

# Lightweight Restaurant Management System

CS699 Software Lab Project

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**Team: BugBusters**

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## 1 Introduction

Lightweight Restaurant Management System is a software system which aims to digitise the order management process at restaurants whilst being very light, inexpensive and user friendly. It does so by enabling the restaurant staff to make use of an Android app to view orders, edit menu, manage tables and view statistics. IT allows placing orders using a webapp which can be accessed via a table specific QR code.

## 2 Motivation

During this time of peril where Covid-19 is causing havoc, we are moving towards the new normal of masks and social distancing. One such place where there is high amount of exposure to the virus is a restaurant. Everybody loves to eat outside once in a while but the risks attached with it are higher than normal. This system would reduce the contact between various people to bare minimal by leveraging the power of technology. Being lightweight and inexpensive, even small scale restaurants can make use of this system to their advantage.

## 3 Dependencies

- Python Django
- Python Flask

- Python Socketio
- Python PyQRcode
- Android Mobile Phone

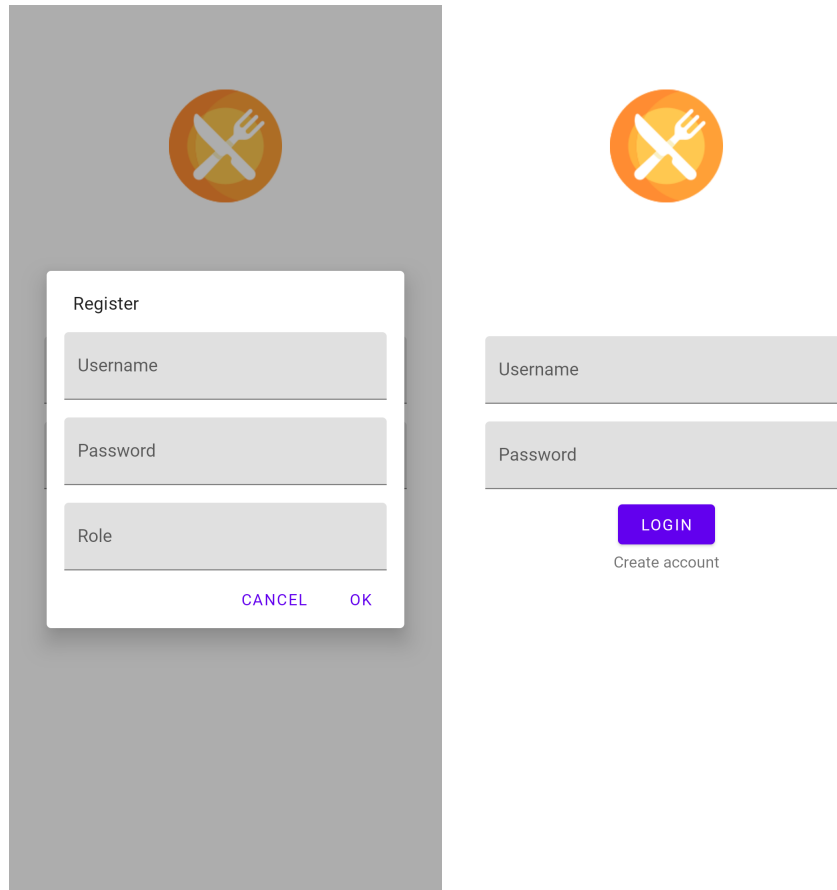
## 4 Usage

Get the system up and running by executing the following commands when in the project directory.

