Overview

"POS" is a Point of Sale transaction that takes place between a merchant and customer when a product or service is purchased, commonly using a point of sale system to complete the transaction. POS terminal is the electronic equipment performing the sales transaction and processing the credit card payments. The POS for a restaurant is to accept cash and credit card payments.

Development

Backend

There are two Microservices

1)Authentication,

2)POS

Authentication: Nodejs, Typescript, Mongodb.

Authentication Microservice used to save the users and JWT authentication.

POS: Nodejs, Typescript, Postgresql

POS Microservice is used to save all the main datas related to pos

Frontend

There are Three UI in POS.

1)Pos-ui, 2)Backoffice-ui, 3)Callcenter-ui

Pos-ui: Angular

Pos-ui is used to place the order and track the order

Backoffice-ui: Angular

Backoffice-ui is used setup all requirement that POS need

Callcenter-ui: Angular

Callcenter-ui is used to when customer directly place his orders through centralized callcenter

Domain and Roles

Mainly three domains 1)Pos, 2)Backoffice, and 3)Callcenter

POS: There are 5 roles in pos domain

1)Waiter: Brand, Branch specific

2)Cashier: Brand, Branch specific

3)Manager: Brand, Branch specific
4)Driver: Brand, Branch specific
5)Warehouse: Brand specific

Callcenter: there are 2 roles in callcenter domain
1) Agent and 2)Supervisor

Backoffice: there is only one role in backOffice domain
1) Backoffice / admin

Backoffice-Setup

Brand: Brand is like Big organization that contain multiple branches and You can create Brand in Backoffice-ui

Example: Banglore is brand and it contain multiple Branches in all location

Branch: Branch is part of brand in particular location, there are 6 segments in brand 1)Take-out, 2)Car-service, 3)Dine-in, 4)Categring, 5)Delivery, 6)Staff-Meal and You can create Branch in Backoffice-ui

Example: Jayanagar and Indiranagar is two branches for Banglore Brand

Users: You can create any users with respective domain in backoffice-ui

POS-Menu

Item: Item is Brand specific You can create any item in this section

Example: {Brand: bangalore, item_name: apple}

Menu-Item-Group: You can Create one group and You can add multiple item to any group and it is Brand specific

Example: {Brand: bangalore, group_name: fruits , items:'mango, apple, orange' }

Menu-Category: You can Create category name here and you can mention category while creating menu and it is brand specific

Example: {brand: bangalore, category:Non-veg}

Menu-master: Here you can create menus which will be displayed in pos and its brand specific, you can add individual items, you can add menu-item-group, you can

specify in what category this menu will come and you can specify kitchen printer ip here.

Example: {Brand: bangalore, menu_name: chicken, category:Non-veg, menudata:[]}

Refund-order: here you can refund the order or you can cancel the order.

POS-Setup

Printers: It's a brand, branch specific You can mention printer name and printer ip here and it's mainly for kitchen printer, you can add this printer whenever you're creating menus.

Example: {Brand: bangalore,Branch:jayanagar,printer_ip:1.1.1.1, printer_name:'xyz'}

Discount & Offers: Here You can give Discount for orders. It's Brand specific You can mention discount name, percentage or price and discount type will be Coupon or Discount

Example: {Brand: bangalore,discount_name:'summer offer', price:50, type: discount}

Table-setup: Here You can create Number of tables which helps in dine-in. Whenever orders are taken he can mention table names.

Example:{Brand:Bangalore,Branch:Jayanagar,table_no:1,table_data:[{table_name:A1 }]}

Area-Setup: Here You can Create Area and Blocks, and it's for global there is no brand, branch specification.

Example: Area- {area_name:xyz}

Block- {area_name:xyz, block:b1}, {area_name:xyz, block:b2}

Deliver-Setup: Here You can Create Delivery it means you can assign an area to a brand,branch and you can mention that area is local or non local.

Example: {Brand:Bangalore,Branch:Jayanagar,are_name:xyz, local:true}

Delivery-Charges: You can mention price for local area and non local area

Example: {Brand:Bangalore,Branch:Jayanagar,local:10,non-local:20}

Delivery-Time: You can add Average delivery time of each branches like within this time branch will deliver your order

Example: {Brand:Bangalore,Branch:Jayanagar,delivery_time: 20min}

Online-Source: It helps You whenever you're going to take delivery(online) orders.

You can create Source and each source contains multiple payment-type. It's not Brad,Branch specific

Example: Online-Source- {source_name:'Talabat'}

Online-Payment-type- {source_name: 'Talabat', payment_type:'Talabat1',type:card}

{source_name: 'Talabat', payment_type:'Talabat2',type:cash}

Complaints: Here you can configure complaint and sub complaint, complaint can raise against the order by customer

Example: Complaint: {complaint_name:'food'}

SubComplaint: {complaint_name:'food', subcompaint:'salty'}

{complaint_name:'food', subcompaint:'quality'}

Stocks

Items: This is the master item, here You can create any item with respect to Brand, You can assign what category of item it is, and You can mention whether this item is a semi finished item or raw item. Once you create an item here stock will get created for this item with initial quantity as zero in each branch of brand and each warehouse of brand.

