**SLIP1-B) Create an Android application to demonstrate Progress Dialog Box using AsyncTask(25M)**

**XML CODE:**

<?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"  
 tools:context=".MainActivity">  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="show progress dialog"  
 android:layout\_gravity="center"  
 android:layout\_marginStart="50dp"/>  
</LinearLayout>

**JAVA CODE:**

package com.example.slip1b;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.ProgressDialog;  
import android.os.AsyncTask;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
  
public class MainActivity extends AppCompatActivity {  
 Button button;  
 mytask mytask;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 button=(Button) findViewById(R.id.*button*);  
 button.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 mytask = new mytask();  
 mytask.execute();  
 }  
 });  
 }  
 class mytask extends AsyncTask<Void,Integer,Void> {  
 ProgressDialog manish;  
 boolean running;  
 @Override  
 protected Void doInBackground(Void... Voids){  
 try {  
 while (manish.getProgress() <= manish .getMax())  
 {  
 Thread.*sleep*(300);  
 manish.incrementProgressBy(1);  
 if(manish.getProgress()==manish.getMax())  
 {  
 manish.dismiss();  
 }  
 }  
 }catch(Exception e){  
 e.printStackTrace();  
 }  
 return null;  
 }  
 @Override  
 protected void onPreExecute() {  
 super.onPreExecute();  
 running = true;  
 manish=new ProgressDialog(MainActivity.this);  
 manish.setMax(100);  
 manish.setMessage("loading....................");  
 manish.setTitle("Progressdialog Box Example");  
 manish.setProgressStyle(ProgressDialog.*STYLE\_HORIZONTAL*);  
 manish.show();  
 }  
 @Override  
 protected void onPostExecute(Void unused) {  
 super.onPostExecute(unused);  
 manish.dismiss();  
 }  
 @Override  
 protected void onProgressUpdate(Integer... values) {  
 super.onProgressUpdate(values);  
 manish.setMessage(String.*valueOf*(values));  
   
 }  
 }  
}

**SLIP2-A) Create a Simple Application Which demonstrate Life Cycle of Activity. [15 M]**

**JAVA CODE:**

package com.example.activity;  
  
import static androidx.constraintlayout.helper.widget.MotionEffect.*TAG*;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.util.Log;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Log.*d*(*TAG*, "onCreate");  
 }  
 @Override  
protected void onStart(){  
 super.onStart();  
 Log.*d*(*TAG*, "onstart: ");  
}  
@Override  
 protected void onResume(){  
 super.onResume();  
 Log.*d*(*TAG*, "onresume: ");  
 }  
 @Override  
protected void onPause(){  
 super.onPause();  
 Log.*d*(*TAG*, "onpause: ");  
}  
 @Override  
protected void onStop(){  
 super.onStop();  
 Log.*d*(*TAG*, "onstop: ");  
}  
@Override  
protected void onRestart(){  
 super.onRestart();  
 Log.*d*(*TAG*, "restart: ");  
}  
@Override  
protected void onDestroy(){  
 super.onDestroy();  
 Log.*d*(*TAG*, "onDestroy: ");  
}}

**SLIP2-B) Create an Android Application that Demonstrate DatePicker and DatePickerDailog. [25 M]**

**XML CODE:**

<?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"  
 tools:context=".MainActivity">  
  
  
 <Button  
 android:id="@+id/btnshow"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="500dp"  
 android:text="Display Date"  
 android:layout\_gravity="center"/>  
 <TextView  
 android:id="@+id/txtdate"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"/>  
</LinearLayout>

**JAVA CODE:**

package com.example.datepicker;  
  
import androidx.annotation.RequiresApi;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.DatePickerDialog;  
import android.content.Context;  
import android.os.Build;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.DatePicker;  
import android.widget.TextView;  
  
import java.util.Calendar;  
  
public class MainActivity extends AppCompatActivity {  
 DatePickerDialog pickerDialog;  
 Button btnshow;  
 TextView txtdate;  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 txtdate = (TextView) findViewById(R.id.*txtdate*);  
 btnshow = (Button) findViewById(R.id.*btnshow*);  
 btnshow.setOnClickListener(new View.OnClickListener() {  
 @RequiresApi(api = Build.VERSION\_CODES.*N*)  
 @Override  
 public void onClick(View View) {  
 final Calendar clndr = Calendar.*getInstance*();  
 int day = clndr.get(Calendar.*DAY\_OF\_MONTH*);  
 int month = clndr.get(Calendar.*MONTH*);  
 int year = clndr.get(Calendar.*YEAR*);  
 pickerDialog = new DatePickerDialog(MainActivity.this, new DatePickerDialog.OnDateSetListener() {  
 @Override  
 public void onDateSet(DatePicker view, int year, int month, int dayOfMonth) {  
 txtdate.setText(dayOfMonth + "/" + (month + 1) + "/" + year);  
 }  
 }, year, month, day);  
 pickerDialog.show();  
 txtdate.setText("select date is:" + txtdate.getText());  
 }  
 });  
 }  
}

**SLIP3-A) Create a Simple Application, which read a positive number from the user and display its factorial value in another activity.(15M)**

**XML CODE 1:**

<?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">  
  
  
 <EditText  
 android:id="@+id/et\_no"  
 android:layout\_width="286dp"  
 android:layout\_height="75dp"  
 android:ems="10"  
 android:hint="Enter a number"  
 android:textSize="30sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.497"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.239" />  
  
 <Button  
 android:id="@+id/bt\_cal"  
 android:layout\_width="258dp"  
 android:layout\_height="132dp"  
 android:text="Calculate Factorial"  
 android:textSize="30sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.496"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.442" />  
</androidx.constraintlayout.widget.ConstraintLayout>

