Group A13 User Guide

JamZ App

**Introduction**

To begin, the first step to creating a functional user interface is an appropriate interface building platform. Depending on the level of skill in which you have, a variety of options exist. For beginners, Wix may be an appropriate option as it is very simplistic. If you have a greater knowledge of coding, android studio would be suitable. In our case Android studio was used. Below you will find the necessary code, and the instruction on how to use it.

**Bill of Materials: (cost 0$)**

* **Free Android Studios Application**
* **Free API**
* **Images used throughout app were found online**
* **Logo**

**-Page Linking**

In order for an app to switch through multiple pages, page linking must occur. To do this the code template below can be used in the Javascript section of any page. This method works by defining buttons (line one), and then setting onclick listeners (line 4 and 5). The code then deciphers between buttons using a switch statement. This basically gives the compiler as many options as there are buttons. If button 7 is clicked, the compiler runs the case with button 7 included in it. This is much more effective than defining individual buttons and giving them each their own intent statements, especially if a page contains many buttons like our app’s main page. Labeling buttons with unique IDs is also very important as the compiler will become confused if more than one button shares a name. As you can see here the two buttons are ID’d as FoodBotton and button7.

 defineButtons();}

 public void defineButtons() {

 findViewById(R.id.*button7*).setOnClickListener(buttonClickListener); findViewById(R.id.*FoodButton*).setOnClickListener(buttonClickListener);}

 @SuppressLint("NonConstantResourceId")

 private final View.OnClickListener buttonClickListener = view -> {

 switch (view.getId()) {

 case R.id.*button7*:

 Intent intent = new Intent(MainActivity.this,Cart.class);

 startActivity(intent);

 break;

 case R.id.*FoodButton*:

 Intent food = new Intent(MainActivity.this,Select\_Page.class);

 startActivity(food);

 break; } };}

**- Search Tab**

Below is the outline for the kind of code needed to create a type of search function. This code allows the user to enter a certain word or words and save them to the interface. Notice how two buttons are required to do this (button 20 and button 21). The first button in the code pastes the user input to the screen, and the second button moves the app to another page. This type of code saves the user input as a string only temporarily, and therefore will not keep the input if the app is turned off. This code is meant to be implemented in the Java Script section.

**package com.example.mainpage;**

**import android.annotation.SuppressLint;**

**import android.content.Intent;**

**import android.content.SharedPreferences;**

**import android.os.Bundle;**

**import android.view.View;**

**import android.widget.Button;**

**import android.widget.EditText;**

**import android.widget.Switch;**

**import android.widget.TextView;**

**import android.widget.Toast;**

**import androidx.appcompat.app.AppCompatActivity;**

**public class Select\_Page extends AppCompatActivity {**

 **@Override**

 **protected void onCreate(Bundle savedInstanceState) {**

 **super.onCreate(savedInstanceState);**

 **setContentView(R.layout.*activity\_select\_\_page*);**

 **final EditText inputText=findViewById(R.id.*enterorder*);**

 **final TextView outputText=findViewById(R.id.*yourorder*);**

 **Button Add=findViewById(R.id.*button20*);**

 **Button Save=findViewById(R.id.*button21*);**

 **Add.setOnClickListener(new View.OnClickListener() {**

 **@Override**

 **public void onClick(View v) {**

 **String Value = inputText.getText().toString();**

 **outputText.setText(Value);}});**

 **Save.setOnClickListener(new View.OnClickListener(){**

 **@Override**

 **public void onClick(View v) {**

 **String Data = outputText.getText().toString();**

 **Intent intent = new Intent(Select\_Page.this, Cart.class);**

 **intent.putExtra("abc", Data);**

 **startActivity(intent);**

 **finish();**

 **}**

 **});**

**-Inserting Image Files**

In order to include pictures out of your saved pictures, images must be uploaded from your computer into android studios. From here the ImageView widget can be placed into your interface and the downloaded image can be placed into it.

**<ImageView**

 **android:id="@+id/imageView"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="127dp"**

 **android:layout\_marginLeft="127dp"**

 **android:layout\_marginEnd="127dp"**

 **android:layout\_marginRight="127dp"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **app:srcCompat="@drawable/jamz\_logo"**

 **android:contentDescription="@string/todo"/>**

**-Text Files**

The code below is the basic set up for inserting text into your interface. These can be any type of text,and can be customized. This is inserted into the XMLl portion of the page.

<TextView

 android:id="@+id/yourorder"

 android:layout\_width="match\_parent"

 android:layout\_height="393dp"

 android:layout\_gravity="center"

 android:gravity="center"

 android:textSize="24sp"

 tools:text="Your Order" />

**Track Your Order Page- Including Activate Flashing Light and Activate Sound Beacon (map involved)**

You will find the code in both XML and Java in **Appendix B** under **Section B**. It is given initially in XML and then in Java code. All you need to do is input into android studios to implicate the same pages. The link to the free API used is also in **Appendix B** under **Section B** but not yet functional but incorporated in the final app when the user clicks “Show Map” icon. I will include the images of pages below so when trying to implicate these pages you can just crop (you can use a snipping tool application like I did and save) the icons straight from the images and use in android studios. Note that on this interface the coloured flashing lights to indicate “Status of drone” isn't working as of yet, it is only an image. Map also doesn't track drones and flashing lights and sound beacon are not connected to the drone. Please look under Appendix C to see the features, layout and how the app works overall to get a better idea. (Use image below for icons on app and reference for app) In **Appendix B** under **Section B** you will see code in XML first then scroll down to see the Java code.



Appendix

(Entire App Code)

**The XML code you will see will go at the center of android studios like the image below.**



**Drone interaction pages and alerts page**

* QR code page

XML code:

Page layout:

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".MainActivity">

Text:

 <TextView

 android:id="@+id/textView2"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="172dp"

 android:layout\_marginLeft="172dp"

 android:layout\_marginTop="90dp"

 android:layout\_marginEnd="174dp"

 android:layout\_marginRight="174dp"

 android:text="STEP 1"

 android:textAppearance="@style/TextAppearance.AppCompat.Title"

 app:layout\_constraintBottom\_toTopOf="@+id/textView"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView2" />

 <TextView

 android:id="@+id/textView"

 android:layout\_width="350dp"

 android:layout\_height="106dp"

 android:layout\_marginStart="15dp"

 android:layout\_marginLeft="15dp"

 android:layout\_marginEnd="15dp"

 android:layout\_marginRight="15dp"

 android:layout\_marginBottom="342dp"

 android:gravity="center"

 android:text="ONCE THE DRONE HAS LANDED SCAN THE QR CODE BELOW TO UNLOCK THE DRONE BOX"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintBottom\_toTopOf="@+id/bqr"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.483"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView2" />