- `pip3 install -r Backend/API/requirements.txt`
- `python3 Backend/API/main.py`
- `python3 Backend/Webapp/PROJECT/manage.py runserver`
- Install the APK Frontend/Android/app-debug.apk in the Android phone

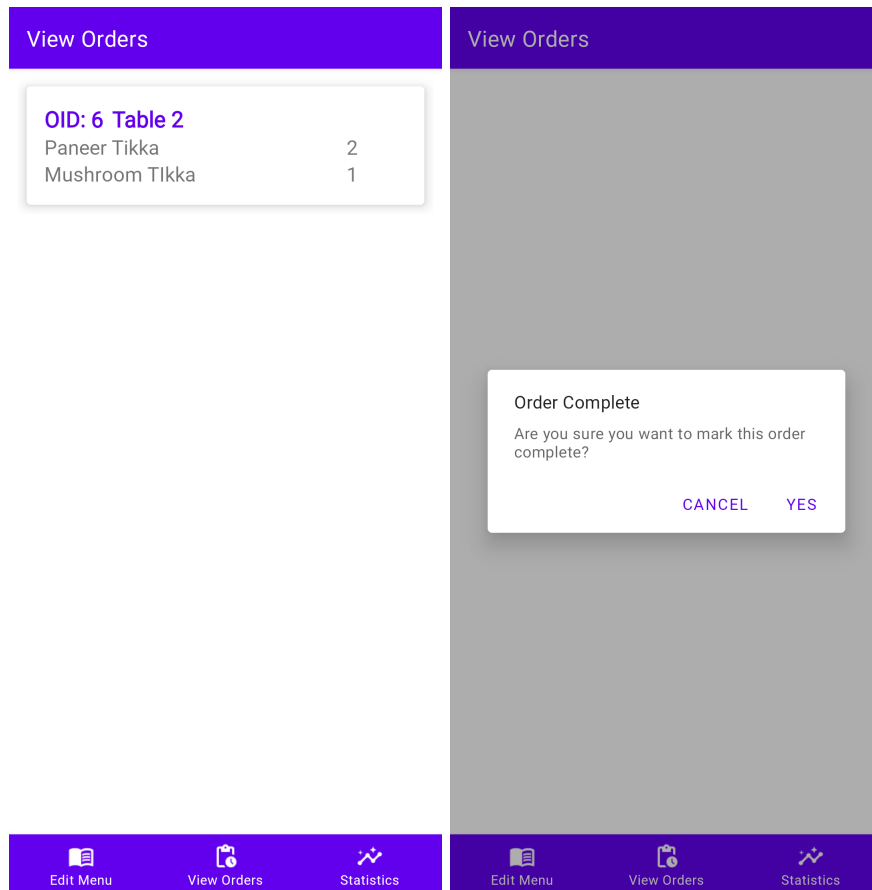
## 4.1 Android App

Users need to register themselves before accessing the app. After registering for the first time, users can login using the login page.