**XML CODE 2:**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="text"  
 android:layout\_gravity="center"  
 android:textAlignment="center"  
 android:textSize="30dp"  
 android:id="@+id/txt\_result">  
  
 </TextView>  
  
  
</LinearLayout>

**JAVA CODE1:**

package com.example.slip3a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 EditText et\_no=findViewById(R.id.*et\_no*);  
 Button bt\_cal=findViewById(R.id.*bt\_cal*);  
 bt\_cal.setOnClickListener(new View.OnClickListener(){  
 @Override  
 public void onClick(View view) {  
 Bundle bundle= new Bundle();  
 int usr,fact=1,i;  
  
 usr = Integer.*parseInt*(et\_no.getText().toString());  
 for (i = 1;i <= usr;i++)  
 {  
 fact= fact\*i;  
  
 }  
  
 bundle.putInt("key",fact);  
 Intent intent=new Intent(MainActivity.this, MainActivity2.class);  
 intent.putExtras(bundle);  
 startActivity(intent);  
  
 }  
 });  
 }  
  
}

**JAVA CODE 2:**

package com.example.slip3a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.widget.TextView;  
  
public class MainActivity2 extends AppCompatActivity {  
 @Override  
 protected void onCreate(Bundle savedInstanceState){  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main2*);  
 TextView txt\_result1=findViewById(R.id.*txt\_result*);  
  
  
 Intent intent=getIntent();  
  
 Bundle bundle=intent.getExtras();  
 int val=bundle.getInt("key");  
 String str=String.*valueOf*(val);  
  
 txt\_result1.setText(str);  
  
 }  
  
}

**SLIP 5-A) Create an Android Application that will change color of the College Name on click of Push Button and change the font size, font style of text view using xml.(15M)**

**XML CODE:**

<?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">  
  
 <TextView  
 android:id="@+id/tv"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Ness Wadia College of Commerce"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 android:textSize="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.363"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.155" />  
  
 <Button  
 android:id="@+id/btnRed"  
 android:layout\_width="122dp"  
 android:layout\_height="65dp"  
 android:text="RED"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.134"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.31" />  
  
 <Button  
 android:id="@+id/btnBlue"  
 android:layout\_width="122dp"  
 android:layout\_height="65dp"  
 android:text="BLUE"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.837"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.309" />  
  
 <Button  
 android:id="@+id/btnGreen"  
 android:layout\_width="122dp"  
 android:layout\_height="65dp"  
 android:text="GREEN"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.134"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.468" />  
  
 <Button  
 android:id="@+id/btnYellow"  
 android:layout\_width="122dp"  
 android:layout\_height="65dp"  
 android:text="YELLOW"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.837"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.468" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**JAVA CODE:**

package com.example.pushbtn5a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.graphics.Color;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 TextView tv;  
 Button btnRed,btnBlue,btnGreen,btnYellow;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 tv = (TextView) findViewById(R.id.*tv*);  
 btnRed = (Button) findViewById(R.id.*btnRed*);  
 btnBlue = (Button) findViewById(R.id.*btnBlue*);  
 btnGreen = (Button) findViewById(R.id.*btnGreen*);  
 btnYellow = (Button) findViewById(R.id.*btnYellow*);  
  
 btnRed.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 tv.setTextSize(30F);  
 tv.setTextColor(Color.*parseColor*("#FF0000"));  
 }  
 });  
  
 btnBlue.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 tv.setTextSize(20F);  
 tv.setTextColor(Color.*parseColor*("#0000FF"));  
 }  
 });  
  
 btnGreen.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 tv.setTextSize(30F);  
 tv.setTextColor(Color.*parseColor*("#00FF00"));  
 }  
 });  
  
 btnYellow.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 tv.setTextSize(20F);  
 tv.setTextColor(Color.*parseColor*("#FFFF00"));  
 }  
 });  
 }  
}

**SLIP5-B)Create an Android Application to find the factorial of a number and Display the Result on Alert Box.(25M)**

**XML CODE:**

<?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"  
 tools:context=".MainActivity">  
 <EditText  
 android:id="@+id/edt\_num"  
 android:layout\_width="match\_parent"  
 android:layout\_height="48dp"  
 android:hint="Enter any number"  
 android:layout\_marginLeft="48dp"  
 android:layout\_marginRight="48dp"  
 android:layout\_marginTop="300dp"/>  
 <Button  
 android:id="@+id/btnfact"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="50dp"  
 android:layout\_marginRight="50dp"  
 android:layout\_marginTop="50dp"  
 android:text="Factorial"/>  
</LinearLayout>

**JAVA CODE:**

package com.example.factorial;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.DialogInterface;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edt\_num;  
  
 Button btnfact;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edt\_num = (EditText) findViewById(R.id.*edt\_num*);  
 btnfact = (Button) findViewById(R.id.*btnfact*);  
 btnfact.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 fact();  
 }  
 });  
 }  
  
 private void fact() {  
 int num = Integer.*parseInt*(edt\_num.getText().toString());  
 long fact = 1;  
 for (int i = num; i > 0; i--) {  
 fact = fact \* i;  
  
 }  
 AlertDialog alertDialog = new AlertDialog.Builder(this)  
 .setTitle("Factorial number")  
 .setMessage("your factorial is:" + fact)  
 .setPositiveButton("yes", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(MainActivity.this, "", Toast.*LENGTH\_SHORT*).show();  
 }  
 })  
 .setNegativeButton("no", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(MainActivity.this, "", Toast.*LENGTH\_SHORT*).show();  
 }  
 })  
 .show();  
  
