

Sarawak Campus

Assignment Cover Sheet



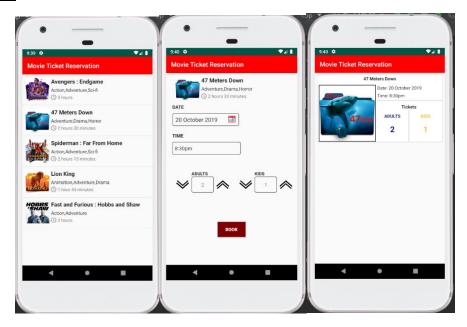


ASSIGNMENT DETA	AILS			
Unit Code		Unit Title		
Tutorial/Lab Group		Lecturer/Tutor Name		
Assignment Title				
Due date		Date Received		
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Student 1			Darren Frederick Chan Chyun Yaw	Digitally signed by Darren Frederick Chan Chyun Yaw Date: 2019.10.18 17:48:29 +08'00'
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Student 1				
Student 2				
Student 3				
Student 4				
Student 5				
MARKER'S COMMENTS				
Total Mark		Marker's Signature	Date	
EXTENSION CERTIF	FICATE			
This assignment has been given an extension by				
Unit Convenor				
Extended due date		Date Received		

COS30017 – Software Development for Mobile Devices

Formative Assignment 3

Task 1 Screenshots



Java Code for Main Activity

package com.example.movieticketreservation;

import androidx.annotation.Nullable;

import androidx.appcompat.app.AppCompatActivity;

import androidx.cardview.widget.CardView;

import androidx.recyclerview.widget.DividerItemDecoration;

import androidx.recyclerview.widget.LinearLayoutManager;

import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;

import android.media.lmage;

import android.os.Bundle;

import android.util.Log;

import android.view.View;

import android.widget.ImageView;

import android.widget.TextView;

import java.text.SimpleDateFormat;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

private RecyclerView recyclerView;

private ArrayList<Movie> movieList;

private RecyclerViewAdapter adapter;

//summary

private CardView cardView;

