Design Document

Team:

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Logical Schema

- 1. Item_id -> item_name, item_type, price, availability
- 2. Ing id -> ing name, availability, price
- person_id -> person_name, person_type, type_from, type_to, address, phone_no, salary, email, password
- 4. purchase id -> purchase name, purchase date, purchase time, quantity
- table_id -> table_type, capacity, price
- 6. dp_id -> dp_name, rating, primary_no, secondary_no, phone_no, salary
- item_f_id -> item_id, person_id, feedback_txt, suggestions, rating FOREIGN KEY(item_id) references items FOREIGN KEY(person_id) references persons
- dp_f_id -> dp_id, person_id, feedback_txt, suggestions, rating FOREIGN KEY(person_id) references persons FOREIGN KEY(dp_id) references delivery_persons
- 9. off_order_id -> quantity, order_price, order_date, order_time
- 10. on_order_id -> quantity, person_id, order_price, order_date, order_time, delivery_address, is_delivered, is_cancelled, estimated_time, dp_id, delivery_date, delivery_time
 - FOREIGN KEY(person_id) references persons FOREIGN KEY(dp_id) references delivery persons
- 11. coupon_id -> coupon_txt, coupon_type, availability, start_date, end_date
- 12. c_id -> on_order_id, c_reason, date, time FOREIGN KEY(on_order_id) references online_orders
- 13. item_id , ing_id -> quantity FOREIGN KEY(item_id) references items FOREIGN KEY(ing_id) references ingredients
- 14. purchase_id, ing_id -> quantity
 FOREIGN KEY(purchase_id) references purchases
 FOREIGN KEY(ing_id) references ingredients

- 15. on_order_id, item_id -> quantity
 - FOREIGN KEY(on_order_id) references online_orders
 - FOREIGN KEY(item_id) references items
- 16. off order id, item id -> quantity
 - FOREIGN KEY(item id) references items
 - FOREIGN KEY(off_order_id) references offline_orders
- 17. coupon id, person id -> use date, use time, is used
 - FOREIGN KEY(coupon_id) references coupons
 - FOREIGN KEY(person_id) references persons
- 18. booking_id -> table_id, person_id, booking_date, booking_from, booking_to FOREIGN KEY(table_id) references tables
 - FOREIGN KEY(person_id) references persons

Integrity Constraints

Items

- 1. item_id, int Primary Key
- 2. Item_name NOT NULL
- 3. availability >=0
- 4. price in [1, 500]
- 5. item_type = { food, beverage }

Ingredients

- 1. ing id, int Primary Key
- 2. ing_name NOT NULL
- 3. availability >= 0
- 4. price in [1,100]

Persons

- 1. person_id, int Primary Key
- 2. Person name NOT NULL
- person_type = { SuperUser, Base Customer, Premium Customer, General Manager, Kitchen Manager , Billing Manager , Delivery Manager , Food Server , Chef, Delivery Person }
- 4. type from <= type to where type from, type to = subscription from and to dates
- 5. phone_no should contains 10 digits
- 6. Email should be of email format
- 7. Password is stored in hash format
- 8. Salary in [10000, 50000] and NULL for base_customer and premium_customer

Purchases

- 1. purchase id, int Primary key
- 2. Purchase_name NOT NULL
- 3. quantity >= 1

Tables

- 1. table id, int Primary Key
- 2. table_type = { normal, family, booth, outdoor}
- 3. capacity lies in [1,10]
- 4. price lies in range [1,500]

Item_Feedback

- 1. item_f_id, int Primary Key
- 2. Item_id, person_id NOT NULL
- 3. feedback_txt = {bad , average , good , worthy }
- 4. rating lies in range [0, 5]

Dp_Feedback

- 1. dp f id, int Primary Key
- 2. Dp_id, person_id NOT NULL
- 3. feedback_txt = { fast_delivery, slow_delivery, neutral }
- 4. rating lies in range [1,5]

Offline Orders

- Primary Key {off_order_id, item_id}
- 2. quantity >= 1
- 3. Order_date, order_time, order_price NOT NULL

