3

This is a description of the item. Gives the guest an idea of how the item is cooked and how would it taste $ price | 3

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- **Manager and HR Home Screen**

Manager	HR
View Leave Requests View Customer Ratings	Create Payslip Organize Training
View Training List Attendance View Training Schedule	Request Leave View Training Schedule
View Payslip View Customer Information	View Employee Information

- **Housekeeping Home Screen and Manage Supply Inventory Navigations**

Housekeeping Home Screen

Manage Supply Inventory   View Payslip

Request Leave   View Training Schedule

Manage Supply Inventory

Item No.   Item   No. of Items Place Order
<Display Supply Inventory From Database>

Update Inventory

Update Inventory

Enter Item No.:   Text

Enter No. Of Supplies.:   4

Update

- **Catering Staff Home Screen and Manage Food Inventory Navigations**

Catering Staff Home Screen	_ □ ✕

Manage Food Inventory   View Payslip

Request Leave   View Training Schedule

Manage Food Inventory	_ □ ✕

Item No.   Item   No. of Items Place Order
<Display Food Inventory From Database>

Update Inventory

Update Inventory	_ □ ✕

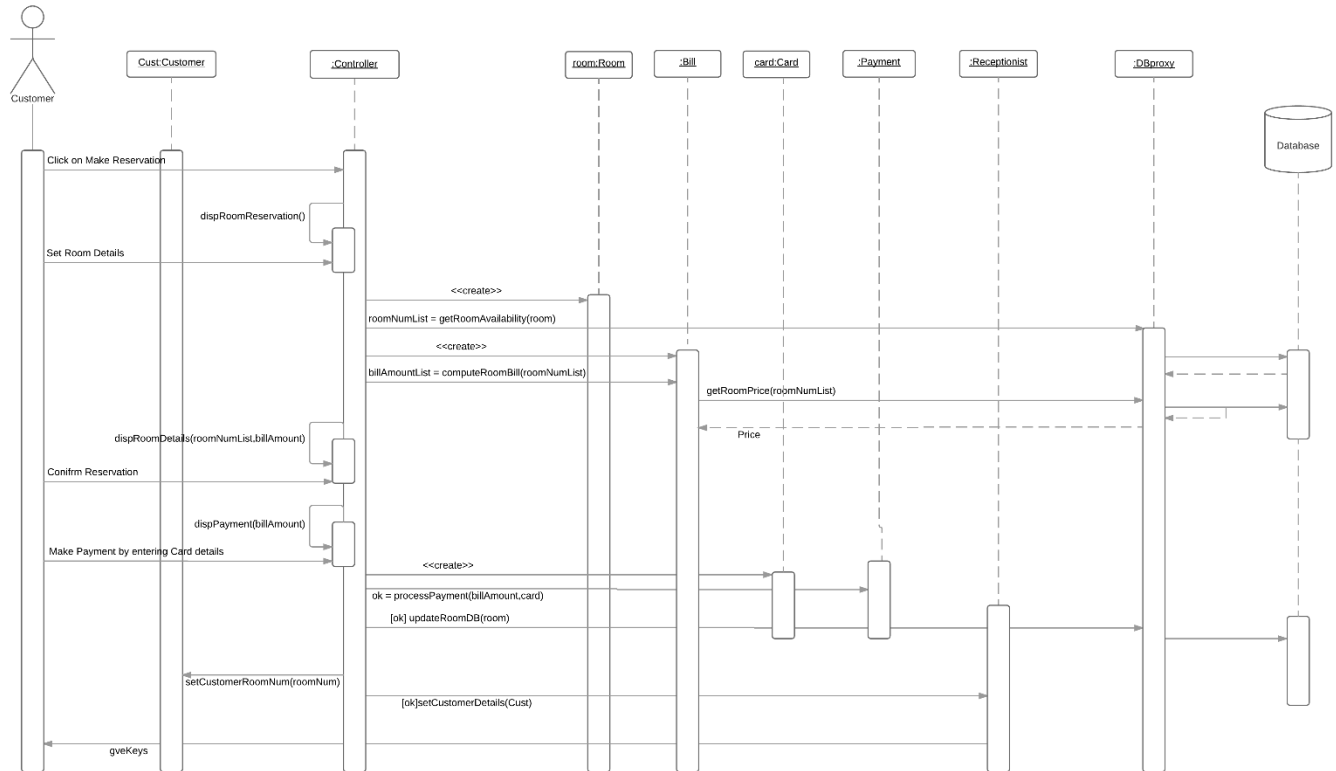Enter Item No.:   Text

Enter No. Of Supplies.:   4

Update

Hotel Management System-Project Part-2

- ➢ **Sequence Diagrams**
- • **Use Case Name: Make Reservation [Use Case ID #US-03] (By- Meher Jain)**

