Slip 1 A

Create a simple application which send "Hello" Message form one activity to another activity

With help of Button (use intent).

Ans -   MainActivity.java

```java
package com.example.slip1a;

import …

public class MainActivity extends AppCompatActivity {

    EditText input_txt;
    Button btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        input_txt = findViewById(R.id.input_txt);
        btn = findViewById(R.id.btn);

        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                String inmsg = input_txt.getText().toString();

                Intent intvar = new Intent(MainActivity.this, Activity2.class);

                intvar.putExtra("intxt",inmsg);
                startActivity(intvar);
            }
        });
    }
}
```

Activity2.java

```java
package com.example.slip1a;

import …

public class Activity2 extends AppCompatActivity {

    TextView outputtxt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);
```

```
        outputtxt = findViewById(R.id.output_txt);

        Intent intvar = getIntent();

        String outmsg = intvar.getStringExtra("intxt");

        outputtxt.setText(outmsg);
    }
}
```

Slip 1 B

Create an android application to demonstrate progress dialog box using Async Task.

```
package com.example.slip1b;

import …

public class MainActivity extends AppCompatActivity {

    Button show_btn;
    mytask mytask;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        show_btn = findViewById(R.id.show_btn);

        show_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                mytask = new mytask();
                mytask.execute();
            }
        });
    }

    class mytask extends AsyncTask<Void,Integer,Void>{

        ProgressDialog progressdialog;

        boolean running;

        @Override
        protected Void doInBackground(Void... voids) {

            try {
                while (progressdialog.getProgress()<= progressdialog.getMax()){
                    Thread.sleep(300);
```

```java
                    progressdialog.incrementProgressBy(1);
                if (progressdialog.getProgress() == progressdialog.getMax())
                    {
                        progressdialog.dismiss();
                    }
                }
            }catch (Exception e){
                e.printStackTrace();
            }
            return null;
        }

    @Override
    protected void onPreExecute() {
        super.onPreExecute();

        running = true;
        progressdialog = new ProgressDialog(MainActivity.this);
        progressdialog.setMax(100);
        progressdialog.setMessage("In Progress...");
        progressdialog.setTitle("Progress Dialog");
        progressdialog.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);
        progressdialog.show();

    }

    @Override
    protected void onPostExecute(Void unused) {
        super.onPostExecute(unused);
        progressdialog.dismiss();
    }

    @Override
    protected void onProgressUpdate(Integer... values) {
        super.onProgressUpdate(values);
        progressdialog.setMessage(String.valueOf(values));
    }
    }
}
```

Slip 2 A

Create a Simple App which demonstrate Life cycle of Activity.

```java
package com.example.slip2a;

import …

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```java
        Log.d("LifeCycle","OnCreate method started");
    }

    @Override
    protected void onStart() {
        super.onStart();
        Log.d("LifeCycle","OnStart method started");
    }

    @Override
    protected void onResume() {
        super.onResume();
        Log.d("LifeCycle","OnResume method started");
    }

    @Override
    protected void onPause() {
        super.onPause();
        Log.d("LifeCycle","OnPause method started");
    }

    @Override
    protected void onStop() {
        super.onStop();
        Log.d("LifeCycle","OnStop method started");
    }

    @Override
    protected void onRestart() {
        super.onRestart();
        Log.d("LifeCycle","OnRestart method started");
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.d("LifeCycle","OnDestroy method started");
    }
}
```

Slip 2 B

Create android app that demonstrate DatePicker and DatePicketDialog.

```java
package com.example.slip2b;

import …

public class MainActivity extends AppCompatActivity {

    DatePickerDialog datepicdialog;

    TextView datetxt;
    Button display_datepic_btn;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        display_datepic_btn = findViewById(R.id.display_datepic_btn);
        datetxt = findViewById(R.id.datetxt);

        display_datepic_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                final Calendar calndr = Calendar.getInstance();
                int day = calndr.get(Calendar.DAY_OF_MONTH);
                int month = calndr.get(Calendar.MONTH);
                int year = calndr.get(Calendar.YEAR);

                datepicdialog = new DatePickerDialog(MainActivity.this, new
DatePickerDialog.OnDateSetListener() {
                    @Override
        public void onDateSet(DatePicker view, int year, int monthOfYear,
int dayOfMonth) {
            datetxt.setText(dayOfMonth + " /" +(monthOfYear + 1) + " /" +year);
                }
                },year,month,day);

                datepicdialog.show();;
                datetxt.setText("Selected date is"+datetxt.getText());
            }
        });
    }
}
```

Slip 3 A

Create android app which reads a positive number form user and displays its factorial value in another activity.