 }  
}

**SLIP 6- A) Create a Simple Application that performs Arithmetic Operations. (Use constraint layout)(15M)**

**XML CODE:**

<?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">  
  
  
 <EditText  
 android:id="@+id/editTextTextPersonName"  
 android:layout\_width="131dp"  
 android:layout\_height="48dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:text="Enter No 1 :"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.057"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.073" />  
  
 <EditText  
 android:id="@+id/editTextTextPersonName2"  
 android:layout\_width="129dp"  
 android:layout\_height="44dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:text="Enter No 2 :"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.063"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.237" />  
  
 <EditText  
 android:id="@+id/etNum1"  
 android:layout\_width="158dp"  
 android:layout\_height="48dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.747"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.072" />  
  
 <EditText  
 android:id="@+id/etNum2"  
 android:layout\_width="158dp"  
 android:layout\_height="48dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.747"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.237" />  
  
 <TextView  
 android:id="@+id/tvResult"  
 android:layout\_width="315dp"  
 android:layout\_height="71dp"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 android:textSize="35dp"  
 android:textStyle="italic"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.443"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.424" />  
  
 <Button  
 android:id="@+id/btnAdd"  
 android:layout\_width="115dp"  
 android:layout\_height="74dp"  
 android:onClick="Addition"  
 android:text="Add"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.25"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.654" />  
  
 <Button  
 android:id="@+id/btnSub"  
 android:layout\_width="115dp"  
 android:layout\_height="74dp"  
 android:onClick="Subtraction"  
 android:text="Sub"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.716"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.655" />  
  
 <Button  
 android:id="@+id/btnMul"  
 android:layout\_width="115dp"  
 android:layout\_height="74dp"  
 android:onClick="Multiplication"  
 android:text="Mul"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.25"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.848" />  
  
 <Button  
 android:id="@+id/btDiv"  
 android:layout\_width="115dp"  
 android:layout\_height="74dp"  
 android:onClick="Division"  
 android:text="Div"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.716"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.85" />  
</androidx.constraintlayout.widget.ConstraintLayout>

**JAVA CODE:**

package com.example.slip6a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 TextView tvResult;  
 EditText etNum1,etNum2;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 tvResult = findViewById(R.id.*tvResult*);  
 etNum1 = findViewById(R.id.*etNum1*);  
 etNum2 = findViewById(R.id.*etNum2*);  
 }  
  
 public void Addition(View v){  
 float n1,n2,result;  
  
 n1 = Float.*parseFloat*(etNum1.getText().toString());  
 n2 = Float.*parseFloat*(etNum2.getText().toString());  
  
 result = n1 + n2;  
  
 tvResult.setText(String.*format*("Addition: %s", result));  
 }  
 public void Subtraction(View v){  
 float n1,n2,result;  
  
 n1 = Float.*parseFloat*(etNum1.getText().toString());  
 n2 = Float.*parseFloat*(etNum2.getText().toString());  
  
 result = n1 - n2;  
  
 tvResult.setText(String.*format*("Subtraction: %s", result));  
 }  
 public void Multiplication(View v){  
 float n1,n2,result;  
  
 n1 = Float.*parseFloat*(etNum1.getText().toString());  
 n2 = Float.*parseFloat*(etNum2.getText().toString());  
  
 result = n1 \* n2;  
  
 tvResult.setText(String.*format*("Multiplication: %s", result));  
 }  
 public void Division(View v){  
 float n1,n2,result;  
  
 n1 = Float.*parseFloat*(etNum1.getText().toString());  
 n2 = Float.*parseFloat*(etNum2.getText().toString());  
  
 result = n1 / n2;  
  
 tvResult.setText(String.*format*("Division: %s", result));  
 }  
}

**SLIP 8- A) Create an Android application to demonstrate phone call using Implicit Intent. [15 M]**

**JAVA CODE:**

package com.example.phonecall;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edt\_phone;  
 Button btn\_call;  
  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 edt\_phone=(EditText) findViewById(R.id.*edt\_phone*);  
 btn\_call = (Button)findViewById(R.id.*btn\_call*);  
 btn\_call.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String phonenumber=edt\_phone.getText().toString();  
 Intent intent=new Intent(Intent.*ACTION\_DIAL*, Uri.*fromParts*("tel",phonenumber,null));  
 startActivity(intent);  
 }  
 });  
 }  
}

**SLIP 8- B) Develop an Android application that create custom Alert Dialog containing Friends Name and onClick of Friend Name Button greet accordingly. [25 M]**

**XML CODE:**

<?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:layout\_gravity="center"  
 android:orientation="vertical"  
 tools:context=".MainActivity" >  
 <Button  
 android:id="@+id/btn\_custom"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:text="click me to show Alert Dialog"  
 android:layout\_marginLeft="30dp"  
 android:layout\_marginRight="30dp" />  
</LinearLayout>

**JAVA CODE:**

package com.example.friend8b;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.Dialog;  
import android.content.DialogInterface;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 Button btn\_custom;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 btn\_custom = (Button) findViewById(R.id.*btn\_custom*);  
 btn\_custom.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);  
 AlertDialog alertDialog = builder.create();  
 alertDialog.setButton(Dialog.*BUTTON1*, "Ganesh", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(MainActivity.this, "hello Ganesh", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 alertDialog.setButton(Dialog.*BUTTON2*, "Rakesh", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(MainActivity.this, "hello Rakesh", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 alertDialog.setButton(Dialog.*BUTTON3*, "Ramesh", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(MainActivity.this, "hello Ramesh", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 alertDialog.show();  
 }  
 });  
 }  
}

