ABSTRACT

The food industry is a complex, global collective of diverse businesses that supplies most of the food consumed by the world population. It is growing rapidly at an alarming rate and giving rise to new start-ups and small scale restaurants and food joints. Restaurants, cafes, bakeries and mobile food trucks provide opportunities for consumers to purchase food. As a result, food industry is getting more and more customers every year. This often leads to errors and confusion for the waiters who take orders. Thus, a Food App becomes a necessity. The management platform of the app in this project is designed for the administrators and the waiters. They will be able to manage food dishes, dish orders and get the order summary.

INTRODUCTION

This app is designed to resolve the issues faced by food industries and start-ups. The management platform of the app in this project is designed for the administrators and the waiters. They will be able to manage food dishes, dish orders and get the order summary.

This app is made in the Android Studio Framework. SQLite is used for DBMS in order to maintain the food and drinks menu tables.

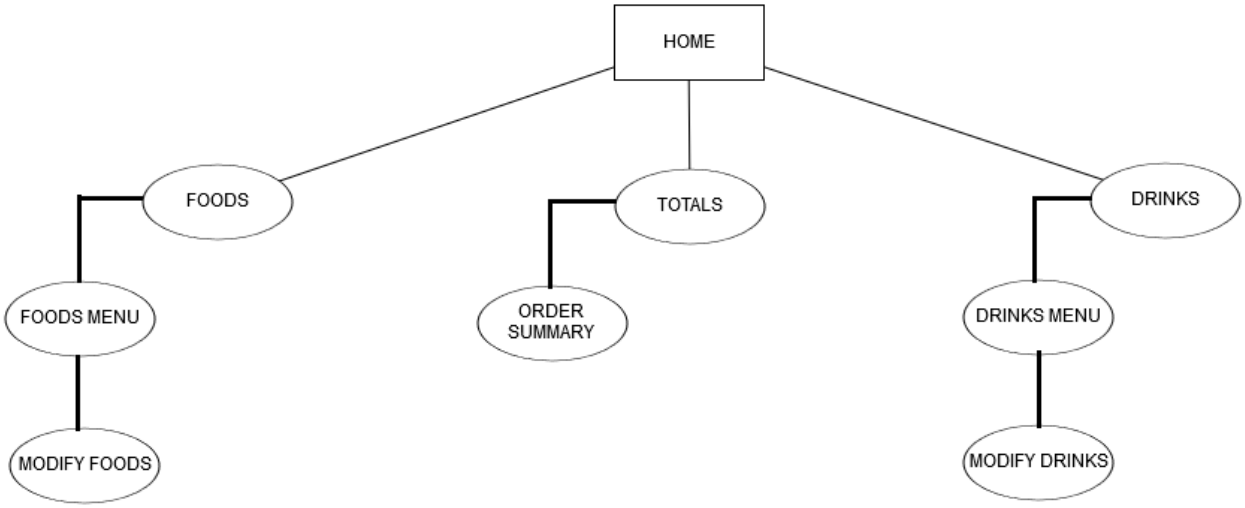
The Existing System

In existing system for giving any orders users should visit hotels or restaurants to know about food items and them give order and pay advance. In this method time and manual work is required. Maintaining critical information in the files and manuals is full of risk and a tedious process and errors can occur with customer's orders.