Button directs user to steps page:

 <Button

 android:id="@+id/bqr"

 android:layout\_width="match\_parent"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="8dp"

 android:layout\_marginLeft="8dp"

 android:layout\_marginTop="603dp"

 android:layout\_marginEnd="8dp"

 android:layout\_marginRight="8dp"

 android:layout\_marginBottom="80dp"

 android:text="NEXT"

 app:backgroundTint="@color/black"

 app:layout\_constraintBottom\_toBottomOf="parent"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="1.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 app:layout\_constraintVertical\_bias="1.0" />

Jamz logo:

 <ImageView

 android:id="@+id/imageView2"

 android:layout\_width="118dp"

 android:layout\_height="42dp"

 android:layout\_marginStart="149dp"

 android:layout\_marginLeft="149dp"

 android:layout\_marginTop="16dp"

 android:layout\_marginEnd="144dp"

 android:layout\_marginRight="144dp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 app:srcCompat="@drawable/ic\_jamzlogo" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java code:

package com.example.qrcodepage;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.Button;

import android.content.Intent;

import android.view.View;

public class MainActivity extends AppCompatActivity {

 private Button button;

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_main*);

 button = (Button) findViewById(R.id.*bqr*);

 button.setOnClickListener(new View.OnClickListener() {

 @Override

 public void onClick(View v) {

 Intent intent = new Intent(MainActivity.this, StepsPage.class);

 startActivity(intent);

 }

 });

 }

}

* Food retrieval steps page

XML code:

Page layout:

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".StepsPage">

Jamz logo:

 <ImageView

 android:id="@+id/imageView2"

 android:layout\_width="118dp"

 android:layout\_height="42dp"

 android:layout\_marginStart="149dp"

 android:layout\_marginLeft="149dp"

 android:layout\_marginTop="16dp"

 android:layout\_marginEnd="144dp"

 android:layout\_marginRight="144dp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 app:srcCompat="@drawable/ic\_jamzlogo" />

 Text:

 <TextView

 android:id="@+id/textView3"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:text="STEP 3"

 android:textAppearance="@style/TextAppearance.AppCompat.Title"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView" />

 <TextView

 android:id="@+id/textView5"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="173dp"

 android:layout\_marginLeft="173dp"

 android:layout\_marginEnd="173dp"

 android:layout\_marginRight="173dp"

 android:text="STEP 4"

 android:textAppearance="@style/TextAppearance.AppCompat.Title"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView4" />

 <TextView

 android:id="@+id/textView"

 android:layout\_width="350dp"

 android:layout\_height="106dp"

 android:layout\_marginStart="15dp"

 android:layout\_marginLeft="15dp"

 android:layout\_marginEnd="15dp"

 android:layout\_marginRight="15dp"

 android:layout\_marginBottom="342dp"

 android:gravity="center"

 android:text="PLEASE CAREFULLY TAKE YOUR FOOD OUT OF THE BOX"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintBottom\_toTopOf="@+id/textView3"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.483"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView2" />

 <TextView

 android:id="@+id/textView4"

 android:layout\_width="361dp"

 android:layout\_height="106dp"

 android:layout\_marginStart="25dp"

 android:layout\_marginLeft="25dp"

 android:layout\_marginEnd="25dp"

 android:layout\_marginRight="25dp"

 android:gravity="center"

 android:text="PROPERLY CLOSE THE BOX AND STAND CLEAR OF THE DRONE"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintBottom\_toTopOf="@+id/textView5"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView3" />

 <TextView

 android:id="@+id/textView6"

 android:layout\_width="359dp"

 android:layout\_height="106dp"

 android:layout\_marginStart="19dp"

 android:layout\_marginLeft="19dp"

 android:layout\_marginEnd="20dp"

 android:layout\_marginRight="20dp"

 android:gravity="center"

 android:text="CHECK YOUR SURROUNDINGS, IS IT SAFE FOR THE DRONE TO FLY AWAY?"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView5" />

 <TextView

 android:id="@+id/textView2"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginTop="60dp"

 android:text="STEP 2"

 android:textAppearance="@style/TextAppearance.AppCompat.Title"

 app:layout\_constraintBottom\_toTopOf="@+id/textView"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView2" />

Button directs user to Completion page:

 <Button

 android:id="@+id/bty"

 android:layout\_width="384dp"

 android:layout\_height="49dp"

 android:layout\_marginStart="13dp"

 android:layout\_marginLeft="13dp"

 android:layout\_marginEnd="14dp"

 android:layout\_marginRight="14dp"

 android:layout\_marginBottom="80dp"

 android:text="YES, CONFIRM DEPARTURE"

 app:backgroundTint="@color/black"

 app:layout\_constraintBottom\_toBottomOf="parent"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java code:

package com.example.qrcodepage;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

public class StepsPage extends AppCompatActivity {

 private Button button;

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_steps\_page*);

 button = (Button) findViewById(R.id.*bty*);

 button.setOnClickListener(new View.OnClickListener() {

 @Override

 public void onClick(View v) {

 Intent intent = new Intent(StepsPage.this, ThankYouPage.class);

 startActivity(intent);

 }

 });

 }

}

* Completion of order page

XML code:

Page layout:

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".ThankYouPage">

Text:

 <ImageView

 android:id="@+id/imageView2"

 android:layout\_width="118dp"

 android:layout\_height="42dp"

 android:layout\_marginStart="149dp"

 android:layout\_marginLeft="149dp"

 android:layout\_marginTop="16dp"

 android:layout\_marginEnd="144dp"

 android:layout\_marginRight="144dp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 app:srcCompat="@drawable/ic\_jamzlogo" />

 <TextView

 android:id="@+id/textView7"

 android:layout\_width="313dp"

 android:layout\_height="60dp"

 android:layout\_marginStart="49dp"

 android:layout\_marginLeft="49dp"

 android:layout\_marginTop="157dp"

 android:layout\_marginEnd="49dp"

 android:layout\_marginRight="49dp"

 android:gravity="center"

 android:text="THANK YOU FOR ORDERING WITH JAMZ"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView2" />

Button redirects user to main menu:

 <Button

 android:layout\_width="380dp"

 android:layout\_height="46dp"

 android:layout\_marginStart="15dp"

 android:layout\_marginLeft="15dp"

 android:layout\_marginTop="40dp"

 android:layout\_marginEnd="16dp"

 android:layout\_marginRight="16dp"

 android:text="GO BACK TO MAIN MENU"

 app:backgroundTint="@color/black"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView7" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java code:

package com.example.qrcodepage;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class ThankYouPage extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_thank\_you\_page*);

 }

}

* Alerts page

XML code:

Page layout:

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".AlertsPage">

Jamz logo:

 <ImageView

 android:id="@+id/imageView2"

 android:layout\_width="312dp"

 android:layout\_height="169dp"

 android:layout\_marginStart="50dp"

 android:layout\_marginLeft="50dp"

 android:layout\_marginEnd="50dp"

 android:layout\_marginRight="50dp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="1.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 app:srcCompat="@drawable/ic\_jamzlogo" />

Text:

 <TextView

 android:id="@+id/textView9"

 android:layout\_width="339dp"

 android:layout\_height="58dp"

 android:layout\_marginStart="53dp"

 android:layout\_marginLeft="53dp"

 android:layout\_marginTop="64dp"

 android:layout\_marginEnd="53dp"

 android:layout\_marginRight="53dp"

 android:gravity="center"

 android:text="SORRY JAMZ IS NOT OPERATING DUE TO:"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView2" />

 <TextView

 android:id="@+id/textView8"

 android:layout\_width="338dp"

 android:layout\_height="70dp"

 android:layout\_marginStart="48dp"

 android:layout\_marginLeft="48dp"

 android:layout\_marginTop="82dp"

 android:layout\_marginEnd="25dp"

 android:layout\_marginRight="25dp"

 android:gravity="center"

 android:text="FOR MORE INFORMATION PLEASE VISIT:"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="1.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView9" />

Button redirects user to Jamz website:

 <Button

 android:id="@+id/button"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="62dp"

 android:layout\_marginLeft="62dp"

 android:layout\_marginTop="30dp"

 android:layout\_marginEnd="62dp"

 android:layout\_marginRight="62dp"

 android:onClick="BrowsJamz"

 android:text="HTTP://WWW.JAMZDELIVERY.COM"

 app:backgroundTint="@color/black"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.0"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView8" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java code:

package com.example.qrcodepage;

import androidx.appcompat.app.AppCompatActivity;

import android.net.Uri;

import android.os.Bundle;

import android.content.Intent;

import android.view.View;

public class AlertsPage extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_alerts\_page*);

 }

public void BrowsJamz(View view) {

 Intent browserIntent = new Intent(Intent.*ACTION\_VIEW*, Uri.*parse*("http://www.jamzdelivery.com"));

 startActivity(browserIntent);

}

}

Appendix

(Entire App Code)

**Sign up page**

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".SecondFragment">

 <EditText

 android:id="@+id/editTextTextPassword2"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/password"

 android:inputType="textPassword"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.508"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName3" />

 <EditText

 android:id="@+id/editTextTextPassword3"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/confirm\_password"

 android:inputType="textPassword"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.508"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPassword2" />

 <TextView

 android:id="@+id/textview\_first2"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginTop="20dp"

 android:text="@string/sign\_up"

 android:textAppearance="@style/TextAppearance.AppCompat.Display1"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.5"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView" />

 <EditText

 android:id="@+id/editTextTextEmailAddress2"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/email"

 android:inputType="textEmailAddress"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.491"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextPhone2" />

 <ImageView

 android:id="@+id/imageView"

 android:layout\_width="290dp"

 android:layout\_height="152dp"

 android:layout\_marginTop="26dp"

 android:contentDescription="@string/app\_name"

 android:src="@tools:sample/avatars"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.5"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 tools:src="@drawable/jamz" />

 <TextView

 android:id="@+id/textview\_second"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 app:layout\_constraintBottom\_toTopOf="@id/button\_second"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent" />

 <Button

 android:id="@+id/button\_second"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginBottom="20dp"

 android:text="@string/next"

 app:layout\_constraintBottom\_toBottomOf="parent"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.498"

 app:layout\_constraintStart\_toStartOf="parent" />

 <EditText

 android:id="@+id/editTextPhone2"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/phone\_number"

 android:inputType="phone"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.491"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName2" />

 <EditText

 android:id="@+id/editTextTextPersonName"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="15dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/first\_name"

 android:inputType="textPersonName"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.5"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textview\_first2" />

 <EditText

 android:id="@+id/editTextTextPersonName3"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:autofillHints=""

 android:ems="10"

 android:hint="@string/age\_dd\_mm\_yy"

 android:inputType="textPersonName"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.5"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextEmailAddress2" />

 <EditText

 android:id="@+id/editTextTextPersonName2"

 android:layout\_width="350dp"

 android:layout\_height="47dp"

 android:layout\_marginTop="10dp"

 android:ems="10"

 android:hint="@string/last\_name"

 android:inputType="textPersonName"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.5"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName"

 android:autofillHints="" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java:

package com.example.apptry1

import android.os.Bundle

import androidx.fragment.app.Fragment

import android.view.LayoutInflater

import android.view.View

import android.view.ViewGroup

import android.widget.Button

import androidx.navigation.fragment.findNavController

*/\*\**

*\* A simple [Fragment] subclass as the default destination in the navigation.*

*\*/*

class FirstFragment : Fragment() {

 override fun onCreateView(

 inflater: LayoutInflater, container: ViewGroup?,

 savedInstanceState: Bundle?

 ): View? {

 // Inflate the layout for this fragment

 return inflater.inflate(R.layout.*fragment\_first*, container, false)

 }

 override fun onViewCreated(view: View, savedInstanceState: Bundle?) {

 super.onViewCreated(view, savedInstanceState)

 view.findViewById<Button>(R.id.*button\_first*).setOnClickListener **{**

*findNavController*().navigate(R.id.*action\_FirstFragment\_to\_SecondFragment*)

 **}**

}

}

**Default settings page**

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"

 xmlns:app="http://schemas.android.com/apk/res-auto"

 xmlns:tools="http://schemas.android.com/tools"

 android:id="@+id/frameLayout"

 android:layout\_width="match\_parent"

 android:layout\_height="match\_parent"

 tools:context=".ThirdFragment">

 <ImageView

 android:id="@+id/imageView5"

 android:layout\_width="244dp"

 android:layout\_height="124dp"

 android:layout\_marginTop="44dp"

 android:src="@drawable/jamz"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.497"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toTopOf="parent"

 android:contentDescription="@string/todo" />

 <TextView

 android:id="@+id/textView"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginTop="24dp"

 android:text="@string/optional\_default\_settings"

 android:textSize="30sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/imageView5" />

 <EditText

 android:id="@+id/editTextTextPersonName4"

 android:layout\_width="261dp"

 android:layout\_height="37dp"

 android:layout\_marginTop="8dp"

 android:ems="10"

 android:hint="@string/e\_g\_peanuts"

 android:inputType="textPersonName"

 android:textSize="14sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.429"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView2"

 android:autofillHints="" />

 <TextView

 android:id="@+id/textView2"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginTop="64dp"

 android:text="@string/dietary\_restrictions"

 android:textSize="18sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.412"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView" />