MainActivity.java

```
package com.example.slip3a;

import …

public class MainActivity extends AppCompatActivity {

    EditText input_num;
    Button fact_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        input_num = findViewById(R.id.input_num);
```

```java
        fact_btn = findViewById(R.id.fact_btn);

        fact_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                Bundle bundle = new Bundle();
                int num, fact=1,i;

                num = Integer.parseInt(input_num.getText().toString());
                for (i=1; i<=num; i++)
                {
                    fact = fact * i;
                }

                bundle.putInt("Factorial",fact);
              Intent intvar = new Intent(MainActivity.this, Activity2.class);
                intvar.putExtras(bundle);
                startActivity(intvar);
            }
        });
    }
}
```

Activity2.java

```java
package com.example.slip3a;

import ..

public class Activity2 extends AppCompatActivity {

    TextView result;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);

        result = findViewById(R.id.result);

        Intent intvar = getIntent();
        Bundle bundle = intvar.getExtras();
        int val = bundle.getInt("factorial");

        String str = String.valueOf(val);

        result.setText("Factorial is: "+str);
    }
}
```

Slip 3 B

Create android app that plays and audio in the background. Audio will not stop even if you switch to another activity. To stop audio, you need to stop the service.

MainActivity.java

```java
package com.example.slip3b;

import ..

public class MainActivity extends AppCompatActivity {

    Button start_btn, next_acti_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        start_btn = findViewById(R.id.start_btn);
        next_acti_btn = findViewById(R.id.next_acti_btn);

        start_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startService(new Intent(MainActivity.this,MyService.class));
            }
        });

        next_acti_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
             Intent intvar = new Intent(MainActivity.this, Activity2.class);
                startActivity(intvar);
                finish();
            }
        });

    }
}
```

Activity2.java

```java
package com.example.slip3b;

import ..

public class Activity2 extends AppCompatActivity {

    Button stop_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```java
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);

        stop_btn = findViewById(R.id.stop_btn);

        stop_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                stopService(new Intent(Activity2.this,MyService.class));
            }
        });
    }
}
```

MyService.java (class)

```java
package com.example.slip3b;

import ..

public class MyService extends Service {

    MediaPlayer mediaplayr;

    @Nullable
    @Override
    public IBinder onBind(Intent intent) {
        return null;
    }

    @Override
    public void onCreate() {
        super.onCreate();
        Toast.makeText(this, "Service Started", Toast.LENGTH_SHORT).show();
        mediaplayr = MediaPlayer.create(this,R.raw.hasshass);
        mediaplayr.start();
        mediaplayr.setLooping(false);
    }

    @Override
    public void onStart(Intent intent, int startId) {
        super.onStart(intent, startId);
        Toast.makeText(this, "Service Started", Toast.LENGTH_SHORT).show();
        mediaplayr.start();
    }

    @Override
    public void onDestroy() {
        super.onDestroy();
        Toast.makeText(this, "Service Stopped", Toast.LENGTH_SHORT).show();
        mediaplayr.stop();
    }
}
```

Slip 4

Q3) Create an Android App, it reads the Students Details (Name, Surname, Class, Gender, Hobbies, Marks) and Display the all information in another activity in table format on click of Submit button

MainActivity.java

```java
package com.example.slip4a;

import ..

public class MainActivity extends AppCompatActivity {

    EditText name_input, surname_input, class_input, gender_input,
hobbies_input, marks_input;
    Button submit_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        name_input = findViewById(R.id.name_input);
        surname_input = findViewById(R.id.surname_input);
        class_input = findViewById(R.id.class_input);
        gender_input = findViewById(R.id.gender_input);
        hobbies_input = findViewById(R.id.hobbies_input);
        marks_input = findViewById(R.id.marks_input);
        submit_btn = findViewById(R.id.submit_btn);

        submit_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = name_input.getText().toString().trim();
                String surname = surname_input.getText().toString().trim();
                String classs = class_input.getText().toString().trim();
                String gender = gender_input.getText().toString().trim();
                String hobbies = hobbies_input.getText().toString().trim();
                String marks = marks_input.getText().toString().trim();

                Bundle bundl = new Bundle();
                bundl.putString("name",name);
                bundl.putString("surname",surname);
                bundl.putString("class",classs);
                bundl.putString("gender",gender);
                bundl.putString("hobbies",hobbies);
                bundl.putString("marks",marks);

               Intent intvar = new Intent(MainActivity.this, Activity2.class);
                intvar.putExtras(bundl);
                startActivity(intvar);
            }
        });
    }
}
```