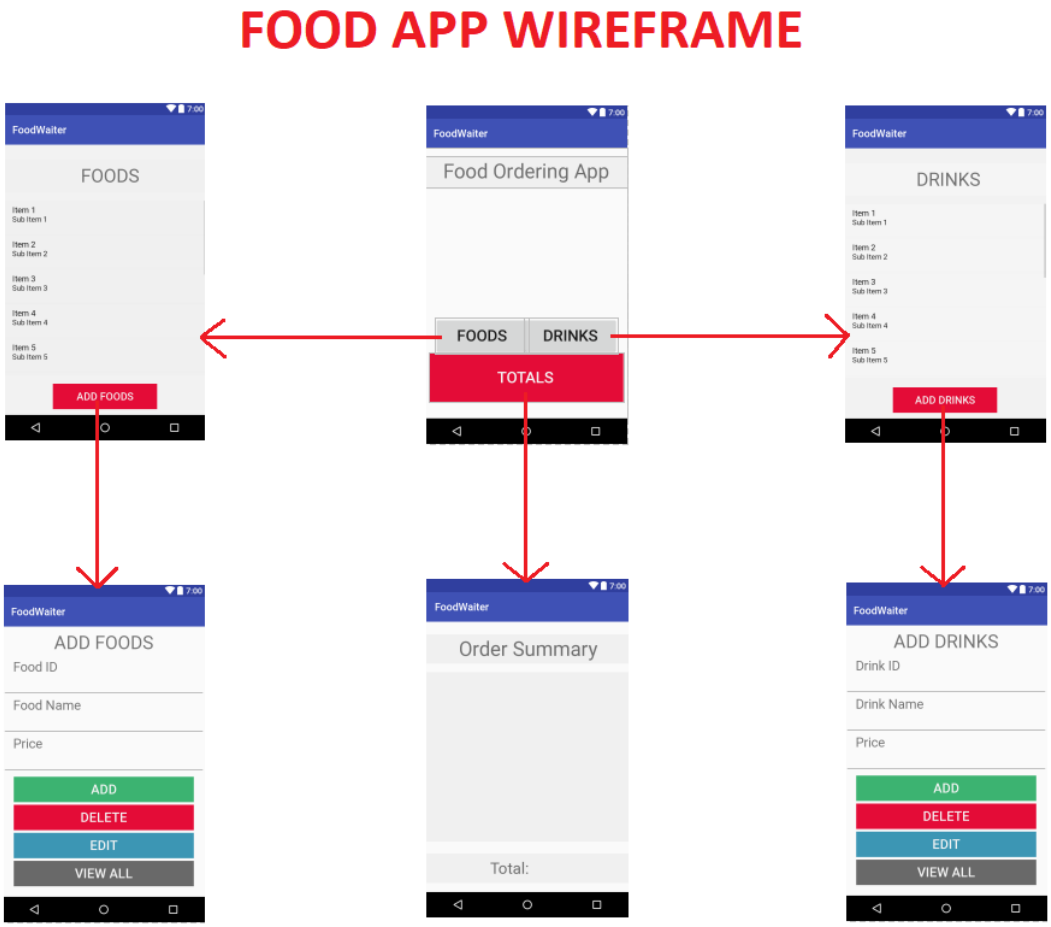
The Proposed System

This android application enables the waiters to select the food from the e-menu card and place foods/drinks order for their customers via the app. The results after selecting the food from the E-menu card will directly appear in the Order Summary for the customers to see. By using this application the work of the waiters is reduced and we can also say that the work is nullified. The benefit of this is that if there is rush in the restaurant/canteen then there will be chances that the waiters will be make mistakes in placing the right orders. The app is built with Android Studio 2.3.3 and SQLite Database is used for DBMS.

THE SITEMAP



THE WIREFRAME



LITERATURE REVIEW

1. Wireless Food Ordering System

By F&B industry, (Khairunnisa, K. and Ayob, J., 2009).

Wireless food ordering system is a solution that can help the restaurant to expedite their customer services as well as management aspect. After the system has been implemented in the restaurant, the flow food ordering process will be changed to computerize.

GAP:- It cannot manage a huge number of orders that may come from a large number of users. Database is Inefficient

2. Online Ordering System

By Kapchnaga, R, 2014

Online Ordering System is a technique that allow customer to order their favourite food online via the internet by using a web browser that installed in their respective computer or smart phone. Implementing this system can help fast food industry to solve the problem that they face while using the traditional food ordering processes.

GAP:- The customer can place an order everywhere and anywhere whenever internet connection is available for them, but the availaibility of particular food item is not updated efficiently

3. Electronic Menu Card for Restaurants

By Aziz Muslim Vohra, R, 2008

This order system overcome the drawback of traditional paper based order system, it change everything from paper based into computerized.

GAP:- The management of Big data in this type of Ordering System is difficult.

4. An automated food ordering system

By Christian Bernard, R, 2015

He implemented a food ordering system for different type of restaurants in which user will make order or make custom food by one click only. By means of android application for Tablet PCs

this system was implemented. The front end was developed using JAVA, Android and at the backend MySQL database was used.

GAP:- The Debug of error is very difficult to tackle in this type of Ordering System

5. Digital dining in restaurants using android technology.

By J Johnson, R, 2016

This system was a basic dynamic database utility system which fetches all information from a centralized database. Efficiency and accuracy of restaurants as well as human errors were improved by this user-friendly application. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a onetime investment for gadgets.

GAP:- Because of inefficiency of maintaining the records of hundred people at the same time, the idea had to be dropped

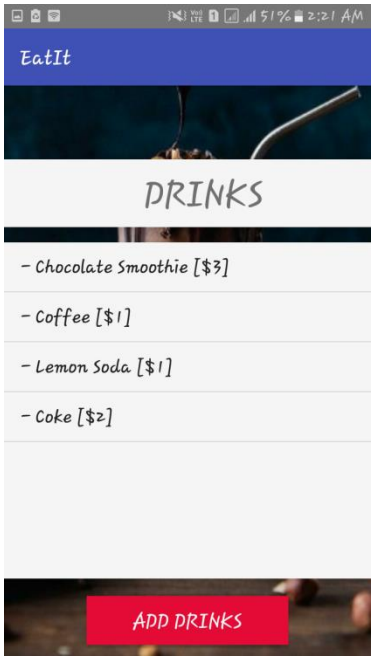
PROPOSED APPLICATION

WORKINGS

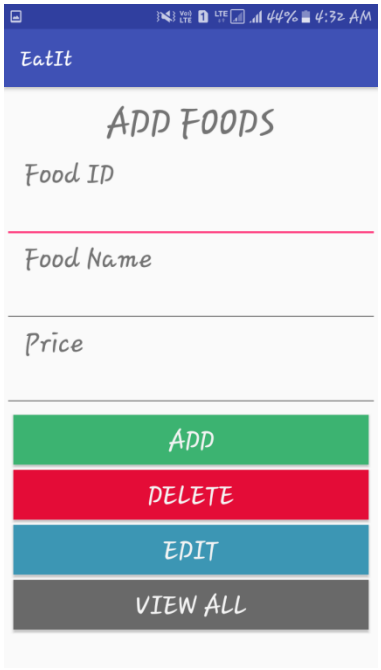
The Home Page (activity_main.xml)

On Clicking Foods Button: (foods.xml)