Online Orders

- 1. Primary Key {on_order_id, item_id}
- 2. quantity >= 1
- (order_date < delivery_date)

```
( (order_date == delivery_date) AND (order_time <= delivery_time) )}
```

4. Order price, order date, order time NOT NULL

Coupons

- 1. coupon_id, int Primary Key
- 2. start_date <= end_date
- 3. availability >= 0
- 4. Start date, end date, coupon type NOT NULL

Delivery Persons

- 1. dp_id , int Primary Key
- 2. dp_rating lies in [0,5]
- 3. phone_no contains 10 digits
- 4. Phone_no, salary, primary_no dp_name NOT NULL

Cancellations

- 1. <u>c_id_, int</u> Primary Key
- 2. On_order_id, c_reason, date, time NOT NULL

Item_ing

- 1. {item id, ing id} Primary Key
- 2. Quantity NOT NULL

pur_ing

- 1. {purchase_id, ing_id} Primary Key
- 2. Quantity NOT NULL

Online items

- 1. {on order id, item id} Primary Key
- 2. Quantity NOT NULL

Offline_items

- 1. {off order id, item id} Primary Key
- 2. Quantity NOT NULL

coupons_users

- 1. {coupon_id, person_id} Primary Key
- 2. is_used NOT NULL

book tables

- 1. <u>booking id, int</u> Primary Key
- 2. Table_id, person_id, booking_date, booking_from, booking_to NOT NULL

<u>Views</u>

out_of_stock_ing

Get all ingredients which are currently out of stock, we need to keep track of Ingredients. Based on these results, managers will purchase the required ingredients. It reduces manager effort to search the ingredients which are out of stock, also reduces while using USE-CASES.

QUERY:

Create view out_of_stock_ing as (select ing_id , price from ingredients where availability <=0)

• Free_dps

Get all delivery persons who are free

While assigning delivery_persons to online_orders we use delivery persons which are free.

It reduces the work load of managers

This view will be used for further statistical analysis like who are most free_delivery guys during that weekend / month.

QUERY:

Create view free_dps as (Select dp_id as ready_person_id from delivery_persons where dp_id NOT IN (select dp_id from online_orders where is_delivered = 'False'))

free tables

Get all tables which are free

While booking a table we need to check everytime which tables are free by Managers

We will be using it in further analysis.

Note: We have not used these views currently but we MAY use it if needed at the time of writing code. These are just attached as extra material

Transactions

Description and Queries

1. ----LOGIN-----

DESCRIPTION:

Get the email and password from the inputs

Check email and passwords in persons table

On successful login display dashboard

For invalid login be on login page

QUERY:

Select count(*) from persons where email = input_email and password = input_password

2. -----ADDING INGREDIENTS------

DESCRIPTION:

Get the ing_name ,price, availability from the inputs

We directly add into ingredients with these fields and constraints on the fields will be checked using integrity constraints.

Check the type of person adding the ingredients.

Ing id will be auto -incremented.

QUERY:

3. —-----ADDING ITEMS—-----

DESCRIPTION:

Get the item name, item type, price, availability from the inputs

We directly add into items with these fields and constraints on the fields will be checked by using integrity constraints.

Check the type of person adding the items.

Item id will be auto-incremented.