MainActivity2.java

```java
package com.example.slip4a;

import ..

public class Activity2 extends AppCompatActivity {

    TextView name_txt, surname_txt, classs_txt, gender_txt, hobbies_txt,
marks_txt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);

        name_txt = findViewById(R.id.name_txt);
        surname_txt = findViewById(R.id.surname_txt);
        classs_txt = findViewById(R.id.classs_txt);
        gender_txt = findViewById(R.id.gender_txt);
        hobbies_txt = findViewById(R.id.hobbies_txt);
        marks_txt = findViewById(R.id.marks_txt);

        Bundle bundl = getIntent().getExtras();

        if (bundl != null)
        {
            String name = bundl.getString("name");
            String surname = bundl.getString("surname");
            String classs = bundl.getString("class");
            String gender = bundl.getString("gender");
            String hobbies = bundl.getString("hobbies");
            String marks = bundl.getString("marks");

            name_txt.setText(name);
            surname_txt.setText(surname);
            classs_txt.setText(classs);
            gender_txt.setText(gender);
            hobbies_txt.setText(hobbies);
            marks_txt.setText(marks);
        }
    }
}
```

Q4) Create an Android Application to display satellite view of current location using Google Map.

Slip 5

Q3) 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.

```java
package com.example.slip5a;

import ..
public class MainActivity extends AppCompatActivity {

    TextView text;
    Button redbtn, greenbtn, bluebtn, yellowbtn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        text = findViewById(R.id.text);
        redbtn = findViewById(R.id.redbtn);
        greenbtn = findViewById(R.id.greenbtn);
        bluebtn = findViewById(R.id.bluebtn);
        yellowbtn = findViewById(R.id.yellowbtn);

        redbtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                text.setTextColor(Color.RED);
                text.setTextSize(30);
            }
        });

        greenbtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                text.setTextColor(Color.GREEN);
                text.setTextSize(40);
            }
        });

        bluebtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                text.setTextColor(Color.BLUE);
                text.setTextSize(50);
            }
        });

        yellowbtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                text.setTextColor(Color.YELLOW);
                text.setTextSize(60);
            }
        });
```

```
        }
}
```

Q4) Create an Android Application to find the factorial of a number and Display the Result on Alert Box.

```
package com.example.slip5b;

import ..

public class MainActivity extends AppCompatActivity {

    EditText inp_num;
    Button fact_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        inp_num = findViewById(R.id.inp_num);
        fact_btn = findViewById(R.id.fact_btn);

        fact_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                fact();
            }
        });

    }
    private void fact(){

        int num =Integer.parseInt(inp_num.getText().toString());
        int fact = 1;
        for (int i=1 ; i<=num ; i++){

            fact = fact * i;
        }
        AlertDialog alrtbox = new AlertDialog.Builder(this)
                .setTitle("Factorial of number")
                .setMessage("Factorial of "+num+" is "+fact)
                .show();
    }
}
```

Slip 6
Q3) Create a Simple Application that performs Arithmetic Operations. (Use constraint layout)

```java
package com.example.slip6a;

import ..

public class MainActivity extends AppCompatActivity {

    EditText f_num, s_num;
    TextView result;
    Button addition_btn, subtraction_btn, multiply_btn, division_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        f_num = findViewById(R.id.f_num);
        s_num = findViewById(R.id.s_num);
        result = findViewById(R.id.result);
        addition_btn = findViewById(R.id.addition_btn);
        subtraction_btn = findViewById(R.id.subtraction_btn);
        multiply_btn = findViewById(R.id.multiply_btn);
        division_btn = findViewById(R.id.division_btn);

        addition_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int num1 = Integer.parseInt(f_num.getText().toString());
                int num2 = Integer.parseInt(s_num.getText().toString());
                int solu = num1 + num2;
                result.setText("Addition Is "+solu);
            }
        });

        subtraction_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int num1 = Integer.parseInt(f_num.getText().toString());
                int num2 = Integer.parseInt(s_num.getText().toString());
                int solu = num1 - num2;
                result.setText("Subtraction Is "+solu);
            }
        });

        multiply_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int num1 = Integer.parseInt(f_num.getText().toString());
                int num2 = Integer.parseInt(s_num.getText().toString());
                int solu = num1 * num2;
                result.setText("Multiplication Is "+solu);
            }
        });
```

```
division_btn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            int num1 = Integer.parseInt(f_num.getText().toString());
            int num2 = Integer.parseInt(s_num.getText().toString());
            int solu = num1 / num2;
            result.setText("Division Is "+solu);
        }
    });
  }
}
```

Q4) Create an Android Application that sends the Notification on click of the button and Display the notification message on second activity.