 $private\ TextView\ ticket_adult_num, ticket_kid_num, title, date, time;$

private ImageView imageView;

```
private Movie movie;
  private Reservation reservation;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    movieList=Movie.createMovieList(this);
    initRecycler();
    initCardView();
  }
  private void initRecycler(){
    recvclerView=findViewBvId(R.id.recvclerView):
    recyclerView.setLayoutManager(new LinearLayoutManager(this));
    DividerItemDecoration divide=new
DividerItemDecoration(this,DividerItemDecoration.VERTICAL);
    recyclerView.addItemDecoration(divide);
    adapter=new RecyclerViewAdapter(movieList);
    recyclerView.setAdapter(adapter);
  private void initCardView(){
    cardView=findViewById(R.id.cardView);
    ticket adult num=findViewByld(R.id.textView adult tickets num);
    ticket_kid_num=findViewById(R.id.textView_child_tickets_num);
    title=findViewById(R.id.title);
    date=findViewById(R.id.textView_date);
    time=findViewById(R.id.textView_time);
    imageView=findViewById(R.id.imageView);
  }
  @Override
  protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if(requestCode==999 && resultCode==RESULT_OK){
       cardView.setVisibility(View.VISIBLE);
       recyclerView.setVisibility(View.GONE);
       //movie=data.getParcelableExtra("reservation");
       reservation=data.getParcelableExtra("reservation");
resID=getResources().getIdentifier(reservation.getImageName(),"drawable",getPackageName());
       imageView.setImageResource(resID);
       title.setText(reservation.getTitle());
       date.setText("Date: "+reservation.getSelected_date());
       time.setText("Time: "+reservation.getSelected_time());
       ticket adult num.setText(reservation.getAdults());
       ticket_kid_num.setText(reservation.getChild());
    }
  }
}
Java Code for SecondActivity
package com.example.movieticketreservation;
import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.DividerItemDecoration;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
```

```
import android.app.DatePickerDialog;
import android.content.Intent;
import android.database.DatabaseErrorHandler;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.DatePicker;
import android.widget.EditText;
import android.widget.ImageView;
import android, widget, Spinner:
import android.widget.TextView;
import android.widget.Toast;
import java.text.DateFormat;
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Calendar;
import java.util.Date;
public class SecondActivity extends AppCompatActivity implements
DatePickerDialog.OnDateSetListener {
  private RecyclerView recyclerView;
  private ArrayList<Movie> movieList; //add selected Movie into this ArrayList after extraction from
bundle
  private RecyclerViewAdapter adapter;
  private Movie movie;
  //calender
  private TextView textView calendar:
  private Date currentDate;
  private Date selectedDate;//to be packaged
  //spinner
  private Spinner spinner;
  private ArrayAdapter<String> timeAdapter;
  private String selectedTime="";//to be packaged
  //tickets
  private TextView adult,kid;
  private ImageView adult_up,adult_down,kid_up,kid_down;
  private int ticket adult=0;//to be packaged
  private int ticket_kid=0;//to be packaged
  //book
  private Button book;
  //reservation
  Reservation reservation; //to be packaged
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_second);
    movieList=new ArrayList<>();
    if(getIntent().hasExtra("selected_movie")){
```

```
movie=getIntent().getParcelableExtra("selected_movie");
     movieList.add(movie);
  reservation=new Reservation(movie);
  initRecycler();
  initCalendar();
  initSpinner();
  initButtons();
private int calcDays(){
  long curDate=currentDate.getTime();
  long selDate=selectedDate.getTime();
  int result=(int)((selDate-curDate)/(24*60*60*1000))+1;
  return result:
private void initButtons(){
  adult=findViewById(R.id.textView_numAdult);
  kid=findViewById(R.id.textView_numKid);
  adult.setText(String.valueOf(ticket_adult));
  kid.setText(String.valueOf(ticket_kid));
  adult up=findViewById(R.id.imageView adult up);
  adult down=findViewById(R.id.imageView adult down);
  adult_up.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
       ticket_adult++;
       adult.setText(String.valueOf(ticket adult));
  });
  adult down.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
       if(ticket adult<=0){
          ticket adult=0:
          adult.setText(String.valueOf(ticket_adult));
       }else{
          ticket_adult--;
          adult.setText(String.valueOf(ticket_adult));
       }
    }
  kid up=findViewByld(R.id.imageView kid up);
  kid_down=findViewById(R.id.imageView_kid_down);
  kid_up.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
       ticket kid++;
       kid.setText(String.valueOf(ticket kid));
    }
  });
  kid down.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
       if(ticket kid<=0){
          ticket kid=0:
          kid.setText(String.valueOf(ticket_kid));
       }else {
          ticket_kid--;
```

```
kid.setText(String.valueOf(ticket_kid));
       }
    }
  });
  book=findViewById(R.id.button book);
  book.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
       int days=calcDays();
       if(days > = 4 || days < = 0){
          Toast.makeText(getApplicationContext(),
               "Invalid selected data, please reselect"
               .Toast.LENGTH SHORT).show():
       }else if(ticket kid==0 && ticket adult==0){
         Toast.makeText(getApplicationContext(),"You must purchase a ticket to book"
              ,Toast.LENGTH SHORT).show();
       }
       else {
         SimpleDateFormat sdf = new SimpleDateFormat("d MMMM yyyy");
         String temp = sdf.format(selectedDate);
         reservation.setSelected_date(temp);
         reservation.setSelected time(selectedTime);
         reservation.setAdults(String.valueOf(ticket_adult));
         reservation.setChild(String.valueOf(ticket_kid));
         Intent intent = new Intent(getApplicationContext(), MainActivity.class);
         intent.putExtra("reservation", reservation);
         setResult(RESULT_OK, intent);
         finish();
    }
  });
private void initSpinner(){
  spinner=findViewById(R.id.spinner);
  String[] time=movieList.get(0).getShowtime();
  timeAdapter=new ArrayAdapter<String>(this,android.R.layout.simple_spinner_item
       ,time);
  timeAdapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
  spinner.setAdapter(timeAdapter);
  spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
     @Override
     public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {
       selectedTime = spinner.getSelectedItem().toString();
    }
     @Override
    public void onNothingSelected(AdapterView<?> parent) {
       selectedTime = movieList.get(0).getShowtime()[0];
  });
private void initCalendar() {
  Calendar calendar=Calendar.getInstance();
  currentDate=calendar.getTime():
  textView calendar=findViewById(R.id.editText date);
  textView_calendar.setOnClickListener(new View.OnClickListener(){
     @Override
     public void onClick(View v) {
```

```
showDatePickerDialog();
       }
    });
  private void showDatePickerDialog(){
    DatePickerDialog datePickerDialog=new DatePickerDialog(this,this,
         Calendar. getInstance().get(Calendar. YEAR),
         Calendar. getInstance().get(Calendar. MONTH),
         Calendar.getInstance().get(Calendar.DAY_OF_MONTH)
    datePickerDialog.show();
  }
  @Override
  public void onDateSet(DatePicker view, int year, int month, int dayOfMonth) {
    String temp=dayOfMonth+" "+(month+1)+" "+year;
    SimpleDateFormat sdf=new SimpleDateFormat("d M yyyy");
    try {
       selectedDate=sdf.parse(temp);
       sdf=new SimpleDateFormat("d MMMM yyyy");
       sdf.format(selectedDate);
       textView_calendar.setText(sdf.format(selectedDate));
    } catch (ParseException e) {
       e.printStackTrace();
  }
  private void initRecycler() {
    recyclerView=findViewById(R.id.second_recycler_view);
    recyclerView.setLayoutManager(new LinearLayoutManager(this));
    adapter=new RecyclerViewAdapter(movieList);
    recyclerView.setAdapter(adapter);
  }
Java Code for RecyclerViewAdapter
package com.example.movieticketreservation;
import android.app.Activity;
import android.content.Context;
import android.content.Intent;
import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
import androidx.annotation.NonNull;
import androidx.recyclerview.widget.RecyclerView;
import java.util.ArrayList;
public class RecyclerViewAdapter extends
```

```
RecyclerView.Adapter<RecyclerViewAdapter.ViewHolder>{
  private ArrayList<Movie> movieList;
  public RecyclerViewAdapter(ArrayList<Movie> movieList) {
    this.movieList = movieList;
  }
  @NonNull
  @Override
  public ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
     View view= LayoutInflater.from(parent.getContext()).inflate(R.layout.movie_layout,
         parent, false);
    return new ViewHolder(view);
  }
  @Override
  public void onBindViewHolder(@NonNull ViewHolder holder, int position) {
    Movie movie=movieList.get(position);
    int resID=holder.imageView.getResources().getIdentifier(movie.getImageName(),
          "drawable",holder.imageView.getContext().getPackageName());
    holder.imageView.setImageResource(resID);
    holder.title.setText(movie.getTitle());
    holder.genre.setText(movie.getGenre());
    holder.duration.setText(movie.getDuration());
  }
  @Override
  public int getItemCount() {
    return movieList.size();
  public class ViewHolder extends RecyclerView.ViewHolder implements View.OnClickListener{
     public ImageView imageView;
    public TextView title, genre, duration;
    public ViewHolder(@NonNull View itemView) {
       super(itemView);
       imageView=itemView.findViewByld(R.id.imageView);
       title=itemView.findViewById(R.id.textView_title);
       genre=itemView.findViewById(R.id.textView_genre);
       duration=itemView.findViewByld(R.id.textView duration);
       itemView.setOnClickListener(this);
    }
     @Override
     public void onClick(View v) {
       int pos=getAdapterPosition();
       Intent intent=new Intent(v.getContext(),SecondActivity.class);
       intent.putExtra("selected_movie",movieList.get(pos));
       ((Activity)v.getContext()).startActivityForResult(intent,999);
    }
  }
}
```