**SLIP 9 - A) Design Following Screens using Table Layout. Display the entered text using Toast.(15M)**

**XML CODE:**

<?xml version="1.0" encoding="utf-8"?>  
<TableLayout 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">  
  
 <TableRow  
 android:id="@+id/row1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv1"  
 android:text="First Name :"  
 android:textSize="25sp">  
 </TextView>  
  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/f\_name"  
 android:text=""  
 android:textSize="25sp">  
  
 </EditText>  
  
 </TableRow>  
 <TableRow  
 android:id="@+id/row2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv2"  
 android:text="Last name"  
 android:textSize="25sp">  
 </TextView>  
  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/l\_name"  
 android:text=""  
 android:textSize="25sp">  
  
 </EditText>  
  
 </TableRow>  
 <TableRow  
 android:id="@+id/row3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv3"  
 android:text="Address :"  
 android:textSize="25sp">  
 </TextView>  
  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/address"  
 android:text=" "  
 android:textSize="25sp">  
  
 </EditText>  
  
 </TableRow>  
 <TableRow  
 android:id="@+id/row4"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv4"  
 android:text="Phone Number :"  
 android:textSize="25sp">  
 </TextView>  
  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/ph\_no"  
 android:text=" "  
 android:textSize="25sp">  
  
 </EditText>  
  
 </TableRow>  
 <TableRow  
 android:id="@+id/row5"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/tv5"  
 android:text="Email :"  
 android:textSize="25sp">  
 </TextView>  
  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/email"  
 android:text=" "  
 android:textSize="25sp">  
  
 </EditText>  
  
 </TableRow>  
 <TableRow  
 android:id="@+id/row6"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <RadioButton  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Male"  
 android:id="@+id/male">  
  
 </RadioButton>  
 </TableRow>  
 <TableRow  
 android:id="@+id/row7"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <RadioButton  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Female"  
 android:id="@+id/female">  
  
 </RadioButton>  
 </TableRow>  
  
 <TableRow  
 android:id="@+id/row8"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content">  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/btn\_submit"  
 android:text="Submit"  
 android:layout\_marginRight="3sp">  
  
 </Button>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/btn\_clear"  
 android:text="Clear">  
  
 </Button>  
 </TableRow>  
  
  
  
  
</TableLayout>

**JAVA CODE:**

package com.example.slip9a;  
  
import static android.widget.Toast.*makeText*;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.RadioButton;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 EditText f\_name = findViewById(R.id.*f\_name*);  
 EditText l\_name = findViewById(R.id.*l\_name*);  
 EditText address = findViewById(R.id.*address*);  
 EditText ph\_no = findViewById(R.id.*ph\_no*);  
 EditText email = findViewById(R.id.*email*);  
  
 Button submit = findViewById(R.id.*btn\_submit*);  
 Button clear = findViewById(R.id.*btn\_clear*);  
  
 RadioButton male = findViewById(R.id.*male*);  
 RadioButton female = findViewById(R.id.*female*);  
  
 submit.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String name = f\_name.getText().toString();  
 String name2 = l\_name.getText().toString();  
 String name3 = address.getText().toString();  
 String name4 = ph\_no.getText().toString();  
 String name5 = email.getText().toString();  
 String name6 = male.getText().toString();  
 String name7 = female.getText().toString();  
 showToast(name);  
 showToast(name2);  
 showToast(name3);  
 showToast(name4);  
 showToast(name5);  
 showToast(name6);  
 showToast(name7);  
 }  
  
 private void showToast(String text) {  
 *makeText*(MainActivity.this, "", Toast.*LENGTH\_SHORT*).show();  
 *makeText*(MainActivity.this, text, Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 clear.setOnClickListener((View view) -> {  
 f\_name.getText().clear();  
 l\_name.getText().clear();  
 address.getText().clear();  
 ph\_no.getText().clear();  
 email.getText().clear();  
 });  
  
 }  
}

**SLIP 11-A) Create an Android Application that Demonstrate Radio Button [15 M]**

**XML CODE:**

<?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">  
  
 <RadioGroup  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:orientation="vertical"  
 android:layout\_marginTop="10dp"  
 android:id="@+id/radioGroup">  
 <RadioButton  
 android:id="@+id/rb1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:checked="true"  
 android:text="MALE"/>  
 <RadioButton  
 android:id="@+id/rb2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="FEMALE"  
 android:checked="false"/>  
 <RadioButton  
 android:id="@+id/rb3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="YES"  
 android:checked="false"/>  
 <RadioButton  
 android:id="@+id/rb4"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="NO"  
 android:checked="false"/>  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="SUBMIT"  
 android:id="@+id/btnsubmit"  
 android:layout\_below="@+id/rb5"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="10dp"/>  
 </RadioGroup>  
  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip11a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 RadioGroup radioGroup;  
 RadioButton rb1, rb2, rb3, rb4, selectedRadioButton;  
 Button buttonSubmit;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 buttonSubmit = (Button) findViewById(R.id.*btnsubmit*);  
 radioGroup = (RadioGroup) findViewById(R.id.*radioGroup*);  
 rb1 = (RadioButton) findViewById(R.id.*rb1*);  
 rb2 = (RadioButton) findViewById(R.id.*rb2*);  
 rb3 = (RadioButton) findViewById(R.id.*rb3*);  
 rb4 = (RadioButton) findViewById(R.id.*rb4*);  
 buttonSubmit.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 selectedRadioButton = (RadioButton) findViewById(radioGroup.getCheckedRadioButtonId());  
 String StringyourVote = selectedRadioButton.getText().toString();  
  