Slip 7
Q3) Create an Android Application to accept two numbers and find power and Average. Display the result on the next activity on Button click.

MainActivity.java
```
package com.example.slip7a;

import ..

public class MainActivity extends AppCompatActivity {

    EditText first_num, second_num;
    Button pwr_avg_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        first_num = findViewById(R.id.first_num);
        second_num =  findViewById(R.id.second_num);
        pwr_avg_btn = findViewById(R.id.pwr_avg_btn);

        pwr_avg_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int base = Integer.parseInt(first_num.getText().toString());
            int exponent = Integer.parseInt(second_num.getText().toString());

                int exp = exponent;
                long result = 1;
                double sum = 0.0, avg = 0.0;

                while (exp!=0){
                    result += base;
                    --exp;
                }
                String s = String.valueOf(result);
```

```
                    sum = base + exponent;
                    avg = sum / 2;
                    String f = String.valueOf(avg);

            Intent intvar = new Intent(MainActivity.this, MainActivity2.class);
                    intvar.putExtra("power",s);
                    intvar.putExtra("average",f);
                    startActivity(intvar);
                }
            });
        }
}
```

MainActivity2.java
```
package com.example.slip7a;

import ..

public class MainActivity2 extends AppCompatActivity {

    TextView result;
    Button back_btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);

        result = findViewById(R.id.result);
        back_btn = findViewById(R.id.back_btn);

        Intent intvar = getIntent();
        String power = intvar.getStringExtra("power");
        String average = intvar.getStringExtra("average");

        result.setText("Power is "+power+" and Average is "+average);

        back_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
            Intent intvr = new Intent(MainActivity2.this, MainActivity.class);
                startActivity(intvr);
                finish();
            }
        });
    }
}
```

Q4) Create Android Application for performing the following operation on the table

Slip 8

Q3) Create an Android application to demonstrate phone call using Implicit Intent.

MainActivity.java

```
package com.example.phone_call;
import…
public class MainActivity extends AppCompatActivity {
    EditText edittext1;
    Button button1;

 @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      edittext1=(EditText)findViewById(R.id.editText1);
      button1=(Button)findViewById(R.id.button1);


      button1.setOnClickListener(new View.OnClickListener(){
         @Override
         public void onClick(View arg0) {
            String number=edittext1.getText().toString();
            Intent callIntent = new Intent(Intent.ACTION_CALL);
            callIntent.setData(Uri.parse("tel:"+number));
            startActivity(callIntent);
         }

      });
   }
   @SuppressLint("ResourceType")
   @Override
   public boolean onCreateOptionsMenu(Menu menu) {
      // Inflate the menu; this adds items to the action bar if it is present.
      getMenuInflater().inflate(R.layout.activity_main, menu);
      return true;
   }
}
```

Q4) Develop an Android application that create custom Alert Dialog containing Friends Name and onClick of Friend Name Button greet accordingly.

MainActivity.java file

```java
package com.example.alertdialog_greet;

import…

public class MainActivity extends AppCompatActivity {

    Button closeButton;

    AlertDialog.Builder builder;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        closeButton = (Button) findViewById(R.id.button);

        builder = new AlertDialog.Builder(this);


  closeButton.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            //Setting message manually and performing action on button click

                builder.setCancelable(false)

                .setPositiveButton("Isha", new DialogInterface.OnClickListener() {

                    public void onClick(DialogInterface dialog, int id) {

                        dialog.cancel();

                        Toast.makeText(getApplicationContext(),"Hello Isha",
```

```java
                    Toast.LENGTH_SHORT).show();

                }

            })
        .setNegativeButton("Sofiya", new DialogInterface.OnClickListener() {

                public void onClick(DialogInterface dialog, int id) {

                    dialog.cancel();

                    Toast.makeText(getApplicationContext(),"Hello Sofiya",

                        Toast.LENGTH_SHORT).show();

                }

            })
        .setNeutralButton("Masirah", new DialogInterface.OnClickListener() {

                public void onClick(DialogInterface dialog, int id) {

                    dialog.cancel();

Toast.makeText(getApplicationContext(),"Hello Masirah",

Toast.LENGTH_SHORT).show();

                }

            });
        //Creating dialog box
        AlertDialog alert = builder.create();
        //Setting the title manually
        alert.setTitle("My Custom Alert");
        alert.show();
    }
```

```
        });

    }

}
```

Slip 9
Q3) Design Following Screens using Table Layout. Display the entered text using Toast.