Java Code for Movie Class

```
package com.example.movieticketreservation;
import android.content.Context;
import android.os.Parcel;
import android.os.Parcelable;
import java.util.ArrayList;
public class Movie implements Parcelable {
  private String title;
  private String genre;
  private String[] showtime;
  private String duration;
  private String imageName;
  public Movie(String title, String genre, String[] showtime, String duration, String imageName) {
     this.title = title;
     this.genre = genre;
     this.showtime = showtime;
     this.duration = duration;
     this.imageName=imageName;
  }
  protected Movie(Parcel in) {
     title = in.readString();
     genre = in.readString();
     showtime = in.createStringArray();
     duration = in.readString();
     imageName=in.readString();
  }
  public static final Creator<Movie> CREATOR = new Creator<Movie>() {
     @Override
     public Movie createFromParcel(Parcel in) {
       return new Movie(in);
     @Override
     public Movie[] newArray(int size) {
       return new Movie[size];
  };
  public String getDuration() {
     return duration;
  }
  public void setDuration(String duration) {
     this.duration = duration;
  }
  public String getTitle() {
     return title;
```

```
}
  public void setTitle(String title) {
    this.title = title;
  public String getGenre() {
    return genre;
  public void setGenre(String genre) {
    this.genre = genre;
  public String[] getShowtime() {
    return showtime;
  public void setShowtime(String[] showtime) {
    this.showtime = showtime;
  public String getImageName() {
    return imageName;
  public void setImageName(String imageName) {
    this.imageName = imageName;
  public static ArrayList<Movie> createMovieList(Context context){
     ArrayList<Movie> movieList=new ArrayList<>();
    movieList.add(new Movie("Avengers: Endgame", "Action, Adventure, Sci-
fi",context.getResources().getStringArray(R.array.avengers),"3 hours","avengers"));
     movieList.add(new Movie("47 Meters
Down", "Adventure, Drama, Horror", context.getResources().getStringArray(R.array.meters), "2 hours 30
minutes", "meters"));
     movieList.add(new Movie("Spiderman: Far From Home", "Action, Adventure, Sci-
fi",context.getResources().getStringArray(R.array.spiderman),"2 hours 15 minutes", "spiderman"));
    movieList.add(new Movie("Lion
King", "Animation, Adventure, Drama", context.getResources().getStringArray(R.array.lionking), "1 hour
45 minutes", "lion_king"));
    movieList.add(new Movie("Fast and Furious: Hobbs and
Shaw", "Action, Adventure", context.getResources().getStringArray(R.array.hobbs), "2 hours", "hobbs"));
    return movieList:
  }
  @Override
  public int describeContents() {
    return 0;
  @Override
  public void writeToParcel(Parcel dest, int flags) {
     dest.writeString(title);
    dest.writeString(genre);
    dest.writeStringArray(showtime);
    dest.writeString(duration);
    dest.writeString(imageName);
```

```
}
Java Code for Reservation Class
package com.example.movieticketreservation;
import android.os.Parcel;
import android.os.Parcelable;
public class Reservation implements Parcelable {
  private String title:
  private String imageName;
  private String selected_time;
  private String selected_date;
  private String adults;
  private String child;
  protected Reservation(Parcel in) {
    title = in.readString();
    imageName = in.readString();
    selected_time = in.readString();
    selected_date = in.readString();
    adults = in.readString();
    child = in.readString();
  }
  public static final Creator<Reservation> CREATOR = new Creator<Reservation>() {
     @Override
    public Reservation createFromParcel(Parcel in) {
       return new Reservation(in);
     @Override
    public Reservation[] newArray(int size) {
       return new Reservation[size];
  };
  public String getTitle() {
    return title;
  }
  public void setTitle(String title) {
    this.title = title;
  }
  public String getImageName() {
    return imageName;
  }
  public void setImageName(String imageName) {
    this.imageName = imageName;
  }
  public String getSelected_time() {
    return selected_time;
  public void setSelected_time(String selected_time) {
    this.selected_time = selected_time;
```

```
}
public String getSelected_date() {
  return selected_date;
}
public void setSelected_date(String selected_date) {
  this.selected_date = selected_date;
}
public String getAdults() {
  return adults;
public void setAdults(String adults) {
  this.adults = adults;
public String getChild() {
  return child;
public void setChild(String child) {
  this.child = child;
public Reservation(Movie movie) {
  this.title = movie.getTitle();
  this.imageName = movie.getImageName();
  this.selected_time = "";
  this.selected_date = "";
  this.adults = "";
  this.child = "";
}
@Override
public int describeContents() {
  return 0;
}
@Override
public void writeToParcel(Parcel dest, int flags) {
  dest.writeString(title);
  dest.writeString(imageName);
  dest.writeString(selected_time);
  dest.writeString(selected_date);
  dest.writeString(adults);
  dest.writeString(child);
}
```