 String yourVote = null;  
 if (rb1.isChecked()) {  
 yourVote += rb1.getText().toString() + "\tTRUE\n";  
 } else {  
 yourVote += rb1.getText().toString() + "\tFALSE\n";  
 }  
 if (rb2.isChecked()) {  
 yourVote += rb2.getText().toString() + "\tTRUE\n";  
 } else {  
 yourVote += rb2.getText().toString() + "\tFALSE\n";  
 }  
 if (rb3.isChecked()) {  
 yourVote += rb3.getText().toString() + "\tTRUE\n";  
 } else {  
 yourVote += rb3.getText().toString() + "\tFALSE\n";  
 }  
 if (rb4.isChecked()) {  
 yourVote += rb4.getText().toString() + "\tTRUE\n";  
 } else {  
 yourVote += rb4.getText().toString() + "\tFALSE\n";  
 }  
 Toast.*makeText*(MainActivity.this, "selected Radio button is:", Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
 }  
}

**SLIP 11- B) Create an Android Application that Demonstrate ListView and Onclick of List Display the Toast. [25 M]**

**XML CODE:**

<?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">  
  
 <ListView  
 android:id="@+id/listView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**JAVA CODE :**

package com.example.slip11b;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.ListView;  
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*);  
 ListView listView=findViewById(R.id.*listView*);  
  
 ArrayList<String> arrayList= new ArrayList<String>();  
 arrayList.add("Sofiya");  
 arrayList.add("Isha");  
 arrayList.add("Rajas");  
 arrayList.add("Aafiya");  
 arrayList.add("Masirah");  
 arrayList.add("Shruti");  
  
 /\*  
 Adapter is a bridge to connect with the content with the list view  
  
 \*/  
 ArrayAdapter<String> arrayAdapter=new ArrayAdapter<String>(this, android.R.layout.*simple\_list\_item\_1*,arrayList);  
 listView.setAdapter(arrayAdapter);  
  
 listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
 @Override  
 public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
 Toast.*makeText*(MainActivity.this, "Hello"+arrayList.get(position),Toast.*LENGTH\_SHORT*).show();  
  
 }  
 });  
  
  
 }  
}

**SLIP 12- A) Design Following Screens Using RadioButtons & CheckBoxes. Display the selected text using Toast. [15 M]**

**XML CODE:**

<?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"  
 tools:context="com.example.radiobutton.MainActivity" >  
  
 <TextView  
 android:id="@+id/tvRg"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentTop="true"  
 android:layout\_centerHorizontal="true"  
 android:gravity="center"  
 android:text="Radio Buttons and CheckBoxes"  
 android:textAppearance="?android:attr/textAppearanceMedium" />  
 <RadioGroup  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/tvRg"  
 android:layout\_centerHorizontal="true"  
 android:orientation="vertical"  
 android:layout\_marginTop="10dp"  
 android:id="@+id/radioGroup" >  
  
 <RadioButton  
 android:id="@+id/rb1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:checked="false"  
 android:text="FYBBA CA" />  
  
 <RadioButton  
 android:id="@+id/rb2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="SY BBA CA"  
 android:checked="false" />  
  
 <RadioButton  
 android:id="@+id/rb3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="TY BBA CA"  
 android:checked="true" />  
  
  
 <CheckBox  
  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text=" C++ "  
 android:id="@+id/cb1"  
 android:layout\_below="@+id/rb3"  
 android:layout\_centerHorizontal="true"  
 android:checked="false" />  
  
 <CheckBox  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="DS using C"  
 android:id="@+id/cb2"  
 android:layout\_below="@+id/cb1"  
 android:layout\_centerHorizontal="true"  
 android:checked="false" />  
  
 <CheckBox  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="PHP"  
 android:id="@+id/cb3"  
 android:layout\_below="@+id/cb2"  
 android:layout\_centerHorizontal="true"  
 android:checked="false" />  
  
 <CheckBox  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="JAVA"  
 android:id="@+id/cb4"  
 android:layout\_below="@+id/cb3"  
 android:layout\_centerHorizontal="true"  
 android:checked="false" />  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="SUBMIT"  
 android:id="@+id/btnSubmit"  
 android:layout\_below="@+id/cb4"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="10dp"/>  
 </RadioGroup>  
  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip12a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.widget.Button;  
import android.widget.CheckBox;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 RadioGroup radioGroup;  
 RadioButton selectedRadioButton;  
 Button buttonSubmit;  
 CheckBox cb1, cb2, cb3, cb4;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 buttonSubmit = (Button) findViewById(R.id.*btnSubmit*);  
 radioGroup = (RadioGroup) findViewById(R.id.*radioGroup*);  
 cb1 = (CheckBox) findViewById(R.id.*cb1*);  
 cb2 = (CheckBox) findViewById(R.id.*cb2*);  
 cb3 = (CheckBox) findViewById(R.id.*cb3*);  
 cb4 = (CheckBox) findViewById(R.id.*cb4*);  
  
 /\*  
 Submit Button  
 \*/  
 buttonSubmit.setOnClickListener(v -> {  
 //Get the selected RadioButton  
 selectedRadioButton = (RadioButton) findViewById(radioGroup.getCheckedRadioButtonId());  
 // get RadioButton text  
 String yourVote = selectedRadioButton.getText().toString();  
  