Main activity file

package com.example.tablelayout;

import…

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);

```java
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){

    Toast.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();

        });

    }
```

Q4) Create application to send SMS message to a friend. After sending message display delivery report of message.

```
Import…
public class MainActivity extends AppCompatActivity {
    private EditText phoneNumberEditText;
    private EditText messageEditText;

    private DeliveryReportReceiver deliveryReportReceiver;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Get references to the UI elements
        phoneNumberEditText = findViewById(R.id.phone_number_edit_text);
        messageEditText = findViewById(R.id.message_edit_text);
        Button sendButton = findViewById(R.id.send_button);

        // Register the delivery report receiver
        deliveryReportReceiver = new DeliveryReportReceiver();
        registerReceiver(deliveryReportReceiver, new IntentFilter("DELIVERED_SMS"));

        // Set a click listener for the send button
        sendButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Get the phone number and message from the UI
                String phoneNumber = phoneNumberEditText.getText().toString();
                String message = messageEditText.getText().toString();
```

```java
            // Create the SMS manager and send the message
            SmsManager smsManager = SmsManager.getDefault();
            Intent deliveryIntent = new Intent("DELIVERED_SMS");
 PendingIntent deliveryPendingIntent = PendingIntent.getBroadcast(MainActivity.this, 0,
deliveryIntent, PendingIntent.FLAG_UPDATE_CURRENT);

 smsManager.sendTextMessage(phoneNumber, null, message, null, deliveryPendingIntent);

            // Display a toast message indicating that the message has been sent
            Toast.makeText(MainActivity.this, "Message sent", Toast.LENGTH_SHORT).show();
        }
    });
  }

  @Override
  protected void onDestroy() {
    super.onDestroy();
    // Unregister the delivery report receiver
    unregisterReceiver(deliveryReportReceiver);
  }

  private class DeliveryReportReceiver extends android.content.BroadcastReceiver {
    @Override
    public void onReceive(android.content.Context context, Intent intent) {
      switch (getResultCode()) {
        case RESULT_OK:
          // Display a toast message indicating that the message has been delivered
          Toast.makeText(context, "Message delivered", Toast.LENGTH_SHORT).show();
          break;
        case RESULT_CANCELED:
          // Display a toast message indicating that the message could not be delivered
    Toast.makeText(context, "Message delivery failed", Toast.LENGTH_SHORT).show();
          break;
      }
    }
  }
}
```

Slip10
Q3) Create an Android Application to perform Zoom In, Zoom Out operation and display Satellite view, on Google Map.

MainActivity.java

Import…

```java
public class MainActivity extends AppCompatActivity implements OnMapReadyCallback {

    private static final float DEFAULT_ZOOM = 15f;

    private MapView mapView;
    private GoogleMap googleMap;
    private boolean isSatelliteViewEnabled = false;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        mapView = findViewById(R.id.map_view);
        mapView.onCreate(savedInstanceState);
        mapView.getMapAsync(this);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        int id = item.getItemId();

        if (id == R.id.action_zoom_in) {
            googleMap.animateCamera(CameraUpdateFactory.zoomIn());
            return true;
        } else if (id == R.id.action_zoom_out) {
            googleMap.animateCamera(CameraUpdateFactory.zoomOut());
            return true;
        } else if (id == R.id.action_toggle_satellite) {
            if (isSatelliteViewEnabled) {
                googleMap.setMapType(GoogleMap.MAP_TYPE_NORMAL);
                isSatelliteViewEnabled = false;
            } else {
                googleMap.setMapType(GoogleMap.MAP_TYPE_SATELLITE);
                isSatelliteViewEnabled = true;
            }
```

```java
        return true;
    }

    return super.onOptionsItemSelected(item);
}

@Override
public void onMapReady(GoogleMap map) {
    googleMap = map;

    googleMap.setMapStyle(MapStyleOptions.loadRawResourceStyle(this,
R.raw.map_style));

    if (googleMap != null) {
        googleMap.setMyLocationEnabled(true);
        googleMap.getUiSettings().setMyLocationButtonEnabled(true);

        LatLng latLng = new LatLng(37.7749, -122.4194);
        CameraPosition cameraPosition = new CameraPosition.Builder()
            .target(latLng)
            .zoom(DEFAULT_ZOOM)
            .build();

        googleMap.moveCamera
```

Q4) Create Application to perform the following operations on table Game (gno,gname, type, no_of_players).
i) Update no_of_players to four where game is Badminton.
ii) Display all the records.