Use Case ID #US-03
Requirement ID #UR-03

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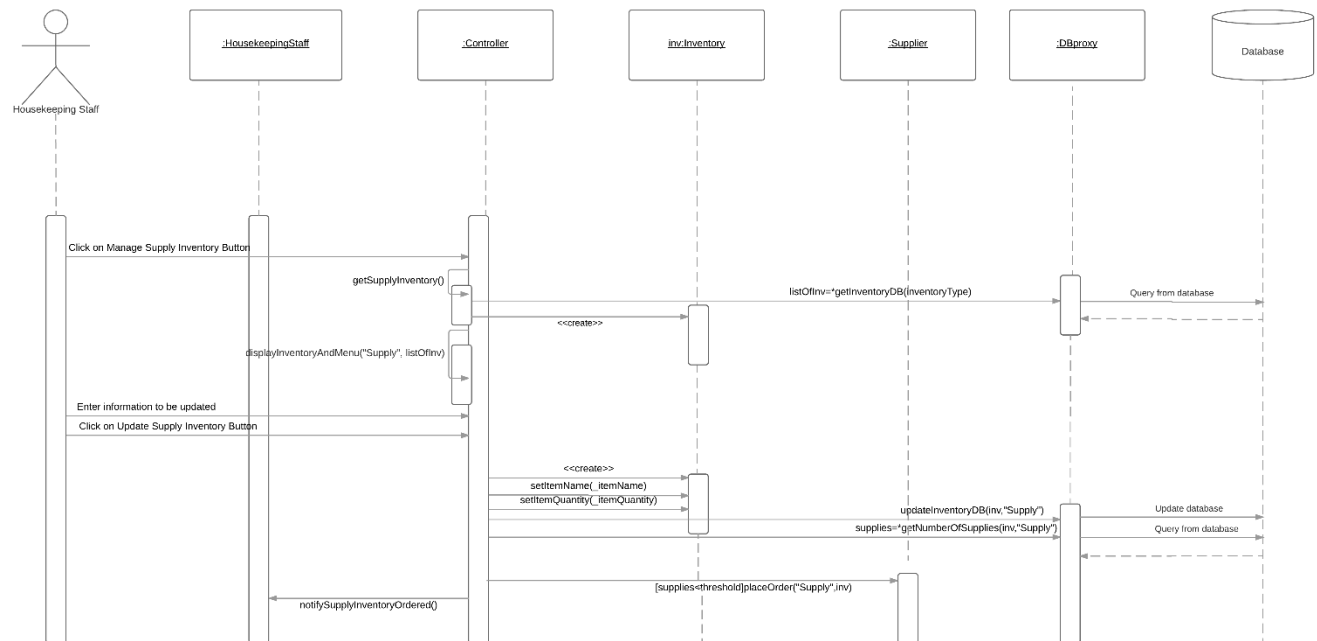
- **Use Case Name: Manage Supply Inventory [Use Case ID #US-12] (By- Radhika Paryekar)**

SEQUENCE DIAGRAM
USE CASE: MANAGE SUPPLY INVENTORY
    Requirement ID #UR-12, #FR-02
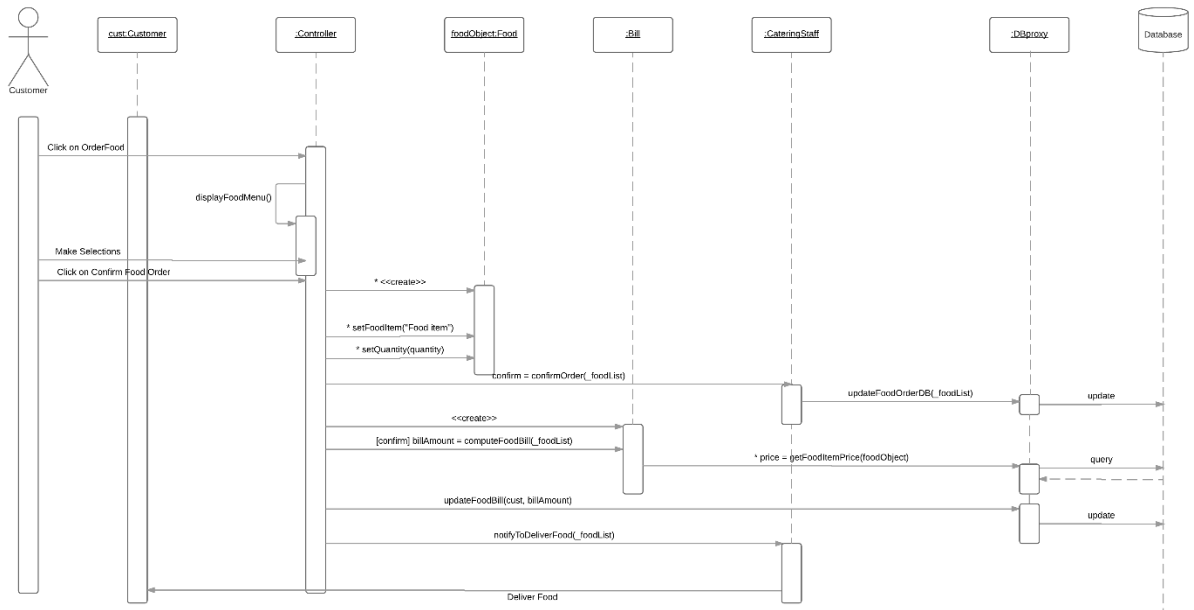   Use Case ID #US-12

RADHIKA PARYEKAR

Hotel Management System-Project Part-2

- ## **Use Case Name: OrderFood [Use Case ID #US-05] (By- Subir Kumar Padhee)**

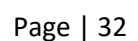SUBIR KUMAR PADHEE | October 12, 2016

SEQUENCE DIAGRAM: ORDER FOOD - US-05

Use Case ID: US-05
Requirement ID: UR-05

Hotel Management System-Project Part-2

➢ **Class Diagram**

- **Note:** Please visit this link to get a better resolution image of class diagram. We apologize for the inconvenience.

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- ➢ **Data Storage:** We will be using MySQL to store the user information. Inventory details, room details, food menu, etc. in the database. There will be a database proxy class (DBproxy) to handle all database queries and updates.

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