 String checkBoxChoices = "";  
  
 if (cb1.isChecked()) {  
 checkBoxChoices += cb1.getText().toString() + "\t: " +  
 "YES\n";  
 } else {  
 checkBoxChoices += cb1.getText().toString() + "\t: NO\n";  
 }  
  
 if (cb2.isChecked()) {  
 checkBoxChoices += cb2.getText().toString() + "\t: YES\n";  
 } else {  
 checkBoxChoices += cb2.getText().toString() + "\t: NO\n";  
 }  
  
 if (cb3.isChecked()) {  
 checkBoxChoices += cb3.getText().toString() + "\t: YES\n";  
 } else {  
 checkBoxChoices += cb3.getText().toString() + "\t: NO\n";  
 }  
  
 if (cb4.isChecked()) {  
 checkBoxChoices += cb4.getText().toString() + "\t: YES\n";  
 } else {  
 checkBoxChoices += cb4.getText().toString() + "\t: NO\n";  
 }  
  
 // display it as Toast to the user  
  
 Toast.*makeText*(MainActivity.this, "Selected Radio Button is:" + yourVote+ "\n CheckBox Choices: \n "+checkBoxChoices,Toast.*LENGTH\_LONG*).show();  
  
  
 });  
 }  
}

**SLIP 16- A) Create following Vertical Scroll View Creation in Android. [15 M]**

**XML CODE:**

<?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"  
 tools:context=".MainActivity">  
 <ScrollView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
  
 <LinearLayout  
  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical">  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
 <EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="hello"  
 android:textSize="30dp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content">  
 </Button>  
  
</LinearLayout>  
 </ScrollView>  
 </LinearLayout>

**JAVA CODE:**

package com.example.slip16a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
}

**SLIP 16- B) Create an Android Application that Demonstrate TimePickerand display Selected Time on TextView. [25 M]**

**XML CODE:**

<?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/textView1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/button1"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginBottom="102dp"  
 android:layout\_marginLeft="30dp"  
 android:layout\_marginStart="30dp"  
 android:text="" />  
  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginBottom="20dp"  
 android:text="Change Time" />  
  
 <TimePicker  
 android:id="@+id/timePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/textView1"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginBottom="36dp" />  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip16b;  
  
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 {  
 TextView textview1;  
 TimePicker timepicker;  
 Button changetime;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 textview1=(TextView)findViewById(R.id.*textView1*);  
 timepicker=(TimePicker)findViewById(R.id.*timePicker*);  
 //Uncomment the below line of code for 24 hour view  
 timepicker.setIs24HourView(true);  
 changetime=(Button)findViewById(R.id.*button1*);  
  
 textview1.setText(getCurrentTime());  
  
 changetime.setOnClickListener(new View.OnClickListener(){  
 @Override  
 public void onClick(View view) {  
 textview1.setText(getCurrentTime());  
 }  
 });  
  
 }  
  
 public String getCurrentTime(){  
 String currentTime="Current Time: "+timepicker.getCurrentHour()+":"+timepicker.getCurrentMinute();  
 return currentTime;  
 }  
  
}

**SLIP 17- A) Create an Android Application to Construct image switcher using setFactory(). [15 M]**

**XML CODE:**

<?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">  
  
 <ImageSwitcher  
 android:id="@+id/imgsw"  
 android:layout\_width="match\_parent"  
 android:layout\_height="600dp"  
 android:layout\_margin="20dp">  
  
 </ImageSwitcher>  
  
 <Button  
 android:id="@+id/prev"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="prev"  
 android:layout\_below="@id/imgsw"  
 >  
  
 </Button>  
  
 <Button  
 android:id="@+id/next"  
 android:layout\_below="@id/imgsw"  
 android:layout\_alignParentRight="true"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="next">  
  
 </Button>  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip17a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.view.animation.Animation;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageSwitcher;  
import android.widget.ImageView;  
import android.widget.ViewSwitcher;  
  
public class MainActivity extends AppCompatActivity {  
  
  
  
 Integer[] images={R.drawable.*scene*,R.drawable.*scene2*,R.drawable.*scene4*,R.drawable.*scene5*,R.drawable.*scene6*};  
 int i=0;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Button next=findViewById(R.id.*next*);  
 Button prev=findViewById(R.id.*prev*);  
 ImageSwitcher imgsw=findViewById(R.id.*imgsw*);  
  
 imgsw.setFactory(new ViewSwitcher.ViewFactory() {  
 @Override  
 public View makeView() {  
 ImageView imageView=new ImageView(getApplicationContext());  
 imageView.setScaleType(ImageView.ScaleType.*FIT\_CENTER*);  
 return imageView;  
 }  
 });  
 Animation out= AnimationUtils.*loadAnimation*(this, android.R.anim.*slide\_out\_right*);  
 Animation in= AnimationUtils.*loadAnimation*(this, android.R.anim.*slide\_in\_left*);  
 imgsw.setOutAnimation(out);  
 imgsw.setInAnimation(in);  
  
  
 next.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 if(i<images.length){  
 i++;  
 imgsw.setImageResource(images[i]);  
 }  
  
  
 }  
 });  
  
 prev.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 if(i>0){  
 i--;  
 imgsw.setImageResource(images[i]);  
 }  
  
  
 }  
 });  
  
 }  
}

**SLIP 18- A) Write an Android application to accept two numbers from the user, and displays them, but reject input if both numbers are greater than 10 and asks for two new numbers. [15 M]**

**XML CODE:**

<?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"  
 tools:context=".MainActivity"  
 android:orientation="vertical">  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/ed1"  
 android:layout\_marginLeft="20sp"  
 android:layout\_marginRight="20sp"  
 android:layout\_marginTop="20sp"  
 android:hint="Enter num 1"  
 android:textSize="30sp">  
  
 </EditText>  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/ed2"  
 android:layout\_marginLeft="20sp"  
 android:layout\_marginRight="20sp"  
 android:layout\_marginTop="20sp"  
 android:hint="Enter num 2"  
 android:textSize="30sp">  
  