Game.java   (java class)

```java
public class Game {
    private int gno;
    private String gname;
    private String type;
    private int no_of_players;

    public Game(int gno, String gname, String type, int no_of_players) {
        this.gno = gno;
        this.gname = gname;
        this.type = type;
        this.no_of_players = no_of_players;
    }

    public int getGno() {
        return gno;
    }
```

```java
    public void setGno(int gno) {
        this.gno = gno;
    }

    public String getGname() {
        return gname;
    }

    public void setGname(String gname) {
        this.gname = gname;
    }

    public String getType() {
        return type;
    }

    public void setType(String type) {
        this.type = type;
    }

    public int getNo_of_players() {
        return no_of_players;
    }

    public void setNo_of_players(int no_of_players) {
        this.no_of_players = no_of_players;
    }
}
```

MainActivity.java

```java
Import…
public class GameAdapter extends RecyclerView.Adapter<GameAdapter.ViewHolder> {

    private List<Game> games;

    public GameAdapter(List<Game> games) {
        this.games = games;
    }

    @NonNull
    @Override
    public ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        View view = LayoutInflater.from(parent.getContext())
                .inflate(R.layout.item_game, parent, false);
        return new ViewHolder(view);
    }
```

```java
    @Override
    public void onBindViewHolder(@NonNull ViewHolder holder, int position) {
        Game game = games.get(position);
        holder.tvGno.setText(String.valueOf(game.getGno()));
        holder.tvGname.setText(game.getGname());
        holder.tvType.setText(game.getType());
        holder.tvNoOfPlayers.setText(String.valueOf(game.getNo_of_players()));
    }

    @Override
    public int getItemCount() {
        return games.size();
    }

    public static class ViewHolder extends RecyclerView.ViewHolder {
        public TextView tvGno;
        public TextView tvGname;
        public TextView tvType;
        public TextView tvNoOfPlayers;

        public ViewHolder(@NonNull View itemView) {
            super(itemView);
            tvGno = itemView.findViewById(R.id.tv_gno);
            tvGname = itemView.findViewById(R.id.tv_gname);
            tvType = itemView.findViewById(R.id.tv_type);
            tvNoOfPlayers = itemView.findViewById(R.id.tv_no_of_players);
        }
    }
}
```
Slip 11

Q3) Create an Android Application that Demonstrate Radio Button

Main activity.java

package com.example.slip11_1;

import …

public class MainActivity extends AppCompatActivity {

    // These are the global variables

    RadioGroup radioGroup;

    RadioButton rb1,rb2,rb3,rb4,selectedRadioButton;

```java
    Button buttonSubmit;

@Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        // layout instances

        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);

        /*

            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();

                if (rb1.isChecked()) {
```

```java
            yourVote += rb1.getText().toString() + "\t TRUE\n";

        } else {

            yourVote += rb1.getText().toString() + "\t FALSE\n";

        }

        if (rb2.isChecked()) {

            yourVote += rb2.getText().toString() + "\t TRUE\n";

        } else {

            yourVote += rb2.getText().toString() + "\t FALSE\n";

        }

        if (rb3.isChecked()) {

            yourVote += rb3.getText().toString() + "\t TRUE\n";

        } else {

            yourVote += rb3.getText().toString() + "\t FALSE\n";

        }

        if (rb4.isChecked()) {

            yourVote += rb4.getText().toString() + "\t TRUE\n";

        } else {

            yourVote += rb4.getText().toString() + "\t FALSE\n";

        }
        // display it as Toast to the user
Toast.makeText(MainActivity.this, "Selected Radio Button is:" + yourVote+ "\n",
Toast.LENGTH_LONG).show();

        }

    });
```

```
        }
}
```

Q4) Create an Android Application that Demonstrate ListView and Onclick of List Display the Toast.

MainActivity.java

```java
package com.example.listview;
import …
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
```

```java
        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
Q3) Design Following Screens Using RadioButtons & CheckBoxes. Display the
selected text using Toast.

MainAcitivity.java

```java
package com.example.radiobutton;
import …
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();
```

```java
        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();
    });
    }
}
```

Q4) Write a program to search a specific location on Google Map.

Slip 13
Q3) Create an Android App with Login Screen. On successful login, gives message go to next Activity (Without Using Database& use Table Layout).

Main activity file

package com.example.logindemo;

import …

public class MainActivity extends AppCompatActivity {

 @Override

  protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);

    EditText et_user=findViewById(R.id.et_user);

    EditText et_pass=findViewById(R.id.et_pass);

    Button bt_okay=findViewById(R.id.bt_okay);

    Button bt_cancel=findViewById(R.id.bt_cancel);

    bt_okay.setOnClickListener(view -> {

      String user=et_user.getText().toString();

      String pass=et_pass.getText().toString();

      if (user.equals("admin")&& pass.equals("admin")) {

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

        startActivity(intent);

      }

      else {

        Toast.makeText(MainActivity.this, "Login Failed", Toast.LENGTH_SHORT).show();

      }

