# Restaurant Automation Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project : | Restaurant Automation |  |  |  |
| First name | Surname | ID | Email |  |
|  |  |  |  |  |
| Himanshu | Shah | 1896502 | himanshushah96@gmail.com |  |
| Urvil | Shah | 1896494 | urvilshah56@gmail.com |  |
| Harshil | Ramswaroop | 1896362 | hramswaroop@gmail.com |  |
| Avtar | Singh | 1896909 | av.avtargill@gmail.com |  |
| Amardeep | Kaur | 1895889 | annukaur25101992@gmail.com |  |
|  |  |  |  |  |

# 

# Client Requirement

Introduction : RESTAURANT Automation Application: The CEGEP Gim system wants to develop an app for Restaurants. In this the Restaurant Manager wants to manage the crowd and order food for dining in and takeout. Users can book a table in a restaurant and as well as users can see there are tables available or not. The user can order food from the table using the application so the manager does not need to hire more staff. The chef can see the order directly in the application with the table number. Users can see restaurant status like Restaurant full book with average waiting time, available space(Table). Users can see the menu in application and order food. After food order users can see bill summary and pay bills in cash (at the counter) or pay by Credit card. Give a feasible solution for the restaurant so Customer, Chef, Cashier and manager can use the application. Users will get a notification of the available table and the chef also gets notification of order.

# Primary Users

1. Customer
2. Manager
3. Cashier
4. Chef
5. Admin

# Requirements :

* Customer Roles

1. Able to create an account(Register).
2. Able to login using email and password.
3. Will have an option to recover password
4. Will have the option to change password.
5. Can register into an application by providing following details
   1. Name
   2. Email
   3. Password
   4. Phone no.
6. Can reserve a table for a particular number of people.(If the table is not available, you can see the average waiting time for a table).
7. Can reserve more than one table , maximum 2.
8. Can add multiple menu items to the cart.
9. Select payment option through a card or at the counter.
10. Options Dine in or Takeout.
11. Gets notification of the available table.
12. Delete the account.
13. Logout of the account.
14. Give feedback/review.

* Manager Roles

1. Can login to the app using email and password
2. Can change the password
3. Add an employee. As per the role.
4. See the status of all the tables (reserved and available).
5. Add items into the menu based on category.
6. See all the menu Items of the menu.
7. Change price of a menu Item.
8. Logout.
9. See the list of employees.
10. Modify employees data.
11. Add tables based on capacity.

* Chef Roles

1. Login using email and password
2. Change password
3. Gets Notification for any order.
4. See the type of order(Dine in or TakeOut).
5. See the order details(Items, Table number ).
6. Change status of order.
7. Can change the menuItem Status(Available or not available)
8. Logout.

* Cashier Roles

1. Check the status of order payment.
2. Handle cash payments.
3. Change status of payments.(Paid or not).
4. Only handle take out - if paid.

# Various terminologies

These should be common during the whole development

* UserType : Customer,Manager,Chef,Cashier
* MenuItem Status : Available or Not Available
* OrderStatus : Ordered , In process, Complete, Cancelled
* Table Status : Reserved or Available
* OrderType : Dine In or TakeOut
* Menu Category : Appetisers, main course , Dessert,Beverages
* Payment Type : Cash or Card

# Screens

1. Splash Screen
2. Login
3. Register

Customer

Table book,

Menu

Cart

Order history

Order status

1. Forgot Password
2. Customer Dashboard
3. Employee Dashboard
4. OrderFood
5. Payment page
6. Contact Us
7. Profile Page

PROJECT DESCRIPTION

Restaurant Automation system is a Mobile application which helps the management of the restaurant easily. In other words , it reduces the manpower, increases accuracy, and makes it easy for the manager to manage the crowd easily. It is an easy to use application in this modern day world, which will make life easy for both customers and the employees of the restaurant.

Customer

The customer opens the app and signs up to the app providing their name ,email , mobile no. and password. If the customer is already signed up he/she logs in to the app with their email and password.

Once logged in they can book a table in the restaurant based on the number of people.

If available the app will assign them a table and reserve it for them. If not available, average waiting time will be shown to them.

After booking a table the customer will be able to see the menu on the home screen. MenuItems are divided according to their category. They can add food items to the cart with the quantity. Once all the desired items are added to the cart, the customers then, can proceed to order the food from the cart. They can choose the type of payment, either paying by card or pay at the counter. They can also choose to DINE IN or to take away the food.

Manager

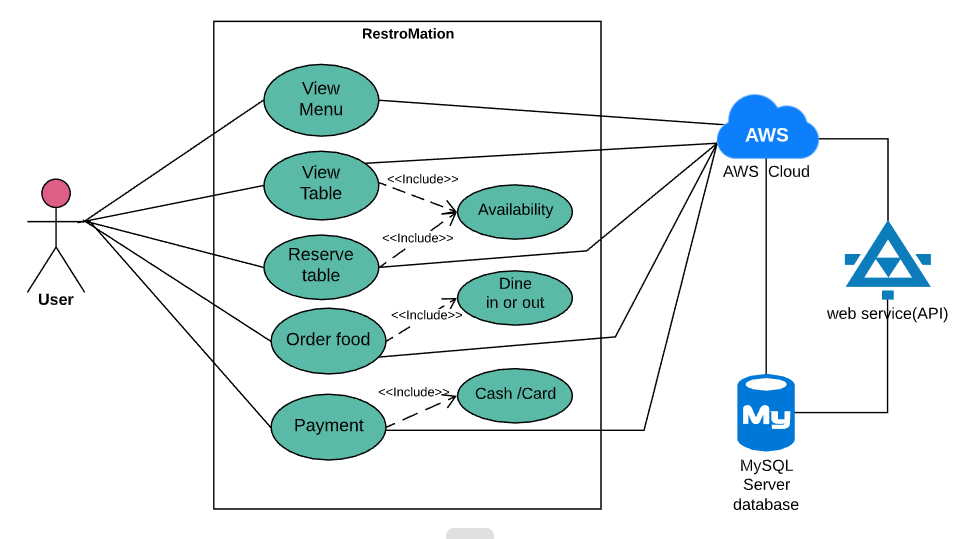
If the manager logs in to the app , he/she has various manipulation options.

The app allows the manager to add/remove or change the status of the table(available/reserved) , add/remove employees.

Moreover, it shows the status of all the tables in the restaurant.

Managers can also add, remove or update the menuItems from the menu.

**User Use Case Diagram :**



**1 .Fully Dressed use case:**

**1.1 : Manage Employee Account**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage Employee Account |
| **Level** | Manager-Level |
| **Primary Actor** | Manager |
| **Stakeholder and Interest** | Manager : As an manager, I want access to database and server.  So that, I can add, update and remove any employee from database. |
| **Preconditions** | - Only Manager can manage employee account.  - Manager must have knowledge about handling database. |
| **Success Guarantee** | Manager can successfully add, modify, and remove any employee from database. |
| **Main Success Scenario** | **-** Manager can add and modify employee details.  -Manager can delete employee information if employee left job or fired. |
| **Extensions** | 1.If Manager cannot manage employees.  -Manager is not authenticated.  2. If there is any empty or invalid field, it will show error. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.2 : Manage Table Reservation**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage Table Reservation |
| **Level** | Manager-Level |
| **Primary Actor** | Manager |
| **Stakeholder and Interest** | Manager : As an manager, I want access to database and server.  So that, I can manage table reservation, add, modify and delete table into database. |
| **Preconditions** | - Only Manager can manage reservation of table.  - Manager can change status of table.  - Manager must have knowledge about handling database. |
| **Success Guarantee** | Manager can successfully add, modify, and remove any table from database.  Manager can successfully change table status. |
| **Main Success Scenario** | **-**Manager can change status of table.  **-** Manager can add and modify table details.  -Manager can delete table information from database. |
| **Extensions** | 1.If Manager cannot manage table reservation.  -Manager is not authenticated.  2. If there is any empty or invalid field, it will show error. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.3 : Manage Menu items**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage Menu items |
| **Level** | Manager-Level |
| **Primary Actor** | Manager |
| **Stakeholder and Interest** | Manager : As an manager, I want access to database and server.  So that, I can add, update and remove any menu item according to category from database. |
| **Preconditions** | - Only Manager can manage menu items.  - Manager must have knowledge about handling database. |
| **Success Guarantee** | Manager can successfully add, modify, and remove any menu item according to category into database. |
| **Main Success Scenario** | **-** Manager can add and modify menu items details.  -Manager can add new category of menu into DB.  -Manager can delete any menu items. |
| **Extensions** | 1.If Manager cannot manage menu items.  -Manager is not authenticated.  2. If there is any empty or invalid field, it will show error. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.4 : View Order History**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | View Order History |
| **Level** | Manager-Level |
| **Primary Actor** | Manager |
| **Stakeholder and Interest** | Manager : As an manager, I can view order history according to date, month and year. |
| **Preconditions** | - Only Manager can view history of orders. |
| **Success Guarantee** | -Manager can successfully view order history.  -Manager can choose time period of showing history. |
| **Main Success Scenario** | **-** Manger can go to view history screen. |
| **Extensions** | 1.If Manager cannot view table history.  -Manager is not authenticated.  - Error exception has occurred. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.5 : View Orders**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | View Orders |
| **Level** | Chef-Level |
| **Primary Actor** | Chef |
| **Stakeholder and Interest** | Chef : As a chef, I want to be able to view all orders with remaining time. So that, I can prepare orders according to time. |
| **Preconditions** | -The database is up and running.  - All orders have to send to chef's screen.  - Chef can view orders. |
| **Success Guarantee** | -All new orders would successfully send to chef's screen on time.  -Chef can successfully remove done order from queue. |
| **Main Success Scenario** | -Chef can view all new orders on time.  -Chef can view all orders according to priority(Older one on top and latest in bottom)  -Chef can view order queue and wait queue from the database. |
| **Extensions** | 1.If Chef cannot view orders.  -Chef is not authenticated.  -Slow server  -Error exception has occurred. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.6 : Manage Order Status**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage order status |
| **Level** | Chef-Level |
| **Primary Actor** | Chef |
| **Stakeholder and Interest** | Chef : As a chef, I want to be able to change the status of orders(Wait and done) |
| **Preconditions** | -The database is up and running.  - All orders should be displayed on chef's screen.  -Only chef can select an order to cook, and flag an order as done. |
| **Success Guarantee** | Chef can successfully change status of orders (Waiting or done) |
| **Main Success Scenario** | -Chef can select orders to cook and flag an order is done. |
| **Extensions** | 1.If Chef unable to manage order status.  -Chef is not authenticated.  -Slow server  -Error exception has occurred. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.6 : Manage Bills**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage Bills |
| **Level** | Cashier-Level |
| **Primary Actor** | Cashier |
| **Stakeholder and Interest** | Cashier : As a cashier, I want to be able to manage bills (Cash/Card) of customer. So that, I can take payment.  -Wants accurate, fast entry, and no payment errors, as cash drawer shortages are deducted from his/her salary. |
| **Preconditions** | -The database is up and running.  -Cashier is identified and authenticated.  - All due payments should be displayed on cashier's screen.  -Only cashier can take payment and change status to PAID. |