 </EditText>  
  
 <Button  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="30sp"  
 android:layout\_marginRight="30sp"  
 android:layout\_marginTop="20sp"  
 android:id="@+id/btn\_val"  
 android:text="DISPLAY"  
 android:textSize="30sp">  
  
 </Button>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="30sp"  
 android:layout\_marginRight="30sp"  
 android:layout\_marginTop="20sp"  
 android:textSize="30sp"  
 android:id="@+id/tv">  
  
 </TextView>  
  
</LinearLayout>

**JAVA CODE:**

package com.example.slip18a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.annotation.SuppressLint;  
import android.os.Bundle;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 EditText ed1,ed2;  
 Button btn\_val;  
 TextView tv;  
  
 @SuppressLint("SetTextI18n")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 ed1=findViewById(R.id.*ed1*);  
 ed2=findViewById(R.id.*ed2*);  
 btn\_val=findViewById(R.id.*btn\_val*);  
 tv=findViewById(R.id.*tv*);  
  
 btn\_val.setOnClickListener(view -> {  
 int a=Integer.*parseInt*(ed1.getText().toString());  
 int b=Integer.*parseInt*(ed2.getText().toString());  
  
 if ((a > 10) || (b > 10))  
 {  
 ed1.getText().clear();  
 ed2.getText().clear();  
 tv.setText("Rejected as numbers should be less than 10");  
 }  
 else{  
 tv.setText("Num 1 :\t" + a + "\nNum 2 :\t" + b);  
 }  
 });  
 }  
}

**SLIP 19- A) Write an Android code to merge given two Array/List [15 M]**

**XML CODE:**

<?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:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:text="Array 1: "  
 android:id="@+id/tv1">  
 </TextView>  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:id="@+id/ed1"  
 android:layout\_toRightOf="@id/tv1"  
 android:layout\_marginLeft="20sp">  
 </EditText>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:text="Array 2: "  
 android:layout\_marginTop="30sp"  
 android:layout\_below="@id/tv1"  
 android:id="@+id/tv2">  
 </TextView>  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:id="@+id/ed2"  
 android:layout\_toRightOf="@id/tv2"  
 android:layout\_below="@id/ed1"  
 android:layout\_marginLeft="20sp">  
 </EditText>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:text="Array 3: "  
 android:layout\_marginTop="30sp"  
 android:layout\_below="@id/tv2"  
 android:id="@+id/tv3">  
 </TextView>  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:id="@+id/ed3"  
 android:layout\_toRightOf="@id/tv3"  
 android:layout\_below="@id/ed2"  
 android:layout\_marginLeft="20sp">  
 </EditText>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:textSize="30sp"  
 android:layout\_marginTop="30sp"  
 android:layout\_below="@id/ed3"  
 android:text="Show"  
 android:id="@+id/btn1">  
 </Button>  
  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip19a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
 EditText ed1,ed2,ed3;  
 Button btn1;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 ed1=findViewById(R.id.*ed1*);  
 ed2=findViewById(R.id.*ed2*);  
 ed3=findViewById(R.id.*ed3*);  
 btn1=findViewById(R.id.*btn1*);  
  
 btn1.setOnClickListener(view -> {  
 String val1=ed1.getText().toString();  
 String val2=ed2.getText().toString();  
 //String val3=ed3.getText().toString();  
 String ans=val1+val2;  
 ed3.setText(ans);  
 });  
 }  
}

**SLIP 20-** B**) Create an Android Application to perform following string operation according to user selection of radio button. [25 M]**

**XML CODE:**

<?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"  
 tools:context="com.example.stringoperation\_radiobutton.MainActivity"  
 android:orientation="horizontal">  
  
 <TextView  
 android:id="@+id/tvRg"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Enter String:"  
 android:textAppearance="?android:attr/textAppearanceMedium"  
 android:textSize="40dp" />  
  
 <EditText  
 android:id="@+id/tvRg1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_toRightOf="@id/tvRg"  
 android:text=""  
 android:textSize="40dp">  
  
 </EditText>  
 <RadioGroup  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@+id/tvRg"  
 android:layout\_centerHorizontal="true"  
 android:orientation="vertical"  
 android:layout\_marginTop="20dp"  
 android:id="@+id/radioGroup" >  
  
 <RadioButton  
 android:id="@+id/rb1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:checked="false"  
 android:text="Uppercase" />  
  
 <RadioButton  
 android:id="@+id/rb2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Lowercase"  
 android:checked="false" />  
  
 <RadioButton  
 android:id="@+id/rb3"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Right 5 character"  
 android:checked="false" />  
 <RadioButton  
 android:id="@+id/rb4"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Left 5 character"  
 android:checked="false" />  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_below="@id/rb4"  
 android:text="Click"  
 android:textSize="20dp"  
 android:id="@+id/btn\_submit"  
 android:textAlignment="center">  
  
 </Button>  
  
 <TextView  
 android:id="@+id/tvRg2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Output"  
 android:textAppearance="?android:attr/textAppearanceMedium"  
 android:textSize="40dp">  
  
 </TextView>  
  
 <TextView  
 android:id="@+id/tvRg3"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentEnd="true"  
 android:layout\_toRightOf="@id/tvRg2"  
 android:text=""  
 android:textSize="40dp">  
  