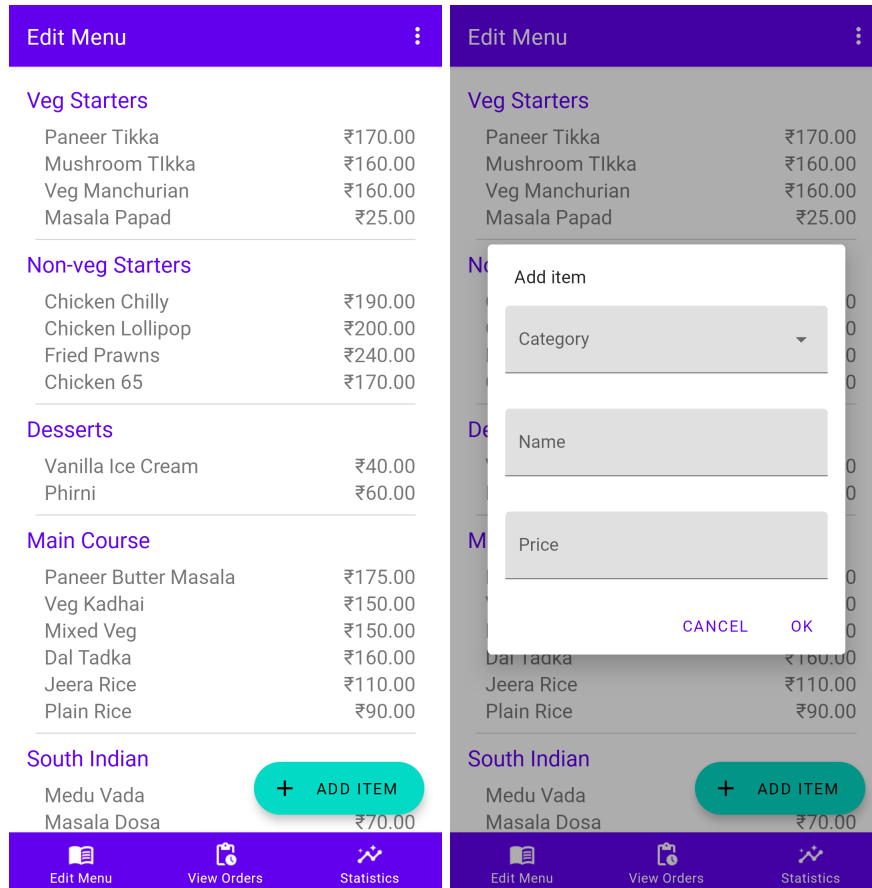


The image displays two mobile application screens side-by-side. Both screens feature a circular logo at the top center, which consists of a brown circle containing a white crossed knife and fork. The left screen is a registration form with a white background and a grey border. It has three input fields labeled 'Username', 'Password', and 'Role'. At the bottom right of the form are two buttons: 'CANCEL' in blue and 'OK' in red. The right screen is a login form with a white background and a grey border. It has two input fields labeled 'Username' and 'Password'. Below these fields is a red 'LOGIN' button. At the very bottom of the screen is a link that says 'Create account' in blue text.

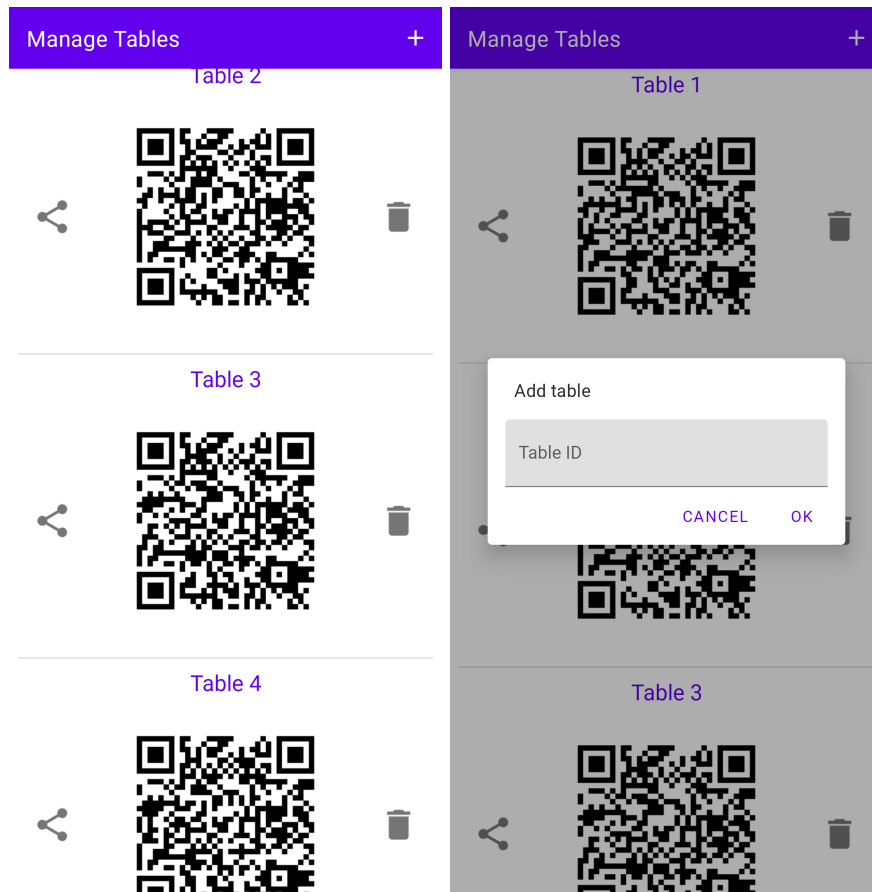
Pending orders can be seen on the View Orders page. Orders here can be marked completed by swiping on the card from right to left.