QUERY:

```
4. —-----ADDING ADMINS(staff)—-----
      DESCRIPTION:
           Get the details like person name, person email, person phone no,etc.,. from the
             Inputs.
           Check the type of person adding the staff only General Manager, SuperUser can
             add the staff into the database.
           Person id will be auto-incremented.
       QUERY:
         (Select role type from persons where person email = logged user email and
                   person password = logged user password );
         If (role type = General Manager OR SuperUser) {
                Insert into persons values
(person_name,...,person_type,...,person_email,...person_password,....);
   5. —----ONLINE ORDERS—-----
      DESCRIPTION:
         Get item id value's, required quantity's, delivery address from the inputs.
         Get logged_user_id from persons table.
         Check the role of person it should be base customer or premium customer.
         Check all item id's availability wrt to the customer required quantity.
         Check the delivery_person who is free to deliver.
         On order id is auto-incremented
      QUERY:
         (Select role_type,logged_user_id from persons where person_email =
logged user email and person password = logged user password);
         If (role type = Base Customer OR Premium Customer) {
             (Select quantity as stock left from items where item id = item id value)
             Check whether (required quantity <= stock left)
             On success, repeat the same procedure for the next item with required_quantity.
             (Select dp id as ready person id from delivery persons where dp id NOT IN
                   (select dp id from online orders where is delivered = 'False') limit 1;)
             Finally, if there are at least one delivey person free then{
            Insert into online order items(item id , required quantity );
             Insert into online orders
values(item id val1,quantity1,logged user id,..,ready person id,..,);
               }
         }
```

6. —-----ADDING COUPONS—-----**DESCRIPTION:** Get coupon txt, coupon type, availability, start date, end date from the inputs We directly add into coupons with these fields and constraints on the fields will be checked using integrity constraints. Check the type of person adding the coupons. coupon id will be auto -incremented. QUERY: (Select role type from persons where person email = logged user email and person password = logged user password); If (role type = General Manager OR Billing Manager) { Insert into coupons values (coupon txt,coupon type,...,start date,end date); } 7. —-----ADDING DELIVERY PERSONS—-----**DESCRIPTION:** Get dp_name, phone_no, primary, secondary,..so on..,. from the inputs We directly add into delivery persons with these fields and constraints on the fields will be checked using integrity constraints. Check the type of person adding the delivery persons. dp id will be auto -incremented. QUERY: (Select role type from persons where person email = logged user email and person password = logged user password); If (role type = General Manager OR Billing Manager) { Insert into delivery persons values (dp name,...,primary, secondary, phone no); } 8. —-----VIEW STAFF—-----**DESCRIPTION:** Check the role of logged user, only managers can view staff QUERY: (Select role_type from persons where person_email = logged_user_email and person password = logged user password); If (role type = General Manager OR SuperUser) { (Select * from persons where person type NOT IN (SuperUser, Base Customer , Premium Customer);) 9. —-----VIEW AVAILABLE ITEMS—------------**DESCRIPTION:** Check the role of logged user, only customers can view available items QUERY:

(Select role type from persons where person email = logged user email and

person_password = logged_user_password);

```
If (role type = Base customer OR Premium Customer) {
            ( Select * from items where availability > 0;)
      }
10. -----DELETING COUPONS AFTER EXPIRY------
   DESCRIPTION:
        Get the current date from input/frontend
        Checking the validity of coupon using end date attribute from coupons
        Deleting the expired coupons by General Manager or SuperUser
   QUERY:
     (Select role type from persons where person email = logged user email and
              person password = logged user password);
      If (role type = General Manager OR SuperUser){
       DELETE FROM coupons where end date > current date;
      }
11. —-----UPDATING FREE DELIVERY PERSONS AFTER DELIVERY------
   DESCRIPTION:
        Get the online delivered id from input/frontend.
        Checking the status of delivery person using is delivered variable from
          Online_orders
        Check the role of person who is updating the database
   QUERY:
        (Select role_type from persons where person_email = logged_user_email and
              person password = logged user password);
        If (role type = General Manager OR SuperUser){
          UPDATE online order SET is delivered = 'True' WHERE on order id =
               online delivered id ;
       }
12. —----VIEW USER PENDING ONLINE ORDERS—-----
    DESCRIPTION:
       Check the role of the person, only customers can view this.
       Check the variable is delivered in online orders for pending online orders
    QUERY:
       (Select role type from persons where person email = logged user email and
              person password = logged user password );
        If (role type = Base customer OR Premium Customer ) {
            Select * from online orders where is delivered = 'False'
       }
```

13. —----VIEW HISTORY OF ONLINE ORDERS—-----

DESCRIPTION:

Get the person_id from persons table using email and password

Check the role of person - only Base Customer or Premium Customer can view
the history of their orders