```java
        });

    bt_cancel.setOnClickListener(view -> {

            et_user.getText().clear();

            et_pass.getText().clear();

        });

    }

}
```

MainActivity2.java

```java
package com.example.logindemo;

import android.annotation.SuppressLint;
import android.os.Bundle;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class SecondActivity extends AppCompatActivity {
    @SuppressLint("SetTextI18n")
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);

        getIntent();
        TextView tvResult=findViewById(R.id.tvResult);
        //Toast.makeText(SecondActivity.this, "Login Successful",
Toast.LENGTH_SHORT).show();
        tvResult.setText("Login Successful");
    }
}
```

Q4) Create Android application to perform following operations on table Student (Sid, Sname ,phno). Use auto increment for Sid and Perform following Operations.

a) Add Student and display its information.

b) Delete Student

Slip 14

Q3) Create Android application to send email with attachment.

Q4) Create an Android application to demonstrates how to use a service to download a file from the Internet on click of Download Button. Once done, the service notifies the activity via a broadcast receiver that the download is complete.

Slip 15

Q3) Design following-add a border to an Android Layout

Q4) Create a Android Application to search a specific location on Google Map.

Slip16

Q3) Create following Vertical Scroll View Creation in Android.

Xml file

```xml
<?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"
```

```xml
        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>
```

```xml
    <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>
```

```xml
<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>
```

```xml
<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"
```

```xml
            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>
```

Main activity

package com.example.scrollview;

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);

   }

Q4) Create an Android Application that Demonstrate TimePickerand display Selected Time on TextView.

MainActivity.java

package com.example.slip16_timepicker;

import …

```
public class MainActivity extends AppCompatActivity {
    TextView textview1;
    TimePicker timepicker;
    Button changetime;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```java
        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
Q3) Create an Android Application to Construct image switcher using setFactory().

MainActivity.java

package com.example.imageswitcher;

import …

public class MainActivity extends AppCompatActivity {

 Integer[]
images={R.drawable.scene,R.drawable.scene2,R.drawable.scene4,R.drawabl
e.scene5,R.drawable.scene6};

```java
    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);
```

```java
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]);

        }

    }

});

    }

}
```

Q4) Create an Android Application that Demonstrate ContextMenu.

MainActivity.java

package com.example.imageswitcher;

import …

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;

```java
                }
        });
        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

Q3) 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.

Main activity file

package com.example.slip18;

import …

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);

```java
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);

    }
});

    }

}
```

Q4) Write a program to find the specific location of an Android device and display

details of the place like Address line, city with Geocoding.

Slip 19
Q3) Write an Android code to merge given two Array/List

Main activity file:

package com.example.slip19;

import…

public class MainActivity extends AppCompatActivity {

    EditText ed1,ed2,ed3;

```java
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);

        });

    }

}
```

Q4) Create a Simple calculator. (Use Linear Layout)

MainActivity.java

package com.example.simple_calculator;

import …

```java
public class MainActivity extends Activity implements View.OnClickListener {

    EditText etNum1;

    EditText etNum2;

    Button btnAdd;

    Button btnSub;

    Button btnMult;

    Button btnDiv;

    TextView tvResult;

    String oper = "";

    /**
     * Called when the activity is first created.
     */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // find the elements
        etNum1 = (EditText) findViewById(R.id.etNum1);
        etNum2 = (EditText) findViewById(R.id.etNum2);
        btnAdd = (Button) findViewById(R.id.btnAdd);
```

```java
        btnSub = (Button) findViewById(R.id.btnSub);

        btnMult = (Button) findViewById(R.id.btnMult);

        btnDiv = (Button) findViewById(R.id.btnDiv);

    tvResult = (TextView) findViewById(R.id.tvResult);


        // set a listener

        btnAdd.setOnClickListener(this);

        btnSub.setOnClickListener(this);

        btnMult.setOnClickListener(this);

        btnDiv.setOnClickListener(this);



}


@Override

public void onClick(View v) {

        // TODO Auto-generated method stub

        float num1 = 0;

        float num2 = 0;

        float result = 0;