 <TextView

 android:id="@+id/textView4"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="128dp"

 android:layout\_marginLeft="128dp"

 android:layout\_marginTop="40dp"

 android:text="@string/address"

 android:textSize="18sp"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName4" />

 <EditText

 android:id="@+id/editTextTextPersonName5"

 android:layout\_width="260dp"

 android:layout\_height="37dp"

 android:layout\_marginTop="10dp"

 android:ems="10"

 android:hint="@string/e\_g\_123\_apple\_road\_townsville"

 android:inputType="textPersonName"

 android:textSize="14sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.426"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView4"

 android:autofillHints="" />

 <EditText

 android:id="@+id/editTextTextPersonName8"

 android:layout\_width="260dp"

 android:layout\_height="37dp"

 android:layout\_marginTop="8dp"

 android:ems="10"

 android:hint="@string/\_0000\_0000\_0000\_0000"

 android:inputType="textPersonName"

 android:textSize="14sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.425"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/textView5"

 android:importantForAutofill="no" />

 <EditText

 android:id="@+id/editTextTextPersonName11"

 android:layout\_width="134dp"

 android:layout\_height="36dp"

 android:layout\_marginTop="8dp"

 android:ems="10"

 android:hint="@string/mm\_yy"

 android:inputType="textPersonName"

 android:textSize="14sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.265"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName8"

 android:autofillHints="" />

 <EditText

 android:id="@+id/editTextTextPersonName12"

 android:layout\_width="109dp"

 android:layout\_height="36dp"

 android:layout\_marginTop="8dp"

 android:ems="10"

 android:hint="@string/cvc"

 android:inputType="textPersonName"

 android:textSize="14sp"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.672"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName8"

 android:autofillHints="" />

 <TextView

 android:id="@+id/textView5"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="128dp"

 android:layout\_marginLeft="128dp"

 android:layout\_marginTop="40dp"

 android:text="@string/credit\_debit\_card"

 android:textSize="14sp"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName5" />

 <Button

 android:id="@+id/button2"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginTop="83dp"

 android:text="@string/done"

 app:layout\_constraintEnd\_toEndOf="parent"

 app:layout\_constraintHorizontal\_bias="0.734"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName12" />

 <Button

 android:id="@+id/button3"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_marginStart="89dp"

 android:layout\_marginLeft="89dp"

 android:layout\_marginTop="83dp"

 android:text="@string/skip"

 app:backgroundTint="@color/blue"

 app:layout\_constraintStart\_toStartOf="parent"

 app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName11" />

</androidx.constraintlayout.widget.ConstraintLayout>

Java (main activity)

package com.example.apptry1

import android.os.Bundle

import android.os.Parcel

import android.os.Parcelable

import com.google.android.material.floatingactionbutton.FloatingActionButton

import com.google.android.material.snackbar.Snackbar

import androidx.appcompat.app.AppCompatActivity

import android.view.Menu

import android.view.MenuItem

class MainActivity : AppCompatActivity() {

 override fun onCreate(savedInstanceState: Bundle?) {

 super.onCreate(savedInstanceState)

 setContentView(R.layout.*activity\_main*)

 setSupportActionBar(findViewById(R.id.*toolbar*))

 findViewById<FloatingActionButton>(R.id.*fab*).setOnClickListener **{** view **->**

Snackbar.make(view, "Replace with your own action", Snackbar.*LENGTH\_LONG*)

 .setAction("Action", null).show()

 **}**

}

 override fun onCreateOptionsMenu(menu: Menu): Boolean {

 // Inflate the menu; this adds items to the action bar if it is present.

 *menuInflater*.inflate(R.menu.*menu\_main*, menu)

 return true

 }

 override fun onOptionsItemSelected(item: MenuItem): Boolean {

 // Handle action bar item clicks here. The action bar will

 // automatically handle clicks on the Home/Up button, so long

 // as you specify a parent activity in AndroidManifest.xml.

 return when (item.*itemId*) {

 R.id.*action\_settings* -> true

 else -> super.onOptionsItemSelected(item)

 }

 }

}

**Log in page**

**<?xml version="1.0" encoding="utf-8"?>**

**<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **tools:context=".FirstFragment">**

 **<TextView**

 **android:id="@+id/textview\_first"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginTop="100dp"**

 **android:text="@string/log\_in"**

 **android:textAppearance="@style/TextAppearance.AppCompat.Display1"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.498"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/imageView2" />**

 **<Button**

 **android:id="@+id/button\_first"**

 **android:layout\_width="153dp"**

 **android:layout\_height="61dp"**

 **android:layout\_marginBottom="200dp"**

 **android:text="@string/log\_in"**

 **app:backgroundTint="@color/blue"**

 **app:layout\_constraintBottom\_toBottomOf="parent"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.5"**

 **app:layout\_constraintStart\_toStartOf="parent" />**

 **<ImageView**

 **android:id="@+id/imageView2"**

 **android:layout\_width="342dp"**

 **android:layout\_height="195dp"**

 **android:layout\_marginTop="26dp"**

 **android:contentDescription="@string/app\_name"**

 **android:src="@tools:sample/avatars"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.5"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **tools:src="@drawable/jamz" />**

 **<EditText**

 **android:id="@+id/editTextTextEmailAddress"**

 **android:layout\_width="350dp"**

 **android:layout\_height="47dp"**

 **android:layout\_marginTop="30dp"**

 **android:autofillHints=""**

 **android:ems="10"**

 **android:hint="@string/email"**

 **android:inputType="textEmailAddress"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.498"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/textview\_first" />**

 **<EditText**

 **android:id="@+id/editTextTextPassword"**

 **android:layout\_width="350dp"**

 **android:layout\_height="47dp"**

 **android:layout\_marginTop="30dp"**

 **android:autofillHints=""**

 **android:ems="10"**

 **android:hint="@string/password"**

 **android:inputType="textPassword"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.5"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/editTextTextEmailAddress" />**

 **<Button**

 **android:id="@+id/button"**

 **style="@style/Widget.MaterialComponents.Button.TextButton"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginTop="50dp"**

 **android:text="@string/don\_t\_have\_an\_account\_sign\_up\_"**

 **android:textColor="@color/blue"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.5"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPassword" />**