QUERY:

p_id = Select person_id from persons where
(person_email = logged_user_email and person_password = logged_user_password
and ((person_type = Base Customer) or (person_type = Premium Customer))) limit 1;

Select * from online orders where person id =p id;

14. —----VIEW PROFILE—-----

DESCRIPTION:

Complete profile can be viewed in thai use -case

QUERY:

(Select * from persons where person_email = logged_user_email and person password = logged user password);

15. —-----UPDATE PROFILE—-----

DESCRIPTION:

Get the mail, password from frontend

Check the role of person - Every user can update the profile except delivery person Person can update the mail, password, name, address, phone number

QUERY

p_id = Select person_id from persons where
(person_email = logged_user_email and person_password = logged_user_password
 and person_type != delivery person);

UPDATE persons SET email=updated_mail, password=updated_password, person_name = updated_name, address=updated_address,phone_no=updated_phone where person_id=p_id; [person can update any of these columns]

16. —----SORT THE ITEMS BASED ON RATING, PRICE —-----DESCRIPTION:

Sorting items for user based on price or rating and order food accordingly.

Check the role of logged user, only customers can view the sorted list for ordering items based on rating, prices.

QUERY:

17. —----SORT DELIVERY PERSONS BASED ON RATINGS—-----DESCRIPTION:

Checking the best delivery_persons based on ratings for managers and giving rewards. Check the role of logged user , only managers , superUSER can view the sorted list of delivery_persons.

QUERY:

}

18. —-----UPDATE AVAILABILITY OF ITEMS —----DESCRIPTION:

Get input online id from input/frontend on placing the order.

Update the items quantity after ordering.

Check the role of person, only managers, superUser can update the data.

QUERY:

19. —-----UPDATE AVAILABILITY OF INGREDIENTS—----DESCRIPTION:

Get input_online_id from input/frontend on placing the order.

Update the ingredients quantity after ordering.

Check the role of person , only managers , superUser can update the data.

```
QUERY:
```

20. —-----UPDATE ON CANCELING ORDERS—------

DESCRIPTION:

Get online_id from input/frontend on canceling the order.

Update the item quantity after canceling.

Check the role of the person , only managers , superUser can update the data. c id is auto incremented

QUERY:

21. —--VIEW ALL ITEMS IN A PARTICULAR ONLINE ORDER FOR CUSTOMER—---DESCRIPTION:

Get online id from input/frontend of order

Check the role of a person - only customer can see this

QUERY:

}

22. —-----OFFLINE BOOKING—-----**DESCRIPTION:** Check the availability of tables. Get the item name's,req quantity,current date & curent time from inputs Offline customers can book the table for 2hrs. Check the availability of items in the order. Insert into book table with person id = 0booking date = current date Booking from = current time Booking to = current time + 2hrs booking id is auto-incremented off order id is auto-incremented QUERY: free table id = (select (select table id as a from tables) - (select table id as b from book_table where (booking_date=order_date and ((order_time > booking_from) or (order_time + 2hrs < booking to)) or booking date != order date) limit 1;) If (free table id > 0) { (Select quantity as stock_left_from items where item_id = item_id_value) Check whether (required quantity <= stock left) On success, repeat the same procedure for the next item with required quantity. Insert into offline orders values (reg quantity, ..., current date, current time); Insert into book_table values(free_table_id, 0, booking_date,booking_from,booking_to); } 23. -----POSTING ITEM FEEDBACK—-----**DESCRIPTION:** Check whether the person is signed up if(success){ Check the role of a person - only Base Customer or Premium Customer can give feedback Get item id for the particular item Check whether person has purchased the item if(success){ Insert rating and suggestions in item feedback table }} Item f id is auto incremented

```
QUERY:
```

```
role type = Select role type from persons where person email = logged user email and
                  person password = logged user password;
If (role type = Base Customer or Premium Customer) {
           item id = select item id from items where item name=input item name
                    = select person id from persons where person email =logged user email
                    and person password = logged user password;
            online o id = select on order id from online orders where person id = p id;
                  = select item id from online order items where on order id = online o id;
         i id
      if(item id == i id){}
                 INSERT INTO item feedback
                          VALUES (item id, person id, feedback txt, suggestions, rating);
}}
   24. —-----TABLE RESERVATION—-----
 DESCRIPTION:
 check whether the person is signed up
      if(success){
      check the role of person - only Base Customer or Premium Customer can book
       check if tables are available
        Insert entries into book table
QUERY:
role_type = Select role_type from persons where person_email = logged_user_email and
                  person password = logged user password;
If (role type = Base Customer or Premium Customer) {
         table_id = select (select table_id as a from tables) - (select table_id as b from
                           book table) limit 1;
         if(table id > 0){
             INSERT INTO book table VALUES
                   (booking_id,table_id,person_id,booking_date,booking_from,booking_to);
       }}
   25. —-----UPDATING TABLES BOOKED THROUGH OFFLINE CUSTOMERS—-----
    DESCRIPTION:
```

