Assignment 4

Q. Date picker

Xml file:

*<?*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:padding="16dp"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/date"  
 android:layout\_width="230dp"  
 android:layout\_height="58dp"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginStart="49dp"  
 android:layout\_marginTop="32dp"  
 android:layout\_marginEnd="117dp"  
 android:layout\_marginBottom="626dp"  
 android:text="Date"  
 app:fontFamily="@font/arbutus" />  
  
 <DatePicker  
 android:id="@+id/datePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"/>  
  
 <Button  
 android:id="@+id/showDateButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/datePicker"  
 android:layout\_marginTop="16dp"  
 android:text="Show Selected Date"/>  
</RelativeLayout>

Java file :

package com.example.simple\_date\_picker;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.DatePicker;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 private DatePicker datePicker;  
 private Button showDateButton;  
 private TextView date;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 datePicker = findViewById(R.id.*datePicker*);  
 showDateButton = findViewById(R.id.*showDateButton*);  
 date = findViewById(R.id.*date*);  
  
 showDateButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 int day = datePicker.getDayOfMonth();  
 int month = datePicker.getMonth() + 1; *// Months are 0-indexed* int year = datePicker.getYear();  
  
 date.setText("selected date is : "+day+"/"+month+"/"+year);  
 }  
 });  
 }  
}

Q. Time Picker

Xml file :

*<?*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"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/time"  
 android:layout\_width="163dp"  
 android:layout\_height="53dp"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignParentEnd="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginStart="51dp"  
 android:layout\_marginTop="32dp"  
 android:layout\_marginEnd="197dp"  
 android:layout\_marginBottom="646dp"  
 android:text="Time"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.431"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.082" />  
  
 <TimePicker  
 android:id="@+id/timePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"  
 />  
 <Button  
 android:id="@+id/showTimePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/timePicker"  
 android:layout\_marginTop="16dp"  
 android:text="Show Selected Time"/>  
  
</RelativeLayout>

Java file :

package com.example.simple\_time\_picker;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import android.widget.TimePicker;  
  
public class MainActivity extends AppCompatActivity {  
 private TimePicker timePicker;  
 private TextView time;  
 private Button showTimePicker;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 timePicker = findViewById(R.id.*timePicker*);  
 time = findViewById(R.id.*time*);  
 showTimePicker = findViewById(R.id.*showTimePicker*);  
  
 showTimePicker.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 int hour = timePicker.getCurrentHour();  
 int minute = timePicker.getCurrentMinute();  
  
 time.setText("Selected Time: " + hour + ":" + minute);  
  
 }  
 });  
 }  
}

Q. Image Switcher:

you have to save images in drawable folder.

Xml file :

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <ImageSwitcher  
 android:id="@+id/imageSwitcher"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerInParent="true"/>  
  
 <Button  
 android:id="@+id/prevButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/imageSwitcher"  
 android:layout\_marginTop="16dp"  
 android:text="Previous"/>  
  
 <Button  
 android:id="@+id/nextButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/imageSwitcher"  
 android:layout\_marginTop="16dp"  
 android:layout\_alignParentEnd="true"  
 android:text="Next"/>  
</RelativeLayout>

Java file :

package com.example.imageswitcher;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ImageSwitcher;  
import android.widget.ImageView;  
import android.widget.ViewSwitcher;  
  
public class MainActivity extends AppCompatActivity {  
 private ImageSwitcher imageSwitcher;  
 private Button prevButton,nextButton;  
  
 private int[] imageResources = {  
 R.drawable.*image1*,  
 R.drawable.*image2*,  
 R.drawable.*image3  
 // Add more image resources as needed* };  
  
 private int currentIndex = 0;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 imageSwitcher = findViewById(R.id.*imageSwitcher*);  
 prevButton = findViewById(R.id.*prevButton*);  
 nextButton = findViewById(R.id.*nextButton*);  
  
 imageSwitcher.setFactory(new ViewSwitcher.ViewFactory() {  
 @Override  
 public View makeView() {  
 ImageView imageView = new ImageView(MainActivity.this);  
 imageView.setScaleType(ImageView.ScaleType.*FIT\_CENTER*);  
 return imageView;  
 }  
 });  
  
 imageSwitcher.setImageResource(imageResources[currentIndex]);  
  
 prevButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 showPreviousImage();  
 }  
 });  
 nextButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 showNextImage();  
 }  
 });  
 }  
 private void showPreviousImage() {  
 if (currentIndex > 0) {  
 currentIndex--;  
 imageSwitcher.setImageResource(imageResources[currentIndex]);  
 }  
 }  
  
 private void showNextImage() {  
 if (currentIndex < imageResources.length - 1) {  
 currentIndex++;  
 imageSwitcher.setImageResource(imageResources[currentIndex]);  
 }  
 }  
}