}

Task 2

XML for Main

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
  android:id="@+id/layout"
  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:orientation="vertical"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  tools:context=".MainActivity"/>
```

```
XML for Fragment One
<?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">
  <lmageView
    android:id="@+id/title"
    android:layout width="358dp"
    android:layout height="71dp"
    android:contentDescription="@string/titleImage"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout constraintTop toTopOf="parent"
    app:srcCompat="@drawable/title"/>
  <ImageView</pre>
    android:id="@+id/burger main"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:adjustViewBounds="true"
    android:contentDescription="@string/burgerMainImage"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout constraintTop toBottomOf="@id/title"
    app:srcCompat="@drawable/burger main"/>
  <lmageView
    android:id="@+id/ingredient"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:contentDescription="@string/ingredientImage"
    app:layout constraintEnd toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/burger main"
    app:srcCompat="@drawable/ingredient"/>
  <androidx.constraintlayout.widget.Guideline
    android:id="@+id/guideline"
    android:layout width="wrap content"
```

android:layout_height="wrap_content"

```
android:orientation="vertical"
  app:layout constraintGuide begin="20dp" />
<ImageView</pre>
  android:id="@+id/meat"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:contentDescription="@string/meatImage"
  app:layout_constraintStart_toEndOf="@id/guideline"
  app:layout_constraintTop_toBottomOf="@id/ingredient"
  app:srcCompat="@drawable/meat"/>
<TextView
  android:id="@+id/protein"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginStart="5dp"
  android:layout_marginTop="8dp"
  android:text="@string/protein"
  android:textColor="@color/font"
  android:textSize="18sp"
  app:layout_constraintStart_toEndOf="@id/meat"
  app:layout_constraintTop_toTopOf="@id/meat" />
<LinearLayout
  android:id="@+id/hori1"
  android:layout_width="260dp"
  android:layout_height="1dp"
  android:layout_marginStart="3dp"
  android:layout_marginTop="13dp"
  android:background="@color/primary"
  android:orientation="horizontal"
  app:layout constraintStart toEndOf="@id/protein"
  app:layout_constraintTop_toTopOf="@id/protein"/>
<RadioGroup
  android:id="@+id/radioGroup"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:orientation="horizontal"
  app:layout_constraintStart_toEndOf="@id/guideline"
  app:layout_constraintTop_toBottomOf="@id/meat">
  <RadioButton
    android:id="@+id/beef"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="10dp"
    android:layout_marginEnd="10dp"
    android:layout_weight="1"
    android:text="@string/beef"/>
  <RadioButton
    android:id="@+id/chicken"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_marginEnd="10dp"
    android:layout_weight="1"
    android:text="@string/chicken"/>
```

```
<RadioButton
    android:id="@+id/fish"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout marginEnd="10dp"
    android:layout_weight="1"
    android:text="@string/fish"/>
  <RadioButton
    android:id="@+id/egg"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginEnd="10dp"
    android:lavout weight="1"
    android:text="@string/egg"/>
</RadioGroup>
<ImageView
  android:id="@+id/salad"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="5dp"
  android:contentDescription="@string/saladImage"
  app:layout constraintStart toEndOf="@id/quideline"
  app:layout_constraintTop_toBottomOf="@id/radioGroup"
  app:srcCompat="@drawable/salad"/>
<TextView
  android:id="@+id/fiber"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:layout marginStart="5dp"
  android:layout marginTop="8dp"
  android:text="@string/fiber"
  android:textColor="@color/font"
  android:textSize="18sp"
  app:layout constraintStart toEndOf="@id/salad"
  app:layout_constraintTop_toTopOf="@id/salad"/>
<LinearLayout
  android:id="@+id/hori2"
  android:layout_width="277dp"
  android:layout_height="1dp"
  android:layout marginStart="3dp"
  android:layout_marginTop="13dp"
  android:background="@color/primary"
  android:orientation="horizontal"
  app:layout_constraintStart_toEndOf="@id/fiber"
  app:layout constraintTop toTopOf="@id/fiber"/>
<CheckBox
  android:id="@+id/lettuce"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginStart="10dp"
  android:text="@string/lettuce"
  app:layout_constraintStart_toEndOf="@id/guideline"
  app:layout_constraintTop_toBottomOf="@id/salad" />
```

<CheckBox