Check the tables which are booked for offline customers using person_id = 0.

Delete the entry

Check the role of person deleting the entry , it should be General managers and SuperUser.

QUERY:

```
If (role type = General Manager OR SuperUser) {
    DELETE from book_table where table_id IN (Select table_id from book_table where person_id = 0);
}
```

DDL and SQL Files

DDL.sql and InsertData.sql files can be found in this link

Indexes

Most of our relations rely on id as primary key and queries almost use id's as predicates. So, additional indices are not needed other than id

Forms and Technologies

Technologies

Frontend - AngularJS Backend - NodeJS Database - PostgreSQL

Note:

Forms and Business Logic Controller are attached in subsequent pages

1) sign up for the Website	
Input	
person name *	-
email *	
Password*	output;-
confirm password 1	sign in page
person type [soloct type]*	
type from	
type = to	
Address *	
Phone_no	. 74
salary *	
2.) Log in page	<u>*</u>
Input:	
Email 1	Output:
Password *	Homepage
	0
Login Forgot password?	
The state of the s	
3) Adding Ingredients	est.
Input	output:
Ing-namo 1x	Adds ingredient to database,
Price *	rediroch to same page
Availability [*	rage
[Add Ingredient]	

4) Adding Items	
Input-	-
item_name* item_type* availability* price* Add Item	Output: Add item to database, redirects to same page
5) Adding Admins	
Input:	
person-name 1 *	
Persontype [select type]*	eutput:
type-from [*	Add person to database,
type-to x	redirects to same page
address *	
phone-no	
Add Admin	
6) Online orders	
Input:	
item_nome 1 x	output:
quantity	order will be placed & delivery person
delivory.oddross *	details will be displayed.
place order	

7) Adding Coupons

Input

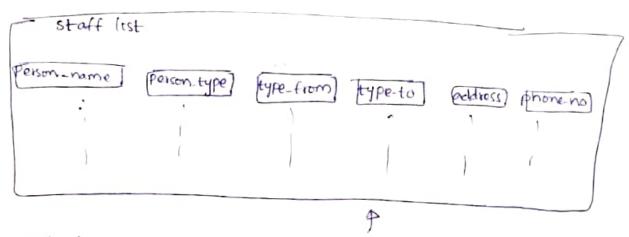
coupon-txt	x
Coupon type	soloct type *
availability	*
start date	*
end-date	*
Add coupon	

Output:

is displayed.

8) VPew staff

To Dutt

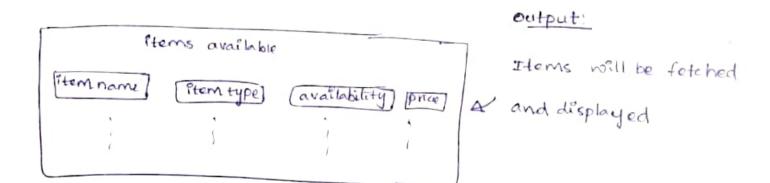


output: persons in staff are fetched and displayed.