Current menu can be viewed on the Edit Menu page. New menu items can be added by tapping on the Add Item button. Users can add a new category or select from a pre-existing category.



Tables can be managed by clicking on the options icon in the Edit Menu page and selecting Manage Tables. Here, users can share the QR code for each table to print it or delete the table by clicking on the delete icon. New tables can be added by tapping the add icon in the top right corner of the Manage Tables page.



Statistics such as average order completion time, most sold item of the day, total item sale for a given item can be viewed on the Statistics page. Users can enter the item name for which the item sale so far is required and tap on the get button to get the quantity.

**Statistics**

Get Total Item Sale

Item name

Days

Quantity

GET

Today's sale

Amount

500

Today's Most Sold Item

Item name

Paneer Tikka

Today's Average Order Completion Time

Time(Minutes)

0.23

Edit Menu

View Orders

Statistics

## 4.2 Webapp

After scanning the table specific QR code, users will be redirected to a webpage which will allow placing orders. Users need to select the corresponding item's checkbox and enter the quantity then click on the Place Order button. An alert will be shown when the order is placed.

Menu			
Name	Price	Select	Quantity
Veg Starters			
Paneer Tikka	170	<input type="checkbox"/>	<input type="text" value="0"/>
Mushroom Tikka	160	<input type="checkbox"/>	<input type="text" value="0"/>
Veg Manchurian	160	<input type="checkbox"/>	<input type="text" value="0"/>
Masala Papad	25	<input type="checkbox"/>	<input type="text" value="0"/>
Non-veg Starters			
Chicken Chilly	190	<input type="checkbox"/>	<input type="text" value="0"/>
Chicken Lollipop	200	<input type="checkbox"/>	<input type="text" value="0"/>
Fried Prawns	240	<input type="checkbox"/>	<input type="text" value="0"/>
Chicken 65	170	<input type="checkbox"/>	<input type="text" value="0"/>
Main Course			
Paneer Butter Masala	175	<input type="checkbox"/>	<input type="text" value="0"/>
Veg Kadhali	150	<input type="checkbox"/>	<input type="text" value="0"/>
Mixed Veg	150	<input type="checkbox"/>	<input type="text" value="0"/>
Dal Tadka	160	<input type="checkbox"/>	<input type="text" value="0"/>
Jeera Rice	110	<input type="checkbox"/>	<input type="text" value="0"/>
Plain Rice	90	<input type="checkbox"/>	<input type="text" value="0"/>
Desserts			
Vanilla Ice Cream	40	<input type="checkbox"/>	<input type="text" value="0"/>
Phirni	60	<input type="checkbox"/>	<input type="text" value="0"/>
South Indian			
Medu Vada	100	<input type="checkbox"/>	<input type="text" value="0"/>
Masala Dosa	70	<input type="checkbox"/>	<input type="text" value="0"/>
Indian Bread			
Tandoor Roti	20	<input type="checkbox"/>	<input type="text" value="0"/>
Parantha	25	<input type="checkbox"/>	<input type="text" value="0"/>
Naan	30	<input type="checkbox"/>	<input type="text" value="0"/>

Place Order



## 5 Future Scope

- A digital token system can be implemented which will allow placing orders only after a token has been given to the customer.
- The base webpage can be used to showcase the brand page of the restaurant.
- Support for iOS.