        // check if the fields are empty

        if (TextUtils.isEmpty(etNum1.getText().toString())

                || TextUtils.isEmpty(etNum2.getText().toString())) {
```

```java
        return;

    }


    // read EditText and fill variables with numbers

    num1 = Float.parseFloat(etNum1.getText().toString());

    num2 = Float.parseFloat(etNum2.getText().toString());



    // defines the button that has been clicked and performs the corresponding operation

    // write operation into oper, we will use it later for output

    switch (v.getId()) {

        case R.id.btnAdd:

            oper = "+";

            result = num1 + num2;

            break;

        case R.id.btnSub:

            oper = "-";

            result = num1 - num2;

            break;

        case R.id.btnMult:

            oper = "*";

            result = num1 * num2;

            break;
```

```java
        case R.id.btnDiv:

            oper = "/";

            result = num1 / num2;

            break;

        default:

            break;

    }

    // form the output line

    tvResult.setText(num1 + " " + oper + " " + num2 + " = " + result);

    }

}
```

Slip 20
Q3) Write an Android Application to Change the Image Displayed on the Screen

MainActivity.java

```java
package com.example.changeiamge;

import …

public class MainActivity extends Activity implements
OnCheckedChangeListener {

    RadioGroup group1, group2;
    Button gen;
    ImageView img;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        // TODO Auto-generated method stub
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```java
        group1 = (RadioGroup) findViewById(R.id.rg1);
    group1.setOnCheckedChangeListener((OnCheckedChangeListener) this);

        group2 = (RadioGroup) findViewById(R.id.rg2);
    group2.setOnCheckedChangeListener((OnCheckedChangeListener) this);

        img = (ImageView) findViewById(R.id.imageView1);
        // oncheckedChanged function
        gen = (Button) findViewById(R.id.button1);
        gen.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub

            }
        });

    }

    @Override
    public void onCheckedChanged(RadioGroup group, int checkedId) {
        // TODO Auto-generated method stub
        switch (checkedId) {
        case R.id.radioButton1:
            img.setImageResource(R.drawable.image4);
            break;

        case R.id.radioButton2:
            img.setImageResource(R.drawable.image5);
            break;

        case R.id.radioButton3:
            img.setImageResource(R.drawable.image6);
            break;

        case R.id.radioButton4:
            img.setImageResource(R.drawable.image7);
            break;

        default:
```

```
        break;
      }
    }
}
```

Q4) Create an Android Application to perform following string operation according to user selection of radio button.

MainActivity.java

```java
package com.example.stringoperation_radiobutton;

import …

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
```

```java
        */
        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
Q3) Write an Android Program to Demonstrate Date Picker Dialog in Android

MainActivity.java

package example.javatpoint.com.datepicker;

import …

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);

```java
        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();
    }
}
```

Q4) Create table Game(no,name,type, no_of_players). Create Application to perform the following operations.

i) Update no_of_players to four where game is Badminton.

ii) Display all the records.

Slip 22
Q3) Create a Simple Application Which Shows Greeting information to User.

MainActivity.java

package com.example.slip22_q1;

import …

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();
    }
}

Q4) Create an Android Application that Demonstrate GridView and Onclick of Item Display the Toast.

Main activity file:

package com.example.grid_view;

import …

public class MainActivity extends Activity {

    GridView gridView;

    static final String[] numbers = new String[] {

        "Monday", "Tue", "Wed","Thur","Fri",

        "Sat", "Sun",

```java
        "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 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.
```

```java
        getMenuInflater().inflate(R.menu.activity_main, menu);

        return true;

    }

}
```

Slip 23
 Q3) Write an Android Program to Demonstrate Date Picker Dialog in Android on click of Edit Text

MainActiviity.java

import …

```java
public class MainActivity extends AppCompatActivity {

  EditText editTextDate;


  @Override

  protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    editTextDate = findViewById(R.id.editTextDate);


    editTextDate.setOnClickListener(new View.OnClickListener() {

      @Override

      public void onClick(View v) {

        showDatePickerDialog();

      }
```

```java
        });
    }

    private void showDatePickerDialog() {

        final Calendar calendar = Calendar.getInstance();

        int year = calendar.get(Calendar.YEAR);

        int month = calendar.get(Calendar.MONTH);

        int dayOfMonth = calendar.get(Calendar.DAY_OF_MONTH);


        DatePickerDialog datePickerDialog = new DatePickerDialog(

            this,

            new DatePickerDialog.OnDateSetListener() {

              @Override

              public void onDateSet(DatePicker view, int year, int month, int dayOfMonth) {

                // