

Databases and Information Systems Project

Restaurant Management System

Deliverable-IV

Team Info

Name	Roll Number	Email-ID
Guttu Sai Abhishek	180050036	180050036@iitb.ac.in
Mulinti Shaik Wajid	180050063	180050063@iitb.ac.in
Sai Phanindra Ramasahayam	180050084	180050084@iitb.ac.in
Sanapathi Sumanth Balaji	180050091	180050091@iitb.ac.in

List of requirements

Manager(M) should be able to

1. Manage ingredients
2. Manage items in menu
3. Know the current orders in restaurant
4. Know which tables are empty and which are occupied
5. Know what are popular dishes served in restaurant and popular day for customers to visit restaurant
6. Add new staff to restaurant
7. Know when amount of ingredients falls below threshold

Cashier(Ca) should be able to

1. Know the orders whose bill is not paid yet
2. Bill the order and accept money

Head waiter(H) should be able to

1. Order items on behalf of customers who can not order online
2. Manages orders and table booking requests

Customer(Cu) should be able to

1. Have an account
2. Order food online
3. Know which tables are booked
4. Know the dishes which the restaurant serves

5. Book a table
6. Know what were his/her previous orders
7. Know whether a item is veg/non-veg/spicy etc
8. Review and rate food items
9. Receive notification if his/her account gets credited with Rcoins

List of use cases

These use cases are in reference to the screen designs(/interfaces) we have given in previous deliverable-3:

1. Manager can add new ingredients
2. Manager can update ingredients
3. Manager can add new items and set its cost, tags etc
4. Manager can update existing items
5. Manager should be able to view current orders in restaurant
6. Manager should be able to see the current status of tables i-e whether they are occupied or not
7. Manager can view most popular dish in restaurant
8. Manager can view most popular day for customers to come to restaurant
9. Manager can add new staff or delete staff
10. Manager should receive notifications when the quantity of ingredients falls below threshold
11. Customer can create an account
12. Customer can log into account
13. Customer can change his personal details
14. Customer can see table status while he is booking a table
15. Customer can see the menu with tags
16. Customer can add items to cart
17. Customer can book a table
18. Customer can change quantity of items in cart
19. Customer can place order of the items in cart
20. Customer can see his previous orders
21. Customer can sort based on tags, rating
22. Customer can rate an(or all) "item" from his/her previous order

23. Customer get a notification if Rcoins are credited to his account
24. Cashier can see all the orders whose payment is not done
25. Cashier can update status of payment to paid after payment
26. Head waiter can order on behalf of customers who don't have an account or internet
27. Head waiter sets order status to 'Cooking', 'Served' as needed
28. Head waiter manages(accepts/rejects) booking of tables
29. Head waiter updates status of tables (available or occupied)

Note:

1. The complete updated list of interfaces are attached at the end
2. The interface-13 we presented in deliverable-3 is changed to "view current orders and table statuses" for manager and the corresponding button is changed in interface-9
3. In the interface-19, for offline orders, the fields for table and time slots are added
4. In interface-17, customer can choose a list of pre-defined time slots now, instead of giving start time and end time
5. In interface-16, head waiter, now after update, can't change the status of table at will
6. In interface-12, the fields for "salary" is added

Test plan

Notation for test plan

M → Manager
 Cu → Customer
 Ca → Cashier
 H → Head waiter
 U → Use case

Requirements(M/Cu/Ca/H + req.no.), Use-Case(U + usecase.no)

Input

Output

Backend Changes (or simply 'Changes'. DB means database)

All test procedures/tests are manual done. The sequence of actions to be taken during the testing are included within the input or output.

M1,U1

Input Valid new ingredients with non negative amount and threshold in screen 11

Output New item should be visible in screen 10

Changes New tuple added to inventory table

M1,U1

Input new ingredients with negative amount and threshold in screen 11

Output **ERROR!** Amount should be non negative

Changes No changes in DB

M1,U2

Input Extra amount to be added for an existing ingredient in screen 11

Output Amount of ingredient updated in screen 10

Changes Tuple updated in inventory table

M2,U3

Input New item along with its tags and amount of ingredients required to prepare the item, price in screen 10

Output New item should be visible in screen 10

Changes New item/items may be added to tables item,item_item_tag,item_item_inventory,item_tag

M2,U3

Input Item name of an existing item in screen 10

Output **ERROR!** Item name already exists

Changes No changes in DB

M2,U4

Input New price of existing item in screen 10

Output New price of item should be visible in screen 10

Changes Tuple of item updated in table item

M3,U5

Input Customer orders an item in screen 4

Output The order should be visible in screen 13

Changes New tuples added to tables my_order, order_item,

M4,U6

Input Customer orders an item from an empty table in screen 4

Output Status of table should be updated in screen 13

Changes New tuples added to tables my_order, order_item

M4,U6

Input Customer orders an item from an existing table in screen 4

Output No change in table statuses in screen 13

Changes New tuples added to tables my_order, order_item

M5,U7

Input Order an item repeatedly sufficient number of time in screen 4

Output Most popular dish should be the item which was ordered repeatedly in screen 14

Changes New tuples added to table my_order, order_item

M5,U8

Input Sufficient number of customers order food on the same day in screen 4

Output Most popular day is changed to the day on which many customers order in screen 14

Changes New tuples added to table my_order, order_item

M5,U9

Input Name of staff, time slots in which staff is supposed to work, phone address, house address, salary in screen 12

Output New staff should be visible in screen 12

Changes New tuples added to table person,staff,staff_time_slot

M5,U9

Input Name of staff, time slots in which staff is supposed to work, phone number of existing staff ,address, house address, salary in screen 12

Output **ERROR!** A staff with the same phone number exists

Changes No changes in DB

M6,U10

Input Add a ingredient with amount of ingredient less than threshold in screen 11

Output Manager should get a notification with item name, amount, threshold in screen 20

Changes New tuple added to table notification

M6,U10

Input Add a ingredient with amount of ingredient greater than threshold in screen 11

Output **ERROR!** Manager should not get a notification in screen 20

Changes No changes in DB

Cu1,U11

Input Enters an unused username and safe password in screen 8

Output Customer enters into his hello page, the screen 2

Changes Tuple inserted in person, customer tables

Cu1,U11

Input Enters an existing username or non-safe password in screen 8

Output **ERROR!** username already exists

Changes No changes in DB

Cu1,U12

Input Enters an his username and password in screen 1

Output Customer enters into his hello page, the screen 2

Changes No changes in DB

Cu1,U12

Input Enters an incorrect username or password in screen 1

Output **ERROR!** incorrect username or password

Changes No changes in DB

Cu1,U13

Input The fields customer wants to change (similar tests for other roles for edit personal details interface) and clicks "Update" in screen 7

Output Changes are saved successfully

Changes Tuples are updated in person table

Cu1,U13

Input Customer entering already existing/other's phone number in screen 7

Output **ERROR!** already existing phone number

Changes No changes in DB

Cu1,U13

Input Customer giving phone no. in wrong format(eg. 'a123bc' or '*@123') in screen 7

Output **ERROR!** Incorrect phone number format

Changes No changes in DB

Cu2,U16

Input Customer adds item to cart in screen 3

Output The item just added by customer should appear in his/her screen 4

Changes Tuples are inserted into cart DB with quantity 1

Cu2,U18

Input Customer changes quantity of items in cart in screen 4

Output The edited quantity in cart should be visible in screen 4

Changes Tuples are updated into cart DB with suitable quantity

Cu2,U19

Input Customer places the order of items in cart in screen 4 along with tables he booked for current time slots

Output The order should be visible in screen 16(head waiter's interface)

Changes Tuples are inserted in my_order, order_item, table_order tables

Cu2,U19

Input Customer places the order of items in cart in screen 4 along with tables he booked for future time slots

Output **ERROR!** Can't place order for future

Changes No changes in DB

Cu2,U19

Input Customer places the order of items in cart in screen 4 but he did not have any accepted table bookings

Output **ERROR!** table is not booked/request not accepted

Changes No changes in DB

Cu3,U14

Input Customer tries to book a table and need to know the booked statuses of table in screen 17

Output Customer can see the booked slots of table in screen 17

Changes no changes in DB

Cu4,U15

Input Customer clicks on menu button in screen 2

Output Customer can now see all the items restaurant has to offer in screen 3

Changes No changes in DB

Cu5,U17

Input Customer places a request to table and chooses an available time slot in screen 17

Output Head waiter should be able to see the request screen 16

Changes Tuples are inserted into table_request

Cu5,U17

Input Customer places a request to table and chooses an non-available time slot in screen 17

Output **ERROR!** requested table and time slot combination is not available

Changes No changes in DB

Cu6,U20

Input Customer clicks prev-orders in screen 2

Output Customer can see all his previous orders with its status in screen 5

Changes No changes in DB

Cu7,U21

Input Customer chooses to sort items in menu based on rating or filter on some tags in screen 3