4) Adding delivery persons Input! output: Add's the delivery persons to the delivery person table, redirects to homepage. solect Add delivery person

10.) view available items

Input: None



11) View user pending online ord	orc .
Input: Non	
pending online orders list	output
order x	pending online orders of the
Order Y)	user will be fetched and displayed.
2) view history of online orders	
Input:	
en-order. ed [wantity]	delivory_date) delivory_time)
output History of online orders o	of the user will be displayed
13.) view profile	July
User profile outputs Profile o	of the porson will be displayed.
14.) Update profile	be displayed.
email output! email output! person name prione_no address probate	le will got updated redirects to same page

15) updating free delivery persons after delivery online-delivored id from front and output is-delivered From delevery persons list update ap will get updated 16) Deleting Coupons after expiry. output Expired Coupons will get deloted Selete corpon 17) sort the stems based on rating; price thems list after sorting based on price grating output Ptem name rearrange the Pterms based frating availabity DYTCE on rating & price 18) view all items in a particular online order Item in the online order. output' stem 1 fetches & displays the all items Item 2) in the corresponding online order

online-order by users 91ens_softed How to book Welsome! none an 1) ren proprie DASHBOARD Hem 1 Bating1 sof thems CUSTOM ER'S onthe oxeg place based on Then 2 sother ensil Jakes Men 3 sahings phone no descentro vality pole BASHBOARD address on the swift quantity Hem [Propie] greng_soppel page Success By place and posed soft oftens Submit price descending Plem 1 price 1 Louin Ordes History of 9 tem 2 prices 08628 grew page 9tem 3 poke3 viewana - liang Her name order-9d Penans \ passusso au Hens Them proce olders on that Submit ofter-9d ou ailabolity Aser on while en successby submission order- 9d1 or concer ?] DO USE CATE DO USE CASE update availability 8NO-902, concer? updak availability of Progredients 9tens update 001 DO USE CASE conceling orders

Managers Dashboard (OR) Super User Dashboard offline-booking-page DASHBUARD CAPUTAL DO Quantity 1 Flem 1 successful grantitys Lookeng Mew Staff (ogin radding an offune lemail. possword order Submit Successful DO USE CASES: opplere booxing

3) How does manager's add rems, coupons, --MANYAMER'S DASHBOARD [POOPILE Page] pose up poop le lemail -OTHER STATES phone no 18pls rupdate address _ email DASHBOARD SUBMIT phone-no 1800File · Successibly VPew Staff pose logn page Staff VREW (Add 9 tem) Mane1, ---Stall prembers Page em all. lranez. Add granelens possued ranes, ... Hem! Ad company SUBMIT, name4, ... veel 9tem 2 DP- personal available prens 9 Hem 3 Softing the 1 1 1 Ald gleng page, wallable. 1 (, bosed on rating dear delivery perpay greng none dp_navel, -availabity dp_nane 2, . -PACE delivery pasond addena (Submit) prane 3,... dethery gosson componed Adding Engredients page page Page teent grane availability 1 stost-date nane price end-date-Solaly mating ! SUBMIT BUBMIT

Gaving feedbacks by USER'S to giens / dp-persons
USER'S DASH BOARD DU USE CASE table page Table rejeluation, Succession, table-921, from, to seseruly 1 DASHBOARD table 9d2, from, to succe**nt** SOBM IT Proporte Fabre Table · loginpage reserve Page feed bock page Brisne 09628 onal. view H95408-4 feed boer 8 history orders Hem parsuerd nane ISUBMIT Red Peed & back peed 98 BUBMIT. dp-feedback page DO USE CASE do nane Reedback ADD rathy I TEM feedback, SUBMIT, DO USE ldp peedback / € ADD CASE

Super User logging of DASHBUARD SUPER USER PASHBUARD deleting coupons after energy DO USE L this above out profile) Successen add an every remove 108/ employ DO USE coupons Togen page CASE updating updating tebils booked through ensil tables booked pashudd loftine customers through offline customess SUBMIT

* Super User ?s ULTIMATE ONE, It has more powers than Manager's