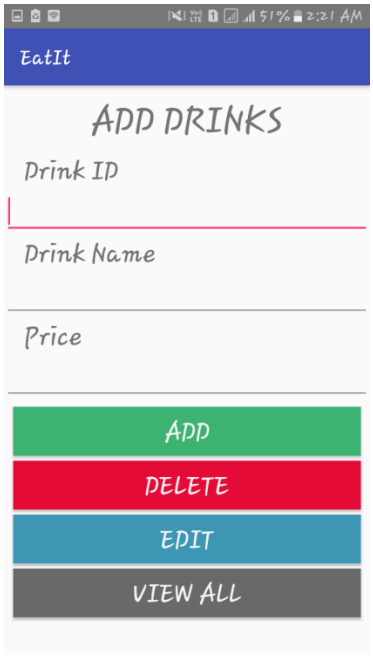
On Clicking Drinks Button: (drinks.xml)



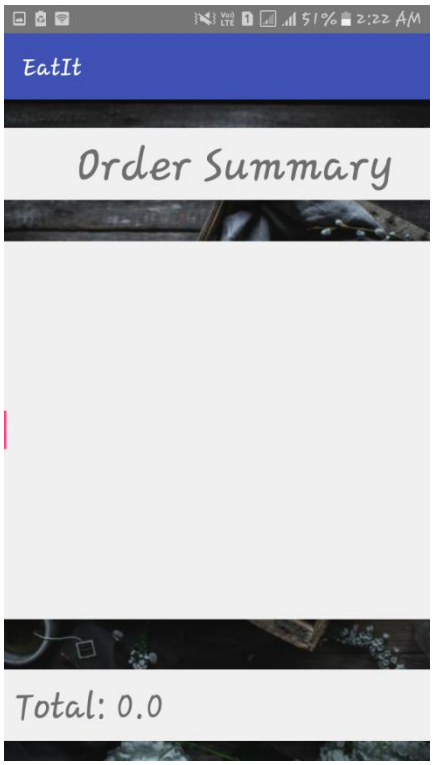
On Clicking ADD FOODS Button:
(add_foods.xml)



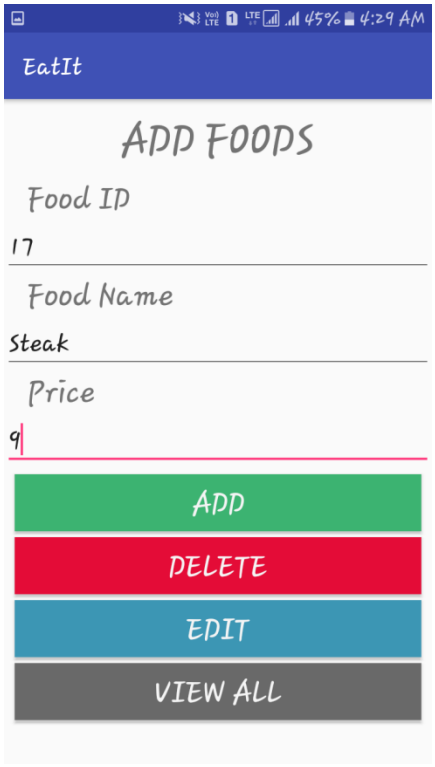
On Clicking ADD DRINKS Button:
(add_drinks.xml)

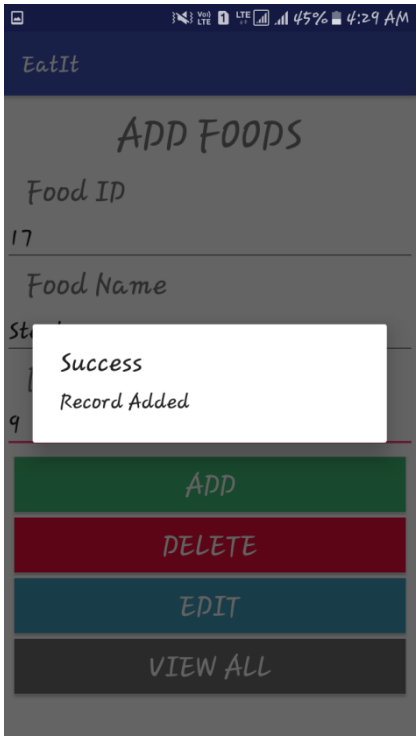


On Clicking Totals Button:
(totals.xml)

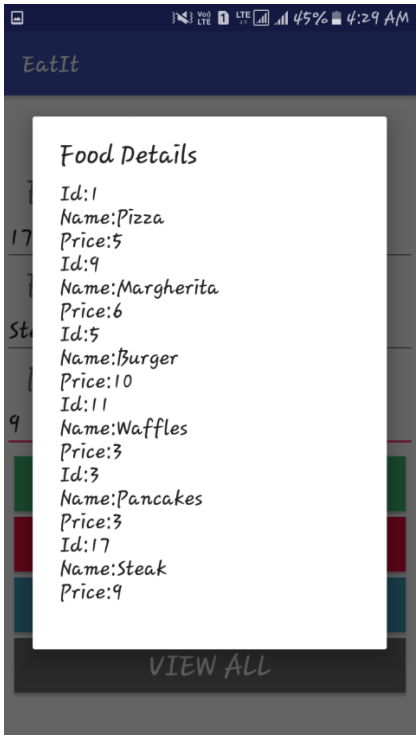


ADD Button:



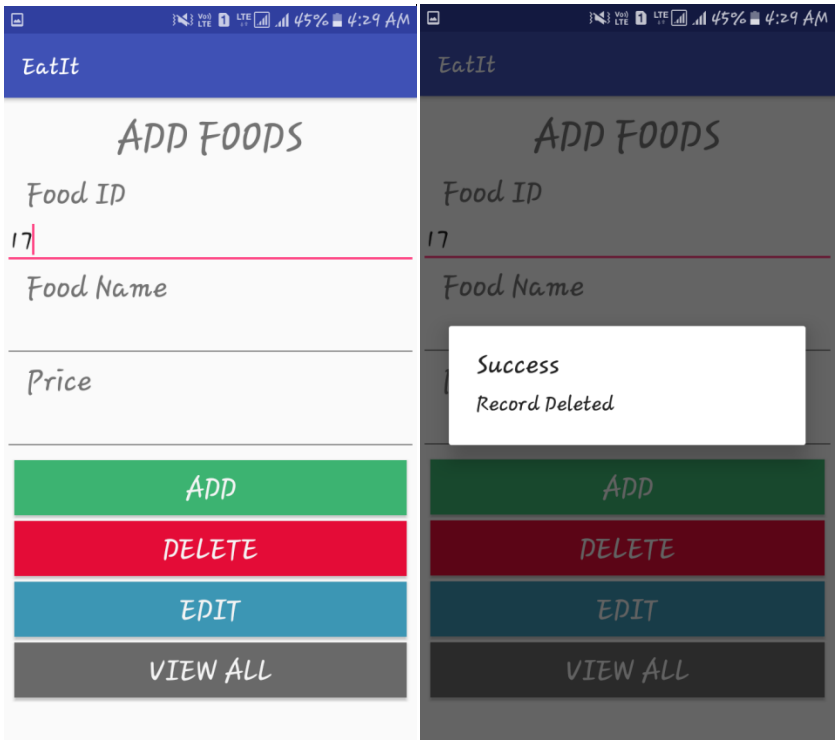


On VIEW ALL Button: Food Id 17 is shown to be added to the database table

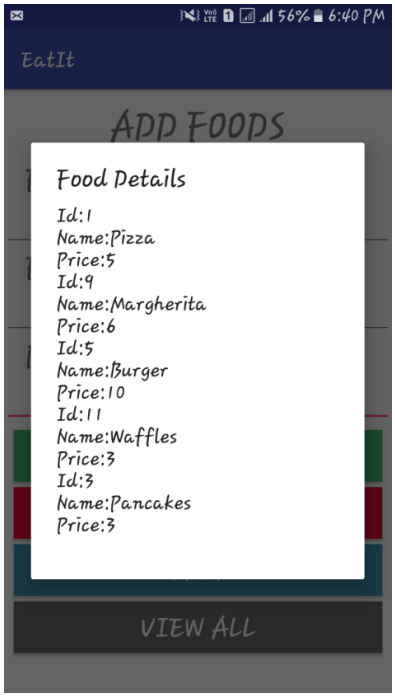


DELETE Button:

Food ID to be deleted: 17

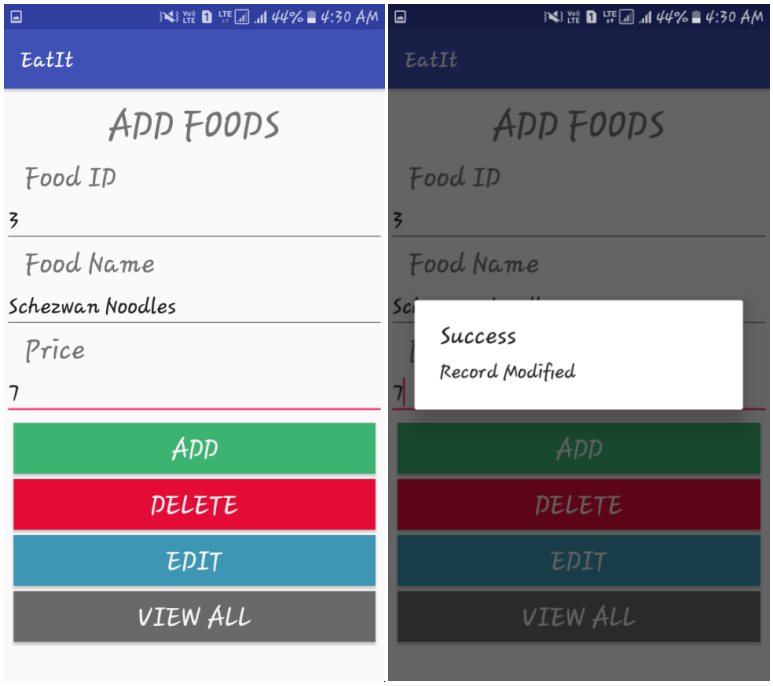


On VIEW ALL Button: Food Id 17 is shown to be deleted from the database table

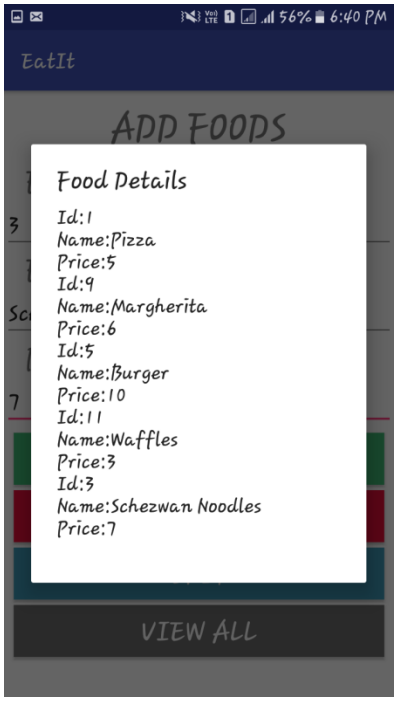


EDIT Button:

Food ID to be modified: 3



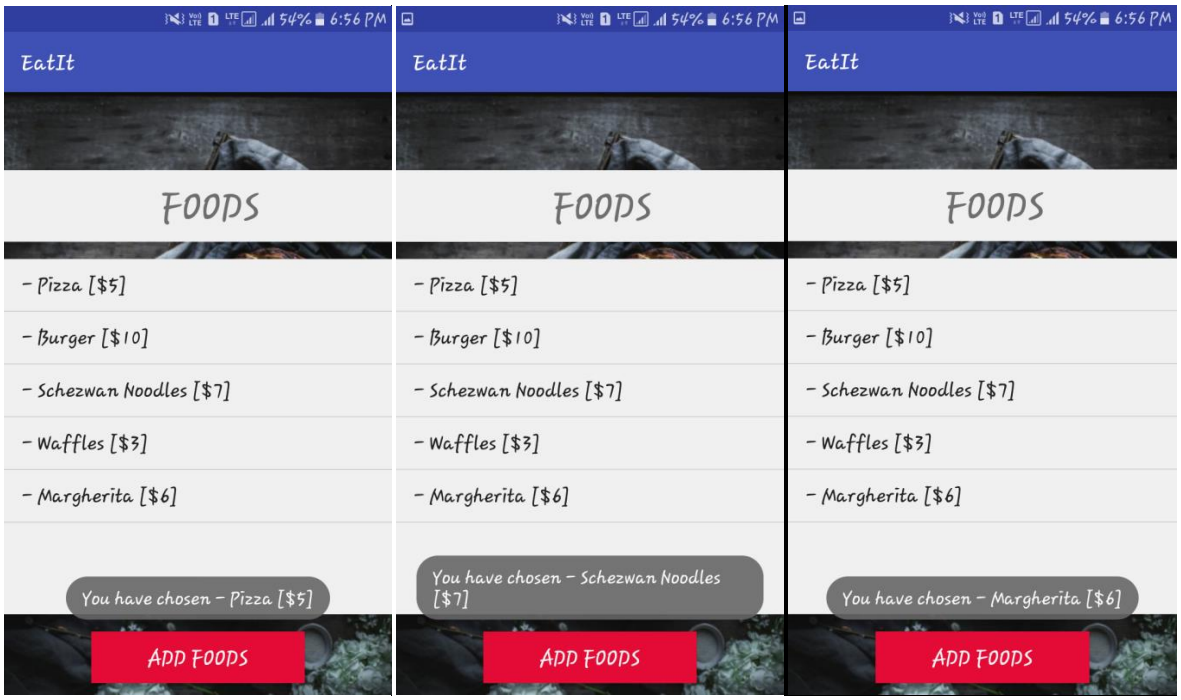
On VIEW ALL Button: Food Id is shown to be updated in the database table



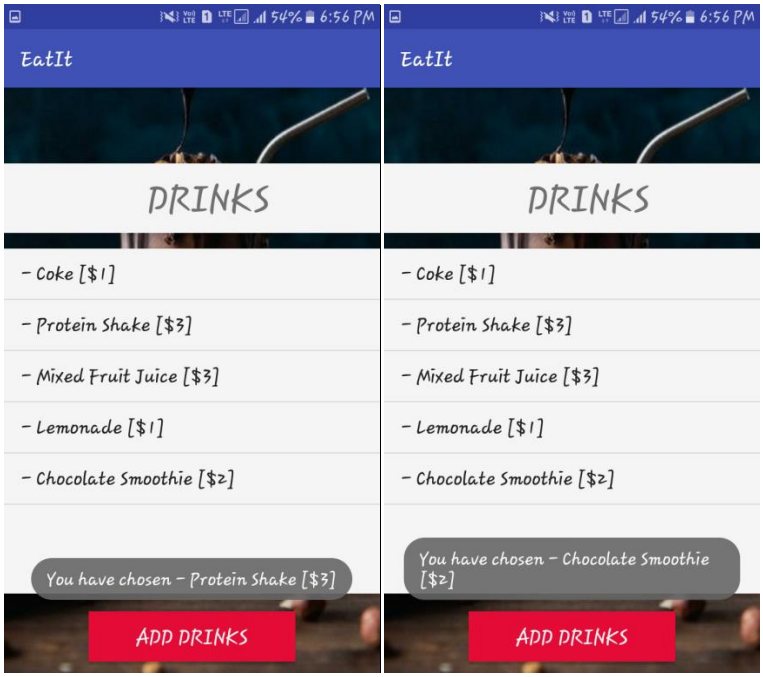
Final Food List

NOTE: Same sequence is followed for the Drinks Section.

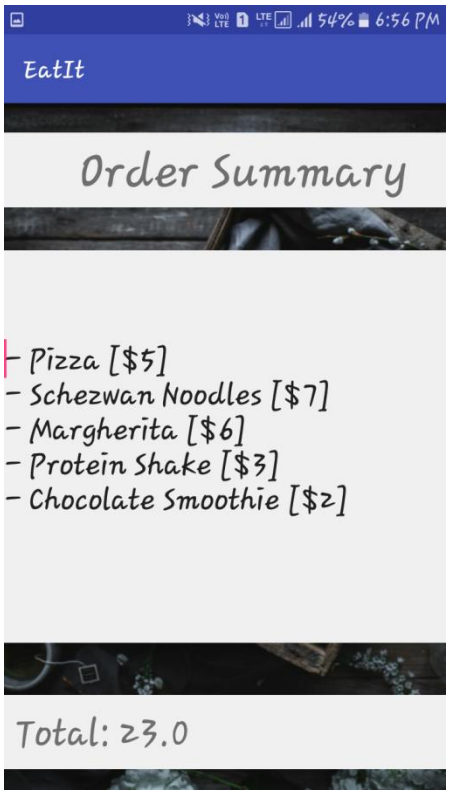
Ordering Foods from Food Menu:



Ordering Drinks from Drinks Menu:



The Order Summary (totals.xml)



SOFTWARE REQUIREMENTS

Android Studio 2.3.3

Android Studio is the official integrated development environment (IDE) for Google's Android OS, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as primary IDE for native Android application development.

Android SDK Tools

Android SDK Tools is a component for the Android SDK. It includes the complete set of development and debugging tools for Android. It is included with Android Studio.

SQLite Database

SQLite is a opensource SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation. SQLite supports all the relational database features.

Nexus 5x Emulator

The Android Emulator simulates various Android phone, tablet, Wear OS, and Android TV devices on your computer. The Android Emulator provides almost all the capabilities of a real Android device. You can simulate incoming phone calls and text messages, specify the location of the device, simulate different network speeds, simulate rotation and other hardware sensors, access the Google Play Store, and much more.

CONCLUSION

The android app made from this project can help the waiters manage orders easily and without any human error during rush hours in the food restaurant/canteen. The application gives information needed in making order to customer. In this method time and manual work is reduced effectively. Maintaining critical information in the files and manuals is full of risk and a tedious process and errors can occur with customer's orders by the waiters. This app is designed to avoid these errors.

This app can also help restaurants in receiving orders and modifying its menu data with a few taps of fingers. The order total will be calculated and displayed under Order Summary for the customers to see.

APPENDIX (Source Code)

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.astha.eatit">

    <application
        android:name=".MyApp"
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".FoodsActivity"></activity>
        <activity android:name=".DrinksActivity"></activity>
        <activity android:name=".TotalsActivity"></activity>
        <activity android:name=".AddFoods"></activity>
        <activity android:name=".AddDrinks"></activity>
    </application>

</manifest>
```

MainActivity.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        addListenerOnButton();
    }
    private void addListenerOnButton() {
        final Context context = this;
        Button button1 = (Button) findViewById(R.id.button1);
        button1.setOnClickListener(new View.OnClickListener() {
            @Override
```

```
            public void onClick(View v) {
                Intent intent = new Intent(context, FoodsActivity.class);
                startActivity(intent);
            }
        });
        Button button2 = (Button) findViewById(R.id.button2);
        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(context, DrinksActivity.class);
                startActivity(intent);
            }
        });
         Button button3=(Button) findViewById(R.id.button3);
         button3.setOnClickListener(new View.OnClickListener(){
             @Override
           public void onClick(View v) {
                 Intent intent = new Intent(context, TotalsActivity.class);
                 startActivity(intent);
             }
        });
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu){
            getMenuInflater().inflate(R.menu.menu_main,menu);
            return true;
        }
        @Override
        public boolean onOptionsItemSelected(MenuItem item){
            int id=item.getItemId();
//              if(id==R.id.action_settings){
//                  return true;
//              }
            return super.onOptionsItemSelected(item);
        }
}
```

FoodsActivity.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.util.Log;
import android.view.View;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.Toast;
import java.util.HashMap;
import java.util.Objects;
/**
 * Created by Astha on 20-Feb-18.
 */
public class FoodsActivity extends AppCompatActivity {
    MyApp mApp;
    private HashMap<String,Location>locations;
```

```
    ListView listView1;
    SQLiteDatabase db;
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        db=openOrCreateDatabase("Foods_DB",Context.MODE_PRIVATE,null);
        setContentView(R.layout.foods);
        locations=loadLocationData();
        addListenerOnButton();
        initializeUI();
    }
    private void addListenerOnButton(){
        final Context context=this;
        Button button=(Button)findViewById(R.id.button);
        listView1=(ListView)findViewById(R.id.listView1);
        listView1.setOnItemClickListener(
                new AdapterView.OnItemClickListener(){
                    public void onItemClick(AdapterView<?> adapter,View view,int
position,long id){
//                        String pen=(String)adapter.getItemAtPosition(position);
                        Object o=listView1.getItemAtPosition(position);
                        String pen=o.toString();
                        mApp=((MyApp)getApplicationContext());
                        mApp.setGlobalVarValue(pen);
                        Toast.makeText(getApplicationContext(),"You have chosen
"+pen,Toast.LENGTH_LONG).show();
                    }
                }
        );
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(context, AddFoods.class);
                startActivity(intent);
            }
        });
    }
    private void initializeUI(){
        String[] cities=getCityNames();
        ArrayAdapter<String> adapter=new
ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,cities);
        listView1.setAdapter(adapter);
    }
    private String[] getCityNames(){
        String[] cities=new String[locations.size()];
        cities=locations.keySet().toArray(cities);
        return cities;
    }
    private void displaySelectedCityInfo(String cityName){
    }
    public void showMessage(String title,String message){
        AlertDialog.Builder builder=new AlertDialog.Builder(this);
        builder.setCancelable(true);
        builder.setTitle(title);
        builder.setMessage(message);
        builder.show();
    }
    private HashMap<String,Location>loadLocationData(){
        HashMap<String,Location>locations=new HashMap<String, Location>();
        Cursor c=db.rawQuery("SELECT * FROM table_foods ORDER BY food_id ASC",null);
        StringBuffer buffer=new StringBuffer();
        while (c.moveToNext())
        {
            locations.put("- "+c.getString(1).toString()+"
```

```
[$"+c.getString(2).toString()+"]",new
Location(Integer.parseInt(c.getString(0)),c.getString(1).toString(),Double.parseDouble
(c.getString(2))));
        }
        return locations;
    }

}
```

AddFoods.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import java.util.HashMap;
/**
 * Created by Astha on 20-Feb-18.
 */
public class AddFoods extends AppCompatActivity {
    EditText id,name,price;
    Button btnAdd,btnEdit,btnDelete,btnViewAll;
    //private HashMap<String,Location> locations;
    //ListView listView1;
    SQLiteDatabase db;
    public void onCreate(Bundle savedInstanceState){
        super.onCreate(savedInstanceState);
        setContentView(R.layout.add_foods);
        id=(EditText)findViewById(R.id.food_id);
        name=(EditText)findViewById(R.id.food_name);
        price=(EditText)findViewById(R.id.price);
        db=openOrCreateDatabase("Foods_DB",Context.MODE_PRIVATE,null);
        db.execSQL("CREATE TABLE IF NOT EXISTS table_foods(food_id int,food_name
VARCHAR,price int);");
        //locations=loadLocationData();
        addListenerOnButton();
        //initializeUI();
    }
    private void addListenerOnButton() {
        final Context context = this;
        btnAdd = (Button) findViewById(R.id.btn_add);
        btnEdit = (Button) findViewById(R.id.btn_edit);
        btnDelete = (Button) findViewById(R.id.btn_delete);
        btnViewAll = (Button) findViewById(R.id.btn_view_all);
        btnAdd.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                db.execSQL("INSERT INTO table_foods
VALUES('"+id.getText()+"','"+name.getText()+"','"+price.getText()+"');");
                showMessage("Success","Record Added");
            }
        });
        btnEdit.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
```

```
                db.execSQL("UPDATE table_foods SET
food_name='"+name.getText()+"',price='"+price.getText()+"' WHERE
food_id='"+id.getText()+"'");
                showMessage("Success","Record Modified");
            }
        });
        btnDelete.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                db.execSQL("DELETE FROM table_foods WHERE
food_id='"+id.getText()+"'");
                showMessage("Success","Record Deleted");
            }
        });
        btnViewAll.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                Cursor c=db.rawQuery("SELECT * FROM table_foods",null);
                if(c.getCount()==0)
                {
                    showMessage("Error","No Records Found");
                    return;
                }
                StringBuffer buffer=new StringBuffer();
                while(c.moveToNext()){
                    buffer.append("Id:"+c.getString(0)+"\n");
                    buffer.append("Name:"+c.getString(1)+"\n");
                    buffer.append("Price:"+c.getString(2)+"\n");
                }
                showMessage("Food Details",buffer.toString());
            }
        });
    }

    public void showMessage(String title,String message){
        AlertDialog.Builder builder=new AlertDialog.Builder(this);
        builder.setCancelable(true);
        builder.setTitle(title);
        builder.setMessage(message);
        builder.show();
    }
}
```

TotalsActivity.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import java.util.StringTokenizer;
/**
 * Created by Astha on 20-Feb-18.
 */
public class TotalsActivity extends AppCompatActivity {
    MyApp mApp;
    EditText summary;
    TextView tv_total;
```

```
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.totals);
        mApp=((MyApp)getApplicationContext());
        summary=(EditText)findViewById(R.id.summary);
        tv_total=(TextView)findViewById(R.id.tv_total);
        summary.setText(mApp.getGlobalVarValue());
        String str=mApp.getGlobalVarValue();
        StringTokenizer st=new StringTokenizer(str,"$");
        String test="";
        float total=0;
        int count=0;
        while(st.hasMoreElements()){
            test=st.nextElement().toString().substring(0,1);
            if(count>0)
                total+= Float.parseFloat(test);
            count++;
        }
        tv_total.setText("Total: "+total);
        mApp.setGlobalClear();
    }
    public  boolean isFloat(String input)
    {
        try{
            Float.parseFloat(input);
            return true;
        }
        catch(Exception e){
            return false;
        }
    }
}
```

Location.java

```
package com.example.astha.eatit;
/**
 * Created by Astha on 23-Feb-18.
 */
public class Location {
    private int id;
    private String name;
    private double price;
    public Location(){

    }
    public Location(int id,String name,double price){
        this.id=id;
        this.name=name;
        this.price=price;
    }
    @Override
    public String toString()
    {
        return this.id+" "+this.name+""+this.price;
    }
}
```

MyApp.java