```
android:id="@+id/tomato"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginStart="20dp"
  android:text="@string/tomato"
  app:layout constraintStart toEndOf="@id/lettuce"
  app:layout_constraintTop_toBottomOf="@id/salad" />
<CheckBox
  android:id="@+id/pickle"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginStart="20dp"
  android:text="@string/pickle"
  app:layout constraintStart toEndOf="@id/tomato"
  app:layout_constraintTop_toBottomOf="@id/salad"/>
<CheckBox
  android:id="@+id/onion"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="20dp"
  android:text="@string/onion"
  app:layout_constraintStart_toEndOf="@id/pickle"
  app:layout_constraintTop_toBottomOf="@id/salad"/>
<LinearLayout
  android:id="@+id/dot1"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:background="@drawable/dot"
  android:orientation="horizontal"
  app:layout constraintBottom toBottomOf="@id/guideline2"
  app:layout constraintStart toStartOf="parent"
  app:layout constraintEnd toEndOf="parent"
  android:layout_marginEnd="10dp"/>
<LinearLayout
  android:id="@+id/dot2"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:orientation="horizontal"
  android:background="@drawable/dot_mute"
  app:layout constraintBottom toBottomOf="@id/guideline2"
  app:layout_constraintStart_toEndOf="@id/dot1"
  android:layout_marginStart="10dp"
  />
<androidx.constraintlayout.widget.Guideline
  android:id="@+id/guideline2'
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:orientation="horizontal"
  app:layout constraintGuide begin="581dp" />
```

</androidx.constraintlayout.widget.ConstraintLayout>

```
XML for Fragment Two
```

```
<?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=".FragmentTwo">
  <ImageView</pre>
    android:id="@+id/burger2"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:layout_marginTop="15dp"
    android:adjustViewBounds="true"
    android:contentDescription="@string/burger2Image"
    android:src="@drawable/burger2"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <ImageView
    android:id="@+id/juice"
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:contentDescription="@string/juiceImage"
    android:src="@drawable/juice"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/burger2" />
  <androidx.constraintlayout.widget.Guideline
    android:id="@+id/guideline3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    app:layout constraintGuide end="391dp" />
  <lmageView
    android:id="@+id/cheese2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:contentDescription="@string/cheese2Image"
    android:src="@drawable/cheese2"
    app:layout_constraintStart_toEndOf="@id/guideline3"
    app:layout constraintTop toBottomOf="@id/juice"/>
  <TextView
    android:id="@+id/vummvfat"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginStart="5dp"
    android:layout_marginTop="8dp"
    android:text="@string/yummyfat"
    android:textColor="@color/font"
    android:textSize="18sp"
    app:layout constraintStart toEndOf="@id/cheese2"
    app:layout_constraintTop_toTopOf="@id/cheese2" />
```

```
<LinearLayout
  android:id="@+id/hori3"
  android:layout_width="230dp"
  android:layout_height="1dp"
  android:layout_marginStart="3dp"
  android:layout_marginTop="13dp"
  android:background="@color/primary"
  android:orientation="horizontal"
  app:layout\_constraintStart\_toEndOf="@id/yummvfat"
  app:layout constraintTop toTopOf="@id/yummyfat"/>
<CheckBox
  android:id="@+id/cheese"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout_marginStart="10dp"
  android:text="@string/cheese"
  app:layout_constraintStart_toEndOf="@id/guideline3"
  app:layout_constraintTop_toBottomOf="@id/cheese2" />
<CheckBox
  android:id="@+id/mayo"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="20dp"
  android:text="@string/mayo"
  app:layout_constraintStart_toEndOf="@id/cheese"
  app:layout constraintTop toBottomOf="@id/cheese2"/>
<CheckBox
  android:id="@+id/mustard"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginStart="20dp"
  android:text="@string/mustard"
  app:layout constraintStart toEndOf="@id/mayo"
  app:layout_constraintTop_toBottomOf="@id/cheese2" />
<LinearLayout
  android:id="@+id/hori4"
  android:layout_width="402dp"
  android:layout_height="1dp"
  android:layout marginStart="3dp"
  android:layout_marginTop="13dp"
  android:background="@color/primary"
  android:orientation="horizontal"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@id/cheese" />
<TextView
  android:id="@+id/size"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginTop="10dp"
  android:text="@string/size"
  android:textColor="@color/font"
  android:textSize="18sp"
  android:textStyle="bold"
```