**</androidx.constraintlayout.widget.ConstraintLayout>**

**Java:**

**package com.example.apptry1**

**import android.os.Bundle**

**import androidx.fragment.app.Fragment**

**import android.view.LayoutInflater**

**import android.view.View**

**import android.view.ViewGroup**

**import android.widget.Button**

**import androidx.navigation.fragment.findNavController**

***/\*\****

***\* A simple [Fragment] subclass as the second destination in the navigation.***

***\*/***

**class SecondFragment : Fragment() {**

 **override fun onCreateView(**

 **inflater: LayoutInflater, container: ViewGroup?,**

 **savedInstanceState: Bundle?**

 **): View? {**

 **// Inflate the layout for this fragment**

 **return inflater.inflate(R.layout.*fragment\_second*, container, false)**

 **}**

 **override fun onViewCreated(view: View, savedInstanceState: Bundle?) {**

 **super.onViewCreated(view, savedInstanceState)**

 **view.findViewById<Button>(R.id.*button\_second*).setOnClickListener {**

 ***findNavController*().navigate(R.id.*action\_SecondFragment\_to\_FirstFragment*)**

 **}**

 **}**

**}**

**Main page:**

**<?xml version="1.0" encoding="utf-8"?>**

**<androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **android:background="#FBF9F9"**

 **tools:context=".MainActivity">**

 **<Button**

 **android:id="@+id/button13"**

 **android:layout\_width="371dp"**

 **android:layout\_height="65dp"**

 **android:layout\_marginStart="10dp"**

 **android:layout\_marginLeft="10dp"**

 **android:layout\_marginEnd="10dp"**

 **android:layout\_marginRight="10dp"**

 **android:layout\_marginBottom="44dp"**

 **android:text="@string/mcdonalds"**

 **app:backgroundTint="#191818"**

 **app:layout\_constraintBottom\_toBottomOf="parent"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.45"**

 **app:layout\_constraintStart\_toStartOf="parent" />**

 **<Button**

 **android:id="@+id/button10"**

 **android:layout\_width="85dp"**

 **android:layout\_height="81dp"**

 **android:layout\_marginStart="4dp"**

 **android:layout\_marginLeft="4dp"**

 **android:layout\_marginTop="20dp"**

 **android:layout\_marginEnd="8dp"**

 **android:layout\_marginRight="8dp"**

 **android:text="@string/sushi"**

 **app:backgroundTint="#DF0C0C"**

 **app:layout\_constraintEnd\_toStartOf="@+id/button11"**

 **app:layout\_constraintStart\_toEndOf="@+id/button9"**

 **app:layout\_constraintTop\_toBottomOf="@+id/button6" />**

 **<Button**

 **android:id="@+id/button11"**

 **android:layout\_width="95dp"**

 **android:layout\_height="81dp"**

 **android:layout\_marginTop="20dp"**

 **android:layout\_marginEnd="4dp"**

 **android:layout\_marginRight="4dp"**

 **android:text="@string/italian"**

 **app:backgroundTint="#CA0E0E"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/button6" />**

 **<Button**

 **android:id="@+id/button9"**

 **android:layout\_width="85dp"**

 **android:layout\_height="81dp"**

 **android:layout\_marginStart="8dp"**

 **android:layout\_marginLeft="8dp"**

 **android:layout\_marginTop="20dp"**

 **android:layout\_marginEnd="4dp"**

 **android:layout\_marginRight="4dp"**

 **android:text="@string/vegan"**

 **app:backgroundTint="#DF1010"**

 **app:layout\_constraintEnd\_toStartOf="@+id/button10"**

 **app:layout\_constraintStart\_toEndOf="@+id/button8"**

 **app:layout\_constraintTop\_toBottomOf="@+id/button5" />**

 **<Button**

 **android:id="@+id/button6"**

 **android:layout\_width="117dp"**

 **android:layout\_height="47dp"**

 **android:layout\_marginTop="13dp"**

 **android:layout\_marginEnd="16dp"**

 **android:layout\_marginRight="16dp"**

 **android:text="@string/favorites"**

 **app:backgroundTint="@color/black"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/searchView" />**

 **<Button**

 **android:id="@+id/button5"**

 **android:layout\_width="117dp"**

 **android:layout\_height="47dp"**

 **android:layout\_marginTop="13dp"**

 **android:layout\_marginEnd="14dp"**

 **android:layout\_marginRight="14dp"**

 **android:text="@string/alcohol"**

 **app:backgroundTint="@color/black"**

 **app:layout\_constraintEnd\_toStartOf="@+id/button6"**

 **app:layout\_constraintTop\_toBottomOf="@+id/searchView" />**

 **<Button**

 **android:id="@+id/FoodButton"**

 **android:layout\_width="117dp"**

 **android:layout\_height="47dp"**

 **android:layout\_marginTop="13dp"**

 **android:layout\_marginEnd="14dp"**

 **android:layout\_marginRight="14dp"**

 **android:text="@string/food"**

 **app:backgroundTint="@color/design\_default\_color\_on\_secondary"**

 **app:layout\_constraintEnd\_toStartOf="@+id/button5"**

 **app:layout\_constraintTop\_toBottomOf="@+id/searchView" />**

 **<SearchView**

 **android:id="@+id/searchView"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="0dp"**

 **android:layout\_marginStart="16dp"**

 **android:layout\_marginLeft="16dp"**

 **android:layout\_marginTop="80dp"**

 **android:layout\_marginEnd="16dp"**

 **android:layout\_marginRight="16dp"**

 **android:background="#FFFFFF"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent">**

 **</SearchView>**

 **<Button**

 **android:id="@+id/button7"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginTop="28dp"**

 **android:layout\_marginEnd="24dp"**

 **android:layout\_marginRight="24dp"**

 **android:text="@string/cart"**

 **app:backgroundTint="#1C1C1C"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **app:strokeColor="#373333" />**

 **<Button**

 **android:id="@+id/button8"**

 **android:layout\_width="92dp"**

 **android:layout\_height="82dp"**

 **android:layout\_marginStart="4dp"**

 **android:layout\_marginLeft="4dp"**

 **android:layout\_marginTop="20dp"**

 **android:text="@string/fast\_food"**

 **app:backgroundTint="#DD0A0A"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/FoodButton" />**

 **<Button**

 **android:id="@+id/button12"**

 **android:layout\_width="373dp"**

 **android:layout\_height="69dp"**

 **android:layout\_marginStart="10dp"**

 **android:layout\_marginLeft="10dp"**

 **android:layout\_marginEnd="10dp"**

 **android:layout\_marginRight="10dp"**

 **android:layout\_marginBottom="8dp"**

 **android:text="@string/tim\_hortons"**

 **app:backgroundTint="#0B0B0B"**

 **app:layout\_constraintBottom\_toTopOf="@+id/button13"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent" />**

 **<ImageView**

 **android:id="@+id/imageView2"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="124dp"**

 **android:layout\_marginLeft="124dp"**

 **android:layout\_marginTop="8dp"**

 **android:contentDescription="@string/todo"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **app:srcCompat="@drawable/jamz\_logo"**