Example: {item:apple, Brand:bangalore,type:raw:category:fruits}

In stock simultaneously

{Brand:bangalore, Branch:jayanagar, item:apple, quantity:0}

{Brand:bangalore, Warehouse:jayanagar-warehouse, item:apple, quantity:0}

Category: Here you can create an item category, this category you can mention while creating items.

Example: {Brand**:**Bangalore, category: fruits}

Suppliers: Here You can create supplier related details which will reflects in GRV creation in pos

Example: {Brand**:**Bangalore, suppliers: amazon}

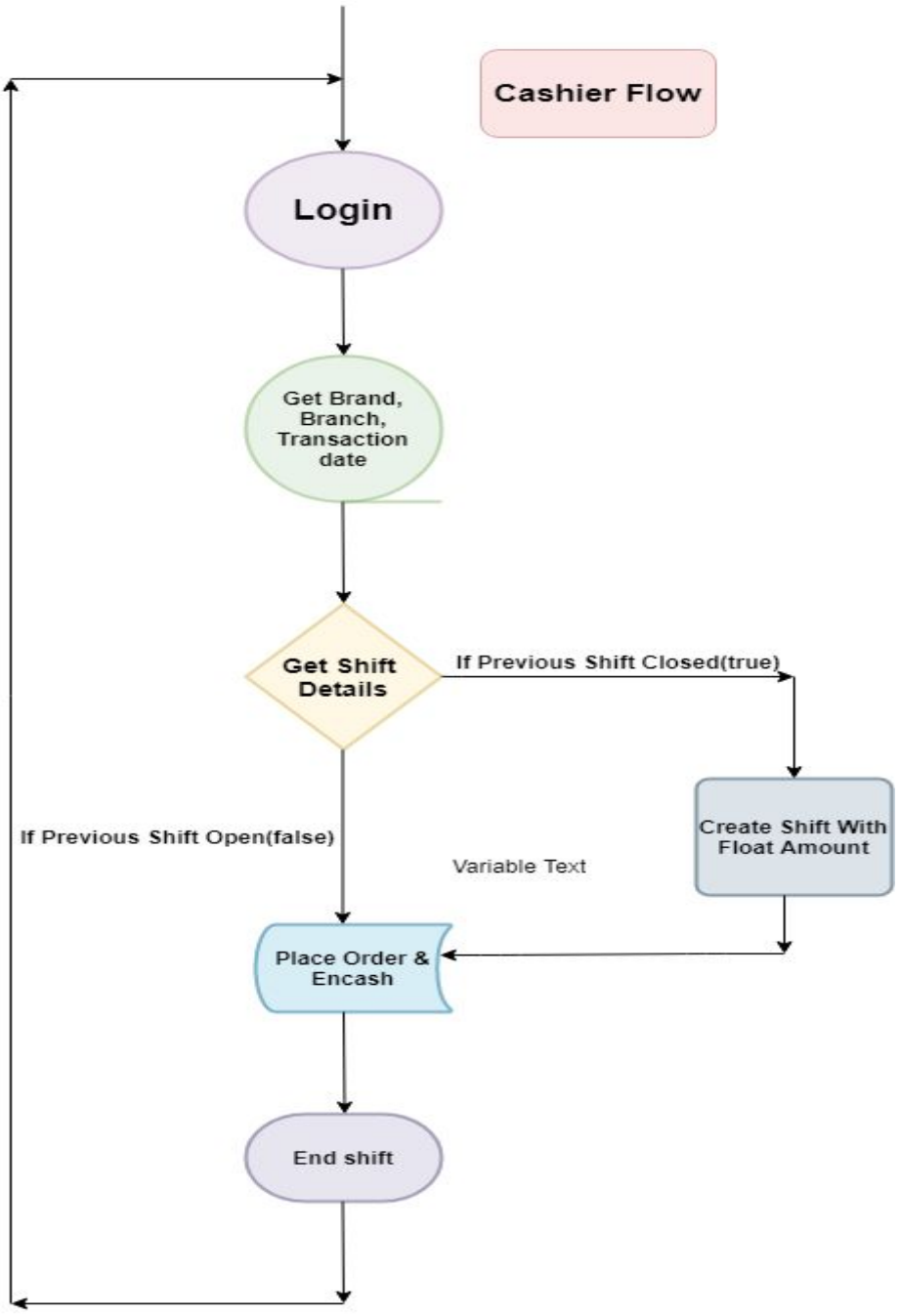
POS-UI

Here order can be placed and all the backoffice settings will reflect here.