```
app:layout_constraintStart_toEndOf="@id/guideline3"
  app:layout constraintTop toBottomOf="@id/hori4"/>
<androidx.appcompat.widget.AppCompatSpinner
  android:id="@+id/spinner"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="10dp"
  app:layout_constraintStart_toEndOf="@id/size"
  app:layout constraintTop toBottomOf="@id/hori4"/>
<TextView
  android:id="@+id/vourorder"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:layout marginTop="10dp"
  android:text="@string/yourorder"
  android:textColor="@color/primary"
  android:textStyle="bold"
  app:layout_constraintStart_toEndOf="@id/guideline4"
  app:layout_constraintTop_toBottomOf="@id/hori4" />
<ImageView</pre>
  android:id="@+id/burger"
  android:contentDescription="@string/burgerImage"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="15dp"
  android:layout_marginTop="10dp"
  android:src="@drawable/burger"
  app:layout constraintStart toEndOf="@id/yourorder"
  app:layout constraintTop toBottomOf="@id/hori4"/>
<androidx.constraintlayout.widget.Guideline
  android:id="@+id/quideline4"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:orientation="vertical"
  app:layout_constraintGuide_begin="217dp" />
<TextView
  android:id="@+id/summary"
  android:layout_width="180dp"
  android:layout height="80dp"
  android:text="@string/placeholder"
  android:textColor="@color/primary"
  app:layout_constraintStart_toEndOf="@id/guideline4"
  app:layout_constraintTop_toBottomOf="@id/burger" />
<TextView
  android:id="@+id/price"
  android:layout width="100dp"
  android:layout height="30dp"
  android:background="@color/price"
  android:gravity="center"
  android:text="@string/priceplaceholder"
  android:textColor="@color/primary"
  android:textStyle="bold"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintStart_toEndOf="@id/guideline4"
```

```
app:layout_constraintTop_toBottomOf="@id/guideline5" />
<androidx.constraintlayout.widget.Guideline
  android:id="@+id/guideline5'
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:orientation="horizontal"
  app:layout_constraintGuide_begin="501dp" />
<androidx.constraintlayout.widget.Guideline
  android:id="@+id/guideline6"
  android:layout width="wrap content"
  android:layout height="wrap content"
  android:orientation="horizontal"
  app:layout constraintGuide begin="581dp" />
<LinearLayout
  android:id="@+id/dot1F2"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:background="@drawable/dot_mute"
  android:orientation="horizontal"
  app:layout constraintBottom toTopOf="@id/guideline6"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintEnd_toEndOf="parent"
  android:layout_marginEnd="10dp"/>
<LinearLayout
  android:id="@+id/dot2F2"
  android:layout_width="wrap_content"
  android:layout height="wrap content"
  android:orientation="horizontal"
  android:background="@drawable/dot"
  app:layout constraintBottom toBottomOf="@id/guideline6"
  app:layout constraintStart toEndOf="@id/dot1F2"
  android:layout_marginStart="10dp"
  />
```

</androidx.constraintlayout.widget.ConstraintLayout>

```
Java Code for Main Activity
package com.example.assignment3task2;
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.FragmentManager;
import android.net.Uri;
import android.os.Bundle;
import android.util.Log;
import android.widget.Toast;
import java.util.ArrayList;
public class MainActivity extends AppCompatActivity implements
FragmentOne.OnFragmentInteractionListener{
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    FragmentOne fragmentOne= new FragmentOne();
    FragmentManager fragmentManager=getSupportFragmentManager();
fragmentManager.beginTransaction().add(R.id.layout,fragmentOne).addToBackStack("true").commit()
  }
  //this here is the interface
  @Override
  public void onFragmentInteraction(String meat, ArrayList<String> fiber) {
    FragmentTwo.newInstance(meat,fiber):
    getSupportFragmentManager()
         .beginTransaction()
         .replace(R.id.layout,fragment)
         .addToBackStack(null)
         .commit();
}
```

```
Java Code for FragmentOne
package com.example.assignment3task2;
import android.content.Context;
import android.gesture.GestureUtils;
import android.net.Uri;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.util.Log;
import android.view.GestureDetector;
import android.view.LayoutInflater;
import android.view.MotionEvent;
import android.view.View;
import android.view.ViewGroup;
import android.widget.CheckBox;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;
import java.util.ArrayList;
import java.util.HashMap;
public class FragmentOne extends Fragment implements GestureDetector.OnGestureListener{
  //RadioGroup
  private RadioGroup radioGroup;
  private boolean isProtein=false; //validate that a protein is picked
  private RadioButton radioButton;
  private String selected meat="";//to be bundled
  //Fiber
  private String[] fiberID;
  private CheckBox[] checkBoxes_fiber;
  private ArrayList<String> selected_fiber=new ArrayList<>();//to be bundled
  private int selection=3;
  private int numofVeg=0;
  private boolean vegPromo=false;
  private OnFragmentInteractionListener mListener;
  private GestureDetector gestureDetector;
  public FragmentOne() {
    // Required empty public constructor
  }
  @Override
  public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
  private void initMain(View view){
    initRadioGroup(view);
    initFiber(view);
```