Output Customer sees an updated menu which is sorted or filtered in screen 3

Changes No changes in DB

Cu8,U22

Input Customer rates/review an item in screen 6

Output Other customers can see the updated average rating in screen 3

Changes Tuples are inserted in rating table

Cu8,U22

Input Customer gives an empty rating/review an item in screen 6 and clicks submit

Output **ERROR!** Rating/review can't be empty

Changes No changes in DB

Cu9,U23

Input Customer pays an amount above the threshold

Output Customer gets a notification saying that Rcoins are credited in screen 2

Changes Rcoins are added to customer's account in customer table

Ca1,U24

Input Customer gives a new order

Output Cashier can see this order and billing amount in screen 15

Changes No changes in DB

Ca2,U25

Input Cashier changes status of order to paid

Output That order is no longer visible in screen 15 and customer can see order status as 'completed' in screen 5

Changes Tuple updated in my_order table

H1,U26

Input Head waiter orders an item(s) and books table

Output That order is visible in current orders on screen 16

Changes New Tuple(s) added to my_order, order_item, table_order tables

H1,U26

Input Head waiter books a table which is already booked in that time-slot while placing an offline order in screen 19

Output **ERROR!** table is already booked

Changes No change in DB

H2,U27

Input Head waiter sets order status to 'Cooking' or 'Served'

Output Head waiter can see updated status in screen 16 and customer can see the updated status in screen 5

Changes Tuple is updated in my_order, order_item, item tables

H2,U28

Input Customer requests booking for a table in screen 17

Output Head waiter can see table requests in screen 16

Changes Tuple is updated in table_request table

H2,U28

Input Head waiter accepts/rejects the request for booking of a table in screen 16

Output Customer can see the updated status of his table-booking-request in screen 18

Changes Tuple is updated in table_request table

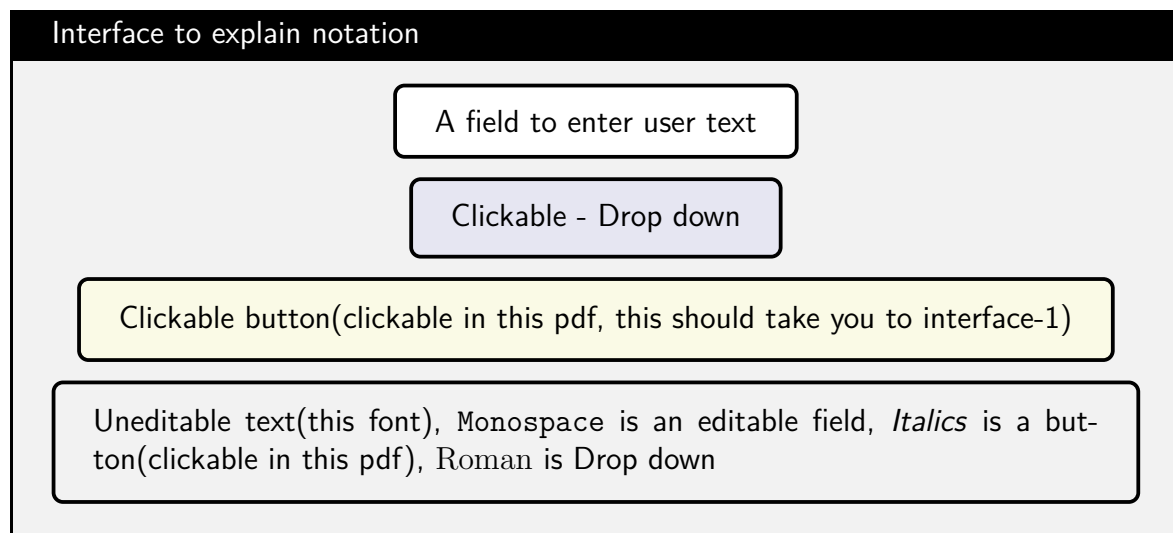
H2,U29

Input Head waiter updates table status in screen 16

Output Manager, head waiter can see the live status of tables in screen 13, 16 resp.