 </TextView>  
 </RadioGroup>  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip20b;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.TextView;  
  
import java.util.Locale;  
  
public class MainActivity extends AppCompatActivity {  
 // These are the global variables  
 RadioGroup radioGroup;  
 RadioButton rb1, rb2, rb3, rb4;  
 RadioButton selectedRadioButton;  
 Button buttonSubmit;  
 TextView tvRg3, tvRg1;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 // layout instances  
 buttonSubmit = (Button) findViewById(R.id.*btn\_submit*);  
 radioGroup = (RadioGroup) findViewById(R.id.*radioGroup*);  
 rb1 = (RadioButton) findViewById(R.id.*rb1*);  
 rb2 = (RadioButton) findViewById(R.id.*rb2*);  
 rb3 = (RadioButton) findViewById(R.id.*rb3*);  
 rb4 = (RadioButton) findViewById(R.id.*rb4*);  
 tvRg3 = findViewById(R.id.*tvRg3*);  
 tvRg1 = findViewById(R.id.*tvRg1*);  
 /\*  
 Submit Button  
 \*/  
 buttonSubmit.setOnClickListener(new View.OnClickListener() {  
  
 @Override  
 public void onClick(View v) {  
 //Get the selected RadioButton  
 selectedRadioButton = (RadioButton) findViewById(radioGroup.getCheckedRadioButtonId());  
 // get RadioButton text  
 String yourVote = selectedRadioButton.getText().toString();  
 String radioButtonChoices = "";  
  
 //String Rg3,Rg1;  
  
 if (rb1.isChecked()) {  
  
 radioButtonChoices += tvRg1.getText().toString();  
 tvRg3.setText(radioButtonChoices.toUpperCase(Locale.*ROOT*));  
  
 }  
 else {  
 }  
  
 if (rb2.isChecked()) {  
 radioButtonChoices += tvRg1.getText().toString();  
 tvRg3.setText(radioButtonChoices.toLowerCase(Locale.*ROOT*));  
 } else {  
  
 }  
  
 if (rb3.isChecked()) {  
 radioButtonChoices += tvRg1.getText().toString();  
 tvRg3.setText(radioButtonChoices.substring(tvRg1.length()-5, tvRg1.length()));  
 } else {  
  
 }  
 if (rb4.isChecked()) {  
 radioButtonChoices += tvRg1.getText().toString();  
 tvRg3.setText(radioButtonChoices.substring(0,5));  
 } else {  
  
 }  
 }  
 });  
 }  
}

**SLIP 21- A) Write an Android Program to Demonstrate Date Picker Dialog in Android [15 M]**

**XML CODE:**

<?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="example.javatpoint.com.datepicker.MainActivity">  
  
 <TextView  
 android:id="@+id/textView1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/button1"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginBottom="102dp"  
 android:layout\_marginLeft="30dp"  
 android:layout\_marginStart="30dp"  
 android:text="" />  
  
 <Button  
 android:id="@+id/button1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginBottom="20dp"  
 android:text="Change Date" />  
  
 <DatePicker  
 android:id="@+id/datePicker"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_above="@+id/textView1"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginBottom="36dp" />  
  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip21a;  
  
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;  
  
public class MainActivity extends AppCompatActivity {  
 DatePicker picker;  
 Button displayDate;  
 TextView textview1;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 textview1=(TextView)findViewById(R.id.*textView1*);  
 picker=(DatePicker)findViewById(R.id.*datePicker*);  
 displayDate=(Button)findViewById(R.id.*button1*);  
  
 textview1.setText("Current Date: "+getCurrentDate());  
  
 displayDate.setOnClickListener(new View.OnClickListener(){  
 @Override  
 public void onClick(View view) {  
  
 textview1.setText("Change Date: "+getCurrentDate());  
 }  
  
 });  
  
 }  
 public String getCurrentDate(){  
 StringBuilder builder=new StringBuilder();;  
 builder.append((picker.getMonth() + 1)+"/");//month is 0 based  
 builder.append(picker.getDayOfMonth()+"/");  
 builder.append(picker.getYear());  
 return builder.toString();  
 }  
}

**SLIP 22-A) Create a Simple Application Which Shows Greeting information to User. [15 M]**

**XML CODE:**

<?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">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Its displays a greeting message to user"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**JAVA CODE:**

package com.example.slip22a;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Toast.*makeText*(MainActivity.this,"Hello, Welcome to this application",Toast.*LENGTH\_SHORT*).show();  
 }  
}

**SLIP 22-B) Create an Android Application that Demonstrate GridView and Onclick of Item Display the Toast. [25 M]**

**XML CODE:**

<?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">  
  
  
 <GridView  
 android:id="@+id/gridView1"  
 android:numColumns="3"  
 android:gravity="center"  
 android:columnWidth="50dp"  
 android:stretchMode="columnWidth"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="fill\_parent" >  
 </GridView>  
  
</RelativeLayout>

**JAVA CODE:**

package com.example.slip22b;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.app.Activity;  
import android.os.Bundle;  
import android.view.Menu;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.GridView;  
import android.widget.TextView;  
import android.widget.Toast;  
  
public class MainActivity extends Activity {  
 GridView gridView;  
 static final String[] *numbers* = new String[] {  
 "Monday", "Tue", "Wed","Thur","Fri",  
 "Sat", "Sun",  
 "holiday","week",};  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 gridView = (GridView) findViewById(R.id.*gridView1*);  
  
 ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,  
 android.R.layout.*simple\_list\_item\_1*, *numbers*);  
  
 gridView.setAdapter(adapter);  
  
 gridView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
  
 @Override  
 public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
 Toast.*makeText*(getApplicationContext(),((TextView) view).getText(), Toast.*LENGTH\_LONG*).show();  
  
 }  
  
  
 });  
 }  
  
 @Override  
 public boolean onCreateOptionsMenu(Menu menu) {  
 // Inflate the menu; this adds items to the action bar if it is present.  
 getMenuInflater().inflate(R.menu.*activity\_main*, menu);  
 return true;  
 }  
  
}