```
package com.example.astha.eatit;
import android.app.Application;
/**
```

```
 * Created by Astha on 23-Feb-18.
 */
public class MyApp extends Application {
    private String mGlobalVarValue="";

    public String getGlobalVarValue(){
        return mGlobalVarValue;
    }
    public void setGlobalVarValue(String str)
    {
        mGlobalVarValue +=str+"\n";
    }
    public void setGlobalClear(){
        mGlobalVarValue="";
    }
}
```

DrinksActivity.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.os.Bundle;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.Toast;
import java.util.HashMap;
/**
 * Created by Astha on 20-Feb-18.
 */
public class DrinksActivity extends AppCompatActivity {
    MyApp mApp;
    private HashMap<String,Location> locations;
    ListView listView2;
    SQLiteDatabase db;

    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        db=openOrCreateDatabase("Foods_DB",Context.MODE_PRIVATE,null);
        setContentView(R.layout.drinks);
        locations=loadLocationData();
        addListenerOnButton();
        initializeUI();
    }
    private void addListenerOnButton(){
        final Context context=this;
        Button buttondri=(Button)findViewById(R.id.buttondri);
        listView2=(ListView)findViewById(R.id.listView2);
        listView2.setOnItemClickListener(
                new AdapterView.OnItemClickListener(){
                    public void onItemClick(AdapterView<?> adapter,View view,int
position,long id){
//                        String pen=(String)adapter.getItemAtPosition(position);
                        Object o=listView2.getItemAtPosition(position);
                        String pen=o.toString();
                        mApp=((MyApp)getApplicationContext());
```

```
                        mApp.setGlobalVarValue(pen);
                        Toast.makeText(getApplicationContext(),"You have chosen
"+pen,Toast.LENGTH_LONG).show();
                    }
                }
        );
        buttondri.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(context, AddDrinks.class);
                startActivity(intent);
            }
        });
    }
    private void initializeUI(){
        String[] cities=getCityNames();
        ArrayAdapter<String> adapter=new
ArrayAdapter<String>(this,android.R.layout.simple_list_item_1,cities);
        listView2.setAdapter(adapter);
    }
    private String[] getCityNames(){
        String[] cities=new String[locations.size()];
        cities=locations.keySet().toArray(cities);
        return cities;
    }
    private void displaySelectedCityInfo(String cityName){

    }
    public void showMessage(String title,String message){
        AlertDialog.Builder builder=new AlertDialog.Builder(this);
        builder.setCancelable(true);
        builder.setTitle(title);
        builder.setMessage(message);
        builder.show();
    }

    private HashMap<String,Location>loadLocationData(){
        HashMap<String,Location>locations=new HashMap<String, Location>();
        Cursor c=db.rawQuery("SELECT * FROM table_drinks ORDER BY drink_id ASC",null);
        StringBuffer buffer=new StringBuffer();
        while (c.moveToNext())
        {
            locations.put("- "+c.getString(1).toString()+"
[$"+c.getString(2).toString()+"]",new
Location(Integer.parseInt(c.getString(0)),c.getString(1).toString(),Double.parseDouble
(c.getString(2))));
        }
        return locations;
    }
}
```

AddDrinks.java

```
package com.example.astha.eatit;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.EditText;

/**
 * Created by Astha on 20-Feb-18.
 */
public class AddDrinks extends AppCompatActivity {
    EditText id,name,price;
    Button btnAdd,btnEdit,btnDelete,btnViewAll;
    SQLiteDatabase db;
    public void onCreate(Bundle savedInstanceState){
        super.onCreate(savedInstanceState);
        setContentView(R.layout.add_drinks);
        id=(EditText)findViewById(R.id.drink_id);
        name=(EditText)findViewById(R.id.drink_name);
        price=(EditText)findViewById(R.id.drink_price);
        db=openOrCreateDatabase("Foods_DB",Context.MODE_PRIVATE,null);
        db.execSQL("CREATE TABLE IF NOT EXISTS table_drinks(drink_id int,drink_name
VARCHAR,drink_price int);");
        addListenerOnButton();
    }
    private void addListenerOnButton() {
        final Context context = this;
        btnAdd = (Button) findViewById(R.id.btn_add);
        btnEdit = (Button) findViewById(R.id.btn_edit);
        btnDelete = (Button) findViewById(R.id.btn_delete);
        btnViewAll = (Button) findViewById(R.id.btn_view_all);
        btnAdd.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                db.execSQL("INSERT INTO table_drinks
VALUES('"+id.getText()+"','"+name.getText()+"','"+price.getText()+"');");
                showMessage("Success","Record Added");
            }
        });
        btnEdit.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                db.execSQL("UPDATE table_drinks SET
drink_name='"+name.getText()+"',drink_price='"+price.getText()+"' WHERE
drink_id='"+id.getText()+"'");
                showMessage("Success","Record Modified");
            }
        });
        btnDelete.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                db.execSQL("DELETE FROM table_drinks WHERE
drink_id='"+id.getText()+"'");
                showMessage("Success","Record Deleted");
            }
        });
        btnViewAll.setOnClickListener(new View.OnClickListener(){
            @Override
            public void onClick(View v) {
                Cursor c=db.rawQuery("SELECT * FROM table_drinks",null);
                if(c.getCount()==0)
                {
                    showMessage("Error","No Records Found");
                    return;
                }
                StringBuffer buffer=new StringBuffer();
                while(c.moveToNext()){
                    buffer.append("Id:"+c.getString(0)+"\n");
```

```
                buffer.append("Name:"+c.getString(1)+"\n");
                buffer.append("Price:"+c.getString(2)+"\n");
            }
            showMessage("Drink Details",buffer.toString());
        }
    });
}
public void showMessage(String title,String message){
    AlertDialog.Builder builder=new AlertDialog.Builder(this);
    builder.setCancelable(true);
    builder.setTitle(title);
    builder.setMessage(message);
    builder.show();
}
}
```