Changes Tuple is updated in my_table table

Interfaces/Screen designs



Interface-1

Login screen for all roles

Enter Username

Enter Password

Login

Don't have an account? Sign Up

Interface-2

Customer Hello

Menu

Cart

Previous Orders

Edit personal details

Book a table

Previous table requests

Notifications

Logout

Interface-3

Menu

Sort/Filter by: Alphabetical order/recent orders/most ordered/rating

Search by name/tag

Search

Item1, Price1, Item tags1, Average rating1, *Add to cart*

Item2, Price2, Item tags2, Average rating2, *Add to cart*

Item3, Price3, Item tags3, Average rating3, *Add to cart*

Back

Interface-4

Cart

Item1, Price1, Total Price1, quantity1, *remove*

Item2, Price2, Total Price2, quantity2, *remove*

Item3, Price3, Total Price3, quantity3, *remove*

Table number

Time slots

Place Order

Back

Interface-5

Prev-Orders

Prev-order1, status1, total price for this order1, Rcoins used1, use this may Rcoins, *Pay this many Rcoins, View or Rate*

Prev-order2, status2, total price for this order2, Rcoins used2, use this may Rcoins, *Pay this many Rcoins, View or Rate*

Prev-order3, status3, total price for this order3, Rcoins used3, use this may Rcoins, *Pay this many Rcoins, View or Rate*

Back

Interface-6

Specific Prev-Order, can rate/review here

Item name1, Price1, Quantity1, Total Price of this item1, status1, Stars - 1/2/3/4/5, *Rate, Give review, Post review*

Item name2, Price2, Quantity2, Total Price of this item2, status2, Stars - 1/2/3/4/5, *Rate, Give review, Post review*

Item name3, Price3, Quantity3, Total Price of this item3, status3, Stars - 1/2/3/4/5, *Rate, Give review, Post review*

Back

Interface-7

Edit Personal Details

Password

Name

Address

House no

Street

City

State

Country

PIN

Phone Numbers - comma seperated

Interface-8

Create a customer account

Username*

Password*

Confirm Password*

Name*

Create

Back

Interface-9

Manager hello

Update menu/item

Update inventory

Update/Add staff

View current orders and table statuses

Edit personal details

View Statistics

Notifications

Log out

Interface-10

Update items/menu

item name1, price1, tags1, inventory & corresponding quantity1

item name2, price2, tags2, inventory & corresponding quantity2

item name3, price3, tags3, inventory & corresponding quantity3

Add item

Save

Back

Interface-11

Update Inventory

Inventory name1, threshold1, quantity remaining1, units1

Inventory name2, threshold2, quantity remaining2, units2

Inventory name3, threshold3, quantity remaining3, units3

Add Inventory

Save

Back

Interface-12

Add/delete staff

Username*

Password*

Confirm Password*

Salary*

Name*

role - cashier, head waiter

Username1, Role1, time slots1, salary1 *delete*

Username2, Role2, time slots2,salary2, *delete*

Username3, Role3, time slots3,salary3 *delete*

Create Account

Back

Interface-13

Current orders and live table statuses(for manager)

Live table statuses

Table1, status of table1, customer name1

Table2, status of table2, customer name2

Table3, status of table3, customer name3

Presently active order details

Order1, status1, customer1

Order2, status2, customer2

Order3, status3 customer3

Interface-14

Statistics

<Graph of items vs number of orders in selected time period>

<Graph of items vs average time to prepare>

<day of week vs number of customers>

<time slot of the day vs number of customers>

<Popular dishes>

Back

Interface-15

Cashier hello

customer username1, total amount to be paid1 - Rcoins used1

Paid

customer username2, total amount to be paid2 - Rcoins used2

Paid

customer username3, total amount to be paid3 - Rcoins used3

Paid

Edit Personal Details

Log out

Interface-16

Head Waiter hello

Presently active order details

customer1, order2, current status2, next-status*

customer2, order2, current status2, next-status

Table requests

customer1 , table id1, time slot list1, *Accept, Reject*

customer2 , table id2, time slot list2, *Accept, Reject*

Live table statuses

table1, status1, customer1

table2, status2, customer2

Place an offline order

Edit personal details

Log out

*

*one among order-served,order-completed

Interface-17

Book a table

table1, table location, current status: available/occupied, Book - yes/no:
default - no, Show available slots

table2, table location, current status: available/occupied, Book - yes/no:
default - no, Show available slots

table3, table location, current status: available/occupied, Book - yes/no:
default - no, Show available slots

Time slots

Place request(if at least one table is picked)

Back

Interface-18

All prev-table requests for this customer

table id1, start time, end time, status

table id2, start time, end time, status

table id3, start time, end time, status

Back

Interface-19

Offline Orders(Available to Head waiter)

Search for items

Search

Item1, Price1, Item tags1, quantity-1

Item2, Price2, Item tags2, quantity-2

Table number

Time slots

Place order

Back

Interface-20

Notifications

Notification-1, Time stamp 1

Notification-2, Time stamp 2

Notification-3, Time stamp 3

Back