```
}
private void initRadioGroup(final View view) {
  radioGroup=view.findViewById(R.id.radioGroup);
  radioGroup.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
     @Override
     public void onCheckedChanged(RadioGroup group, int checkedId) {
       isProtein=true;
       int id=radioGroup.getCheckedRadioButtonId();
       radioButton=((View)view).findViewById(id);
       String result=radioButton.getText().toString();
       selected meat=result;
     }
  });
private void initFiber(View view){
  fiberID=view.getResources().getStringArray(R.array.fiber);
  checkBoxes_fiber=new CheckBox[fiberID.length];
  for(int i=0;i<fiberID.length;i++){
     int id=getResources().getIdentifier(fiberID[i],"id",view.getContext().getPackageName());
     checkBoxes fiber[i]=view.findViewByld(id);
     checkBoxes_fiber[i].setOnClickListener(new View.OnClickListener(){
        @Override
       public void onClick(View v) {
          if(((CheckBox) v).isChecked()){
            vegChecked();
          }else{
            vegUnchecked();
       }
    });
  }
}
private void vegChecked(){
  selection--;
  numofVeg++;
  checkSelection();
private void vegUnchecked(){
  selection++;
  numofVeg--;
  checkSelection();
private void checkSelection(){
  for(int i=0;i<checkBoxes_fiber.length;i++){
     if(selection==0){
       if(!checkBoxes fiber[i].isChecked()){
          checkBoxes_fiber[i].setClickable(false);
          checkBoxes_fiber[i].setEnabled(false);
     }else{
       checkBoxes_fiber[i].setClickable(true);
       checkBoxes fiber[i].setEnabled(true);
  }
}
```

```
private void reset(View view){
    //reset meat section
    radioGroup.setOnCheckedChangeListener(null);
    radioGroup.clearCheck();
    selected_meat="";
    //reset vegetables section
    selected_fiber=new ArrayList<>();
    selection=3:
    numofVeg=0;
    vegPromo=false:
    clearCheckBox():
    //re-init
    initRadioGroup(view);
    initFiber(view);
  private void clearCheckBox(){
    for(int i=0;i<checkBoxes_fiber.length;i++){
       checkBoxes_fiber[i].setChecked(false);
       checkBoxes_fiber[i].setClickable(true);
       checkBoxes_fiber[i].setEnabled(true);
    }
  private void getVeg(){
    for(int i=0;i<checkBoxes_fiber.length;i++){</pre>
       if(checkBoxes_fiber[i].isChecked()){
          selected fiber.add(checkBoxes fiber[i].getText().toString());
    }
  }
  @Override
  public View on Create View (Layout Inflater, View Group container,
                  Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    final View view=inflater.inflate(R.layout.fragment_one,container,false);
    //GestureDetector
    gestureDetector=new GestureDetector(this);
    view.setOnTouchListener(new View.OnTouchListener() {
       @Override
       public boolean onTouch(View v, MotionEvent event) {
          if(gestureDetector.onTouchEvent(event)){
            if(isProtein){
               //function to get array of selected veggies
               getVeg();
               onButtonPressed(selected_meat,selected_fiber);
               reset(view);
            }else{
               Toast.makeText(getActivity(),"Pick a Protein to
proceed", Toast. LENGTH_SHORT). show();
         }
         return true:
    });
    initMain(view);
    return view;
  }
```

```
public void onButtonPressed(String meat,ArrayList<String> fiber) {
  if (mListener != null) {
     mListener.onFragmentInteraction(meat,fiber);
  }
}
@Override
public void onAttach(Context context) {
  super.onAttach(context);
  if (context instanceof OnFragmentInteractionListener) {
     mListener = (OnFragmentInteractionListener) context;
     throw new RuntimeException(context.toString()
          + " must implement OnFragmentInteractionListener");
}
@Override
public void onDetach() {
  super.onDetach();
  mListener = null;
}
@Override
public boolean onDown(MotionEvent e) {
  return false;
@Override
public void onShowPress(MotionEvent e) {
}
@Override
public boolean onSingleTapUp(MotionEvent e) {
  return false;
@Override
public boolean onScroll(MotionEvent e1, MotionEvent e2, float distanceX, float distanceY) {
  return false;
@Override
public void onLongPress(MotionEvent e) {
}
@Override
public boolean onFling(MotionEvent e1, MotionEvent e2, float velocityX, float velocityY) {
  boolean result=false;
  float diffX=e2.getX()-e1.getX();
  //diffX<0 means swipe right to left.
  if(diffX<0){
     result=true;
  return result;
}
```

```
public interface OnFragmentInteractionListener {
    void onFragmentInteraction(String meat,ArrayList<String> fiber);
  }
Java Code for FragmentTwo
package com.example.assignment3task2;
import android.content.Context;
import android.net.Uri;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.util.Log:
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.CheckBox;
import android.widget.Spinner;
import android.widget.TextView;
import java.lang.reflect.Array;
import java.util.ArrayList;
import java.util.HashMap;
public class FragmentTwo extends Fragment {
  private static final String ARG_PARAM1 = "selected_meat";
  private static final String ARG PARAM2 = "selected fiber";
  // TODO: Rename and change types of parameters
  private String selected meat;
  private ArrayList<String> selected_fiber;
  private String temp;
  private Double initialPrice=0.0;
  //Junk
  private String[] junkID;
  private CheckBox[] checkBoxes junk;
  private String selected_junk=""; //implement an update method to dynamically change the summary
  //Size
  private boolean isSize=false;
  static private double selected_size;
  private Spinner spinner;
  private ArrayAdapter<String> adapter;
  private String sizeDefault="Small";
  private String[] size;
  //HashMap
  private HashMap<String,Double> junk;
  private HashMap<String,Double> sizeHash:
  private HashMap<String,Double> meatHash; //placed in second fragment
  private HashMap<String,Double> fiberHash; //placed in second fragment
```