Q. Toggle Button

Xml file :

*<?*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">  
  
  
 <ToggleButton  
 android:id="@+id/toggleButton"  
 android:layout\_width="309dp"  
 android:layout\_height="187dp"  
 android:text="Toggle Button"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.598"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.643" />  
  
 <TextView  
 android:id="@+id/result"  
 android:layout\_width="215dp"  
 android:layout\_height="50dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.454"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.233" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Java file :

package com.example.toggle\_button;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.CompoundButton;  
import android.widget.TextView;  
import android.widget.Toast;  
import android.widget.ToggleButton;  
  
public class MainActivity extends AppCompatActivity {  
 TextView result;  
 ToggleButton toggleButton;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 result = findViewById(R.id.*result*);  
 toggleButton = findViewById(R.id.*toggleButton*);  
  
 toggleButton.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {  
 @Override  
 public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {  
 if(isChecked){  
  
 result.setText("Toggle Button ON");  
 *//Toast.makeText(MainActivity.this, "ON", Toast.LENGTH\_SHORT).show();* }  
 else{  
 result.setText("Toggle Button OFF");  
 *//Toast.makeText(MainActivity.this, "OFF", Toast.LENGTH\_SHORT).show();* }  
 }  
 });  
 }  
}

Q. image view

you have to save images in drawable folder.

Xml file :

*<?*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">  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="335dp"  
 android:layout\_height="400dp"  
 android:layout\_centerInParent="true"  
 android:src="@drawable/bulb\_off"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.21"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.105" />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="193dp"  
 android:layout\_height="45dp"  
 android:layout\_alignParentBottom="true"  
 android:text="ON"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.547"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.696" />  
</androidx.constraintlayout.widget.ConstraintLayout>

Java file :

package com.example.imageview;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.ImageView;  
  
public class MainActivity extends AppCompatActivity {  
 private ImageView imageView;  
 private Button button;  
 private boolean swith = false;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 imageView = findViewById(R.id.*imageView*);  
 button = findViewById(R.id.*button*);  
  
 button.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 if(swith==false){  
 imageView.setImageResource(R.drawable.*bulb\_on*);  
 button.setText("OFF");  
 swith=true;  
 }  
 else{  
 imageView.setImageResource(R.drawable.*bulb\_off*);  
 button.setText("ON");  
 swith=false;  
 }  
 }  
 });  
 }  
}

Q. Using Spinner display selected item in toast

Xml file :

*<?*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\_gravity="center"  
 tools:context=".MainActivity">  
  
 <Spinner  
 android:id="@+id/spinner\_main"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 />  
  
</LinearLayout>

Java file:

package com.example.spinner;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.Spinner;  
import android.widget.Toast;  
  
import java.util.ArrayList;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Spinner spinner = findViewById(R.id.*spinner\_main*);  
 spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {  
 @Override  
 public void onItemSelected(AdapterView<?> adapterView, View view, int position, long l) {  
 String item = adapterView.getItemAtPosition(position).toString();  
 Toast.*makeText*(MainActivity.this, "Selected Item : " +item, Toast.*LENGTH\_SHORT*).show();  
 }  
  
 @Override  
 public void onNothingSelected(AdapterView<?> adapterView) {  
  
 }  
 });  
 ArrayList<String> arrayList = new ArrayList<>();  
 arrayList.add("apple");  
 arrayList.add("Pineapple");  
 arrayList.add("mango");  
 arrayList.add("orange");  
 arrayList.add("grapes");  
 ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.*simple\_spinner\_item*,arrayList);  
 adapter.setDropDownViewResource(android.R.layout.*select\_dialog\_singlechoice*);  
 spinner.setAdapter(adapter);  
 }  
}