 **tools:ignore="ContentDescription" />**

 **<Button**

 **android:id="@+id/button14"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="24dp"**

 **android:layout\_marginLeft="24dp"**

 **android:layout\_marginTop="28dp"**

 **android:text="@string/profile"**

 **app:backgroundTint="#0C0B0B"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent" />**

**</androidx.constraintlayout.widget.ConstraintLayout>**

Java Script

package com.example.mainpage;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;

import android.content.res.Configuration;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.content.Intent;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_main*);

 defineButtons();

 }

 public void defineButtons() {

 findViewById(R.id.*button7*).setOnClickListener(buttonClickListener);

 findViewById(R.id.*FoodButton*).setOnClickListener(buttonClickListener);

 }

 @SuppressLint("NonConstantResourceId")

 private final View.OnClickListener buttonClickListener = view -> {

 switch (view.getId()) {

 case R.id.*button7*:

 Intent intent = new Intent(MainActivity.this,Cart.class);

 startActivity(intent);

 break;

 case R.id.*FoodButton*:

 Intent food = new Intent(MainActivity.this,Select\_Page.class);

 startActivity(food);

 break;

 }

 };

}

**Selection Save Page**

**<?xml version="1.0" encoding="utf-8"?>**

**<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **android:orientation="vertical"**

 **android:layout\_margin="10dp"**

 **tools:context=".Select\_Page">**

 **<TextView**

 **android:id="@+id/yourorder"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="393dp"**

 **android:layout\_gravity="center"**

 **android:gravity="center"**

 **android:textSize="24sp"**

 **tools:text="Your Order" />**

 **<EditText**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="wrap\_content"**

 **android:hint="@string/enter\_order"**

 **android:id="@+id/enterorder"**

 **android:autofillHints="Enter Order" />**

 **<Button**

 **android:id="@+id/button20"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="wrap\_content"**

 **android:text="@string/save\_data"**

 **app:backgroundTint="#0F980F" />**

 **<Button**

 **android:id="@+id/button21"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="79dp"**

 **android:text="@string/procede\_to\_cart"**

 **app:backgroundTint="#050505" />**

**</LinearLayout>**

Java Script

package com.example.mainpage;

import android.annotation.SuppressLint;

import android.content.Intent;

import android.content.SharedPreferences;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Switch;

import android.widget.TextView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class Select\_Page extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_select\_\_page*);

 final EditText inputText=findViewById(R.id.*enterorder*);

 final TextView outputText=findViewById(R.id.*yourorder*);

 Button Add=findViewById(R.id.*button20*);

 Button Save=findViewById(R.id.*button21*);

 Add.setOnClickListener(new View.OnClickListener() {

 @Override

 public void onClick(View v) {

 String Value = inputText.getText().toString();

 outputText.setText(Value);

 }

 });

 Save.setOnClickListener(new View.OnClickListener(){

 @Override

 public void onClick(View v) {

 String Data = outputText.getText().toString();

 Intent intent = new Intent(Select\_Page.this, Cart.class);

 intent.putExtra("abc", Data);

 startActivity(intent);

 finish();

 }

 });

**Cart Page**

**<?xml version="1.0" encoding="utf-8"?>**

**<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **android:background="#FFFFFF"**

 **android:padding="10dp"**

 **android:visibility="visible"**

 **tools:context=".Cart">**

 **<TextView**

 **android:id="@+id/textView"**

 **android:layout\_width="397dp"**

 **android:layout\_height="301dp"**

 **android:gravity="center\_vertical"**

 **android:text="@string/cheese\_burger"**

 **android:textAlignment="center"**

 **android:textColor="#090909"**

 **android:textSize="40sp"**

 **tools:ignore="RtlCompat" />**

 **<Button**

 **android:id="@+id/button3"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_alignParentBottom="true"**

 **android:text="@string/proccede\_to\_checkout"**

 **app:backgroundTint="#0AAA11" />**

 **<Button**

 **android:id="@+id/button4"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_alignParentTop="true"**

 **android:text="@string/back\_to\_main\_page"**

 **app:backgroundTint="#AA0A0A" />**

**</RelativeLayout>**

Java Script

package com.example.mainpage;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.Button;

import android.content.Intent;

import android.widget.TextView;

public class Cart extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_cart*);

 Button button3 = findViewById(R.id.*button3*);

 Button button4 = findViewById(R.id.*button4*);

 button3.setOnClickListener(v -> {

 Intent inten3 = new Intent(Cart.this, Checkoutpage.class);

 startActivity(inten3);

 });

 button4.setOnClickListener(v -> {

 Intent inten4 = new Intent(Cart.this, MainActivity.class);

 startActivity(inten4);

 });

 }

}

**Checkout Page**

**<?xml version="1.0" encoding="utf-8"?>**

**<androidx.constraintlayout.widget.ConstraintLayout**

 **xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **tools:context=".Checkoutpage"**

 **tools:ignore="ExtraText">**

 **xmlns:android="http://schemas.android.com/apk/res/android"**

 **xmlns:app="http://schemas.android.com/apk/res-auto"**

 **xmlns:tools="http://schemas.android.com/tools"**

 **android:layout\_width="match\_parent"**

 **android:layout\_height="match\_parent"**

 **android:layout\_gravity="center"**

 **android:background="#FFFEFE"**

 **tools:context=".MainActivity">**

 **<Button**

 **android:id="@+id/button15"**

 **android:layout\_width="177dp"**

 **android:layout\_height="146dp"**

 **android:layout\_marginEnd="16dp"**

 **android:layout\_marginRight="16dp"**

 **android:layout\_marginBottom="21dp"**

 **android:text="@string/confirm\_order"**

 **android:textSize="18sp"**

 **app:backgroundTint="#0DD315"**

 **app:layout\_constraintBottom\_toBottomOf="parent"**

 **app:layout\_constraintEnd\_toEndOf="parent"/>**

 **<TextView**

 **android:id="@+id/editTextTextPostalAddress"**

 **android:layout\_width="362dp"**

 **android:layout\_height="48dp"**

 **android:layout\_marginStart="103dp"**

 **android:layout\_marginLeft="103dp"**

 **android:layout\_marginTop="79dp"**

 **android:layout\_marginEnd="102dp"**

 **android:layout\_marginRight="102dp"**

 **android:ems="10"**

 **android:gravity="center"**

 **android:text="@string/please\_enter\_address"**

 **android:textColor="#090909"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **android:autofillHints=""**

 **tools:ignore="LabelFor,TextViewEdits" />**

 **<TextView**

 **android:id="@+id/editTextNumber"**

 **android:layout\_width="295dp"**

 **android:layout\_height="41dp"**

 **android:layout\_marginStart="50dp"**

 **android:layout\_marginLeft="50dp"**

 **android:layout\_marginTop="28dp"**

 **android:layout\_marginEnd="50dp"**

 **android:layout\_marginRight="50dp"**

 **android:ems="10"**

 **android:gravity="center"**

 **android:text="@string/credit\_card"**

 **android:textColor="#121111"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPostalAddress" />**

 **<TextView**

 **android:id="@+id/editTextTextPersonName"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="50dp"**

 **android:layout\_marginLeft="50dp"**

 **android:layout\_marginTop="30dp"**

 **android:layout\_marginEnd="50dp"**

 **android:layout\_marginRight="50dp"**

 **android:ems="10"**

 **android:gravity="center"**

 **android:text="@string/coupon"**

 **android:textColor="#040303"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/editTextNumber" />**

 **<TextView**

 **android:id="@+id/textView2"**

 **android:layout\_width="91dp"**

 **android:layout\_height="25dp"**

 **android:layout\_marginStart="163dp"**

 **android:layout\_marginLeft="163dp"**

 **android:layout\_marginTop="18dp"**

 **android:layout\_marginEnd="163dp"**

 **android:layout\_marginRight="163dp"**

 **android:text="@string/food2"**

 **android:textColor="#0B0A0A"**

 **android:textSize="18sp"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintHorizontal\_bias="0.0"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/editTextTextPersonName" />**

 **<TextView**

 **android:id="@+id/textView3"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="176dp"**

 **android:layout\_marginLeft="176dp"**

 **android:layout\_marginTop="16dp"**

 **android:layout\_marginEnd="176dp"**

 **android:layout\_marginRight="176dp"**

 **android:gravity="center"**

 **android:text="@string/delivery"**

 **android:textColor="#050505"**

 **android:textSize="18sp"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/textView2" />**

 **<TextView**

 **android:id="@+id/textView4"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="176dp"**

 **android:layout\_marginLeft="176dp"**

 **android:layout\_marginTop="16dp"**

 **android:layout\_marginEnd="176dp"**

 **android:layout\_marginRight="176dp"**

 **android:text="@string/total"**

 **android:textColor="#020202"**

 **android:textSize="18sp"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toBottomOf="@+id/textView3" />**

 **<Button**

 **android:id="@+id/button14"**

 **android:layout\_width="177dp"**

 **android:layout\_height="146dp"**

 **android:layout\_marginStart="16dp"**

 **android:layout\_marginLeft="16dp"**

 **android:layout\_marginEnd="25dp"**

 **android:layout\_marginRight="25dp"**

 **android:layout\_marginBottom="21dp"**

 **android:text="@string/cancel\_order"**

 **android:textSize="18sp"**

 **app:backgroundTint="#EA0909"**

 **app:layout\_constraintBottom\_toBottomOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent" />**

 **<ImageView**

 **android:id="@+id/imageView"**

 **android:layout\_width="wrap\_content"**

 **android:layout\_height="wrap\_content"**

 **android:layout\_marginStart="127dp"**

 **android:layout\_marginLeft="127dp"**

 **android:layout\_marginEnd="127dp"**

 **android:layout\_marginRight="127dp"**

 **app:layout\_constraintEnd\_toEndOf="parent"**

 **app:layout\_constraintStart\_toStartOf="parent"**

 **app:layout\_constraintTop\_toTopOf="parent"**

 **app:srcCompat="@drawable/jamz\_logo"**

 **android:contentDescription="@string/todo"/>**

**</androidx.constraintlayout.widget.ConstraintLayout>**

Java Script

package com.example.mainpage;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.widget.Button;

import android.content.Intent;

public class Checkoutpage extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.*activity\_checkoutpage*);

 Button button14 = findViewById(R.id.*button14*);

 button14.setOnClickListener(v -> {

 Intent intent=new Intent(Checkoutpage.this,Cart.class);

 startActivity(intent);

 });

 }

}

**Section B- Track Order page**

**Logo From Track Order Page: (XML)**

 <ImageView

 android:id="@+id/imageView"

 android:layout\_width="141dp"

 android:layout\_height="48dp"

 android:layout\_gravity="center\_horizontal"

 android:visibility="visible"

 app:srcCompat="@drawable/jamz"

 tools:visibility="visible" />

**Status of Drone Indicator Image: (XML)**

 <ImageView

 android:id="@+id/imageView2"

 android:layout\_width="wrap\_content"

 android:layout\_height="127dp"

 android:layout\_weight="1"

 android:visibility="visible"

 app:srcCompat="@drawable/jamstraffic"

 tools:visibility="visible" />

**Status of Drone Indicator Text: (XML)**

 <LinearLayout

 android:layout\_width="291dp"

 android:layout\_height="match\_parent"

 android:orientation="vertical">

 <TextView

 android:id="@+id/textView2"

 android:layout\_width="wrap\_content"

 android:layout\_height="35dp"

 android:text="PREPARING YOUR FOOD"

 android:textColor="#000000"

 android:textSize="20sp" />

 <TextView

 android:id="@+id/textView"

 android:layout\_width="wrap\_content"

 android:layout\_height="30dp"

 android:text="CONFIRMING YOUR ORDER"

 android:textColor="@android:color/black"

 android:textSize="20sp" />

 <TextView

 android:id="@+id/textView3"

 android:layout\_width="wrap\_content"

 android:layout\_height="35dp"

 android:text="FLYING YOUR FOOD"

 android:textColor="@android:color/black"

 android:textSize="20sp" />

 <TextView

 android:id="@+id/textView4"

 android:layout\_width="wrap\_content"

 android:layout\_height="30dp"

 android:text="YOUR ORDER HAS ARRIVED"

 android:textColor="@android:color/black"

 android:textSize="20sp" />

 </LinearLayout>

**Track Your Flying Food Text: (XML)**

 <TextView

 android:id="@+id/textView5"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_gravity="center\_horizontal"

 android:text="TRACK YOUR FLYING FOOD"

 android:textColor="@android:color/black"

 android:textSize="20sp" />

**Compass Icon & Map Button: (XML)**

 <LinearLayout

 android:layout\_width="match\_parent"

 android:layout\_height="wrap\_content"

 android:orientation="horizontal">

 <ImageView

 android:id="@+id/imageView3"

 android:layout\_width="70dp"

 android:layout\_height="70dp"

 android:layout\_weight="1"

 android:visibility="visible"

 app:srcCompat="@drawable/compass"

 tools:visibility="visible" />

 <Button

 android:id="@+id/button3"

 android:layout\_width="340dp"

 android:layout\_height="match\_parent"

 android:background="#FFFFFF"

 android:text="Show Map"

 android:textAppearance="@style/TextAppearance.AppCompat.Large"

 android:textColor="#E9533F"

 android:textSize="50sp"

 android:textStyle="bold|italic"

 android:typeface="monospace"

 android:onClick="Map"/>

 </LinearLayout>

**Drone Text: (XML)**

 <TextView

 android:id="@+id/textView6"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_gravity="center\_horizontal"

 android:text="DO YOU SEE THE DRONE?"

 android:textColor="@android:color/black"

 android:textSize="27sp" />

**Yes / No Buttons: (XML)**

 <LinearLayout

 android:layout\_width="match\_parent"

 android:layout\_height="wrap\_content"

 android:orientation="horizontal">

 <Space

 android:layout\_width="100dp"

 android:layout\_height="match\_parent"

 android:layout\_weight="1" />

 <TextView

 android:id="@+id/textView7"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:text="YES"

 android:textSize="23sp"

 android:onClick="Yesbutton"/>

 <Space

 android:layout\_width="100dp"

 android:layout\_height="match\_parent" />

 <TextView

 android:id="@+id/textView8"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:text="NO"

 android:textSize="23sp"

 android:onClick="Nobutton"/>

 <Space

 android:layout\_width="100dp"

 android:layout\_height="match\_parent"

 android:layout\_weight="1" />

 </LinearLayout>

**Inputting Map with API: (XML)**

android:id="@+id/map" android:name="com.google.android.gms.maps.SupportMapFragment" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".MapsActivity" />

**Activate Flashing Lights & Activate Sound Beacon Buttons:**

 <Button

 android:id="@+id/button"

 style="@android:style/Widget.Button"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_gravity="center\_horizontal"

 android:background="@android:color/white"

 android:text="ACTIVATE FLASHING LIGHTS" />

 <Button

 android:id="@+id/button2"

 style="@android:style/Widget.Button"

 android:layout\_width="wrap\_content"

 android:layout\_height="wrap\_content"

 android:layout\_gravity="center\_horizontal"

 android:background="@android:color/white"

 android:text="ACTIVATE SOUND BEACON" />

**JAVA CODE FOR SECTION B**

**Google Maps:**

 <resources>

 <!--

 TODO: Before you run your application, you need a Google Maps API key.

 To get one, follow this link, follow the directions and press "Create" at the end:

 https://console.developers.google.com/flows/enableapi?apiid=maps\_android\_backend&keyType=CLIENT\_SIDE\_ANDROID&r=37:B3:60:73:13:AF:92:4D:8F:9E:B5:6B:09:1B:7F:5B:DC:98:5D:AD%3Bcom.example.jamz

 You can also add your credentials to an existing key, using these values:

 Package name:

 37:B3:60:73:13:AF:92:4D:8F:9E:B5:6B:09:1B:7F:5B:DC:98:5D:AD

 SHA-1 certificate fingerprint:

 37:B3:60:73:13:AF:92:4D:8F:9E:B5:6B:09:1B:7F:5B:DC:98:5D:AD

 Alternatively, follow the directions here:

 https://developers.google.com/maps/documentation/android/start#get-key

 Once you have your key (it starts with "AIza"), replace the "google\_maps\_key"

 string in this file.

 -->

 <string name="google\_maps\_key" templateMergeStrategy="preserve" translatable="false">AIzaSyA4SG0y-xYWr\_Ty1Tmi1AgnsB--KNVumHc

 </string>

 </resources>

**Link for API:**

<https://console.developers.google.com/flows/enableapi?apiid=maps_android_backend&keyType=CLIENT_SIDE_ANDROID&r=37:B3:60:73:13:AF:92:4D:8F:9E:B5:6B:09:1B:7F:5B:DC:98:5D:AD%3Bcom.example.jamz>

**Java Code For Section B:**

 package com.example.jamz;

 import androidx.appcompat.app.AppCompatActivity;

 import android.content.Intent;

 import android.os.Bundle;

 import android.view.View;

 public class MainActivity extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.activity\_main);

 }

 public void Nobutton(View view) {

 Intent intent = new Intent(getApplicationContext(), Main2Activity.class);

 startActivityForResult(intent, 0);

 }

 public void Map(View view) {

 Intent intent = new Intent(getApplicationContext(), MapsActivity.class);

 startActivityForResult(intent, 0);

 }

 }

 --------------------------------------------------------------------------------------------------------------------

 package com.example.jamz;

 import androidx.appcompat.app.AppCompatActivity;

 import android.content.Intent;

 import android.os.Bundle;

 import android.view.View;

 public class Main2Activity extends AppCompatActivity {

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.activity\_main2);

 }

 public void Yesbutton(View view) {

 Intent intent = new Intent(getApplicationContext(), MainActivity.class);

 startActivityForResult(intent, 0);

 }

 }

 --------------------------------------------------------------------------------------------------------------------

 package com.example.jamz;

 import androidx.fragment.app.FragmentActivity;

 import android.os.Bundle;

 import com.google.android.gms.maps.CameraUpdateFactory;

 import com.google.android.gms.maps.GoogleMap;

 import com.google.android.gms.maps.OnMapReadyCallback;

 import com.google.android.gms.maps.SupportMapFragment;

 import com.google.android.gms.maps.model.LatLng;

 import com.google.android.gms.maps.model.MarkerOptions;

 public class MapsActivity extends FragmentActivity implements OnMapReadyCallback {

 private GoogleMap mMap;

 @Override

 protected void onCreate(Bundle savedInstanceState) {

 super.onCreate(savedInstanceState);

 setContentView(R.layout.activity\_maps);

 // Obtain the SupportMapFragment and get notified when the map is ready to be used.

 SupportMapFragment mapFragment = (SupportMapFragment) getSupportFragmentManager()

 .findFragmentById(R.id.map);

 mapFragment.getMapAsync(this);

 }

 /\*\*

 \* Manipulates the map once available.

 \* This callback is triggered when the map is ready to be used.

 \* This is where we can add markers or lines, add listeners or move the camera. In this case,

 \* we just add a marker near Sydney, Australia.

 \* If Google Play services is not installed on the device, the user will be prompted to install

 \* it inside the SupportMapFragment. This method will only be triggered once the user has

 \* installed Google Play services and returned to the app.

 \*/

 @Override

 public void onMapReady(GoogleMap googleMap) {

 mMap = googleMap;

 // Add a marker in Toronto and move the camera

 LatLng toronto = new LatLng(-34, 151);

 mMap.addMarker(new MarkerOptions().position(toronto).title("Marker in Toronto"));

 mMap.moveCamera(CameraUpdateFactory.newLatLng(toronto));

 }

 }

**Appendix C**

**Links to video demonstrations:**

<https://youtu.be/WjO6BamguBQ>

<https://youtu.be/9E0C-5zhglM>

<https://youtu.be/xXVJFdfQtmk>

<https://youtu.be/D_ZWAXBtkOY>