```
//widgets
private TextView summary, price;
private String initialSummary="";
public FragmentTwo() {
  // Required empty public constructor
public static FragmentTwo newInstance(String param1, ArrayList<String> param2) {
  FragmentTwo fragment = new FragmentTwo();
  Bundle args = new Bundle();
  args.putString(ARG PARAM1, param1);
  args.putStringArrayList(ARG PARAM2, param2);
  fragment.setArguments(args);
  return fragment;
}
@Override
public void onCreate(Bundle savedInstanceState) {
  super.onCreate(savedInstanceState);
  if (getArguments() != null) {
     selected_meat = getArguments().getString(ARG_PARAM1);
     selected_fiber = getArguments().getStringArrayList(ARG_PARAM2);
  initHashMap();
  initPrice();
}
private void initMain(View view, ViewGroup container){
  price=view.findViewById(R.id.price);
  initSummary(view);
  updatePrice();
  initJunk(view);
  initSpinner(view,container);
}
private void initHashMap(){
  //junk
  junk=new HashMap<>();
  junk.put("Cheese", 1.00);
  junk.put("Mayonaise",0.50);
  junk.put("Mustard",0.70);
  sizeHash=new HashMap<>();
  sizeHash.put("Regular",1.2);
  sizeHash.put("Small",1.0);
  sizeHash.put("Large",1.3);
  sizeHash.put("Gigantic",1.5);
  //meat
  meatHash=new HashMap<>();
  meatHash.put("beef",4.50);
  meatHash.put("chicken",3.00);
  meatHash.put("fish",4.00);
  meatHash.put("egg",2.00);
  //fiber
  fiberHash=new HashMap<>();
  fiberHash.put("veg",0.50);
}
```

```
private void initPrice(){
  initialPrice+=meatHash.get(selected meat);
  double temp=fiberHash.get("veg");
  switch(selected_fiber.size()){
     case 0:
       break;
     case 1:
       initialPrice+=temp;
       break;
     case 2:
       initialPrice+=(temp*2);
       break:
     case 3:
       initialPrice+=(temp*2);
       break:
  }
private void updateSummary(){
  if(selected_fiber.size()!=0){
     initialSummary=selected_meat+" with "+temp+" top up with "+selected_junk;
  }else{
     initialSummary=selected_meat+" top up with "+selected_junk;
  summary.setText(initialSummary);
private void initSummary(View view){
  summary=view.findViewById(R.id.summary);
  getVeg();
  if(selected fiber.size()!=0){
     initialSummary=selected_meat+" with "+temp+" top up with ";
  }else{
     initialSummary=selected meat+" top up with ";
  summary.setText(initialSummary);
}
private void initJunk(View view){
  junkID=view.getResources().getStringArray(R.array.junk);
  checkBoxes_junk=new CheckBox[junkID.length];
  for(int i=0;i<junkID.length;i++){</pre>
     int id=getResources().getIdentifier(junkID[i],"id",view.getContext().getPackageName());
     checkBoxes_junk[i]=view.findViewById(id);
     checkBoxes_junk[i].setOnClickListener(new View.OnClickListener(){
        @Override
       public void onClick(View v) {
          if(((CheckBox)v).isChecked()){
            checkChanges();
            getJunk();
            updateSummary();
          }else{
            checkChanges();
            getJunk();
            updateSummary();
       }
    });
  }
private void getJunk(){
  ArrayList<String> temp=new ArrayList<>();
```

```
selected_junk="";
  for(int i=0;i<checkBoxes junk.length;i++){
     if(checkBoxes junk[i].isChecked()){
       temp.add(checkBoxes_junk[i].getText().toString());
    }
  for(int i=0;i<temp.size();i++){</pre>
     if(i!=temp.size()-1){
       selected_junk+=temp.get(i)+",";
       selected junk+=temp.get(i);
    }
  selected junk=selected junk.toLowerCase();
}
private void getVeg(){
  temp="";
  for(int i=0;i<selected_fiber.size();i++){
     if(i!=selected_fiber.size()-1){
        temp+=selected_fiber.get(i)+",";
     }else{
       temp+=selected_fiber.get(i);
}
private void initSpinner(View view, ViewGroup container){
  size=view.getResources().getStringArray(R.array.sizes);
  spinner=view.findViewById(R.id.spinner);
  adapter=new ArrayAdapter<String>(container.getContext(),android.R.layout
        .simple spinner item, size);
  adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
  spinner.setAdapter(adapter):
  spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {
     @Override
     public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {
       sizeDefault=spinner.getSelectedItem().toString();
       checkChanges();
     }
     @Override
     public void onNothingSelected(AdapterView<?> parent) {
       sizeDefault="Small";
  });
}
private void updatePrice(){
  price.setText(String.format("RM%.2f",initialPrice));
private void checkChanges(){
  initialPrice=0.0:
  initPrice():
  for(int i=0;i<checkBoxes_junk.length;i++){</pre>
     if(checkBoxes_junk[i].isChecked()){
       initialPrice+=junk.get(checkBoxes_junk[i].getText().toString());
     }
```