| **Success Guarantee** | -Tax is correctly calculated.  - Accounting and Inventory are updated.  - Commissions recorded.  - Receipt is generated.  - Payment authorization approvals are recorded. |
| **Main Success Scenario** | -System presents receipt.  -.Customer leaves with receipt and goods (if any).  -Customer pays and System handles payment. |
| **Extensions** | 1.If cashier unable to manage Bills.  -Cashier is not authenticated.  -Slow server  -Error exception has occurred. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.6 : Manage Bills**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Manage Bills |
| **Level** | Cashier-Level |
| **Primary Actor** | Cashier |
| **Stakeholder and Interest** | Cashier : As a cashier, I want to be able to manage bills (Cash/Card) of customer. So that, I can take payment.  -Wants accurate, fast entry, and no payment errors, as cash drawer shortages are deducted from his/her salary. |
| **Preconditions** | -The database is up and running.  -Cashier is identified and authenticated.  - All due payments should be displayed on cashier's screen.  -Only cashier can take payment and change status to PAID. |
| **Success Guarantee** | -Tax is correctly calculated.  - Accounting and Inventory are updated.  - Commissions recorded.  - Receipt is generated.  - Payment authorization approvals are recorded. |
| **Main Success Scenario** | -System presents receipt.  -.Customer leaves with receipt and goods (if any).  -Customer pays and System handles payment. |
| **Extensions** | 1.If cashier unable to manage Bills.  -Cashier is not authenticated.  -Slow server  -Error exception has occurred.  -Cashier restarts System, logs in, and requests recovery of prior state. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.7 : View Menu**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | View Menu |
| **Level** | User-Level |
| **Primary Actor** | User |
| **Stakeholder and Interest** | User: As a user, I want to view menu according to food category items. So that, I can view all available menu items easily. |
| **Preconditions** | -The database is up and running. |
| **Success Guarantee** | -User Successfully land to menu screen.  . |
| **Main Success Scenario** | -Customer selects “View Menu” from the main screen.  - System displays a categorized list of food items available to order based on ingredients available. |
| **Extensions** | 1.If user unable to View menu.  -User is not authenticated.  -Slow server  -Error exception has occurred.. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.8 : View Table**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | View Table |
| **Level** | User-Level |
| **Primary Actor** | User |
| **Stakeholder and Interest** | User: As a user, I want to view all types of available tables list. So that, I can find a perfect table according to my requirement. |
| **Preconditions** | -The database is up and running. |
| **Success Guarantee** | -User Successfully can view list of available table and waiting for table. |
| **Main Success Scenario** | User can view all available tables and waiting tables list at a same time. |
| **Extensions** | 1.If user unable to View table.  -User is not authenticated.  -Slow server  -Error exception has occurred.. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.9: Reserve Table**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Reserve Table |
| **Level** | User-Level |
| **Primary Actor** | User |
| **Stakeholder and Interest** | User: As a use, I want to view all types of available tables list. So that, I can reserve table according to my requirement. |
| **Preconditions** | -The database is up and running. |
| **Success Guarantee** | -User Successfully reserve one or multiple(no more than 3) available table. |
| **Main Success Scenario** | -Successful reservation of table is main success scenario. |
| **Extensions** | 1.If user unable to reserve table.  -Table must be available at time of reservation.  -User is not authenticated.  -Slow server  -Error exception has occurred.. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.10 : Order Food**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Order Food |
| **Level** | User-Level |
| **Primary Actor** | User |
| **Stakeholder and Interest** | User:  -As a user, I can selects food item of my choice and specifies the desired side meal.  -As a user, I want an option for Dine-in or Dine-out. So that, I can enjoy food in my comfort zone.  -As a user, when I finished adding meals, I can select “View Order” option.  -As a user, I can easily add food items into my cart. |
| **Preconditions** | -The database is up and running.  -User has placed the order.  -User can order only those food items which are available.  -User cannot modify cart items after order placed. |
| **Success Guarantee** | -User Successfully order multiple food items.  -User can modify their order into cart.  -User successfully place order. |
| **Main Success Scenario** | -System displays a categorized list of food items available to order based on ingredients available.  -User can cancel their order after payment successfully. |
| **Extensions** | 1.If user unable to order table.  -User is not authenticated.  -Slow server  -Error exception has occurred.. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |

**1.10 : Payment**

|  |  |
| --- | --- |
| **Use case section** | **Comments** |
| **Use case Name** | Payment |
| **Level** | User-Level |
| **Primary Actor** | User |
| **Stakeholder and Interest** | User:  -As a user, I can make payment by cash or card. |
| **Preconditions** | -User should select payment method.  -The database is up and running. |
| **Success Guarantee** | -User Successfully pay bills by cash or card. |
| **Main Success Scenario** | -User can pay their bill by two option, by cash and using card (Which is fully secure) |
| **Extensions** | 1.If user unable to make payment.  - Card is invalid(Online payment)  -User is not authenticated.  -Slow server  -Error exception has occurred.. |
| **Special requirements** | Device should connect to internet. |
| **Technology and Variants list** | This application can run in any android device.  Variants- MySql, Visual studio |
| **Frequency of occurrence** | Could be nearly continuous. |