There will be four Users can login here cashier, waiter, manager, warehouse

Cashier: Whenever Cashier login he needs to create his shift against the transaction date, when shift create successfully it means his shift started he is eligible to take order. After he takes order printer Api calls in Ui and order gets printed in Cashier print and Kitchen print Once his shift finishes he needs to end his shift. It's called endshift.

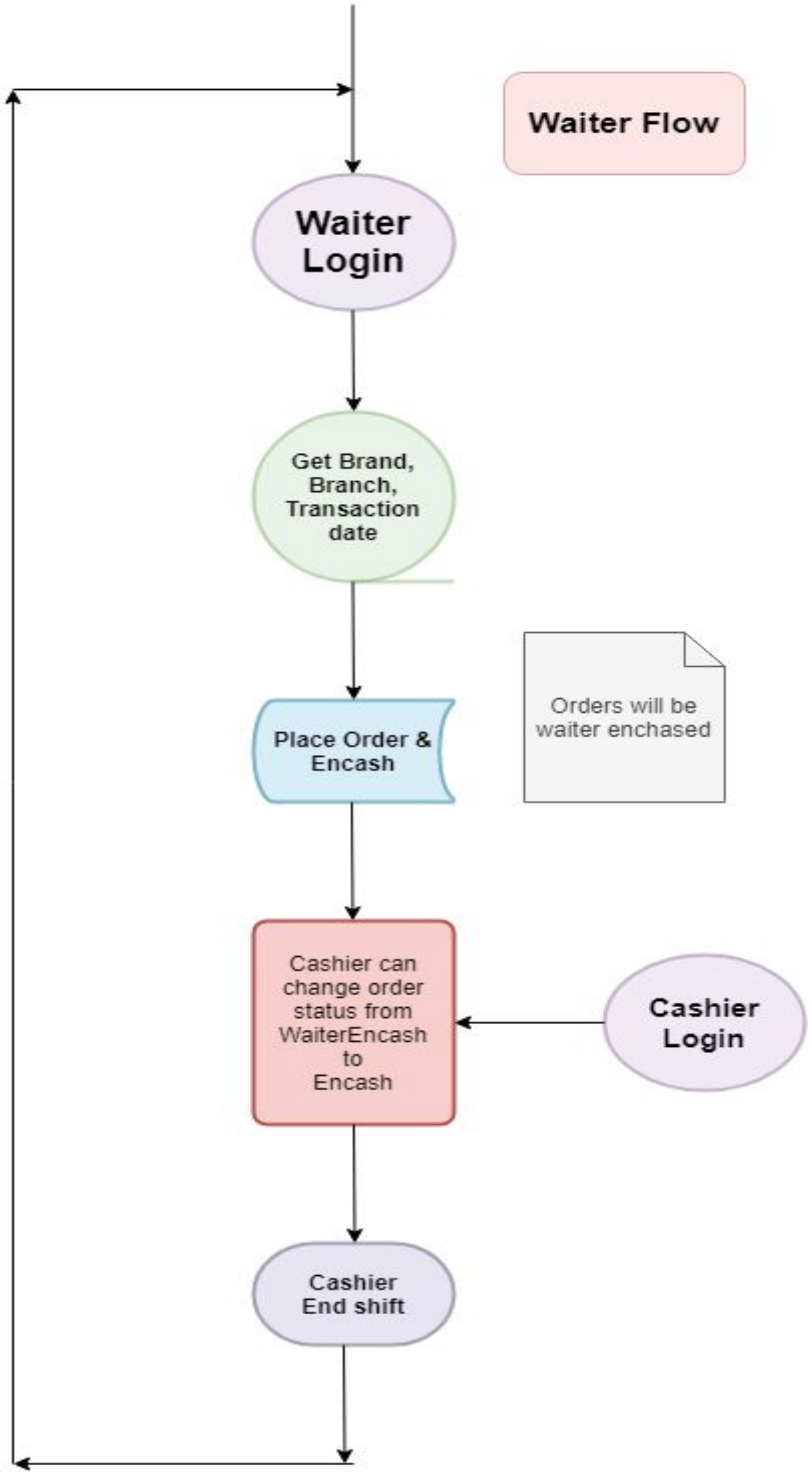
Cashier Flow is described in the below Flow diagram.



Waiter: Waiter flow is straightforward. Once he placed an order, Order status will be **WaiterEncash.** These orders will display for the Cashier and he needs to encash these orders then order status will turn to **Encash.**

After he takes order printer Api calls in Ui and order gets printed in Cashier print and Kitchen print

Waiter Flow is described in the below Flow diagram.



Manager: Manager needs to monitor orders and he needs to do end of the day once all the shifts are closed. Once the end of the day completes then the transaction date

will change to plus one day. And he can add cashier printer ip and name, he can view reports.

Ex: Before end of day transaction date : 20-12-2020

After end of day transaction date : 21-12-2020

Manager Flow is described in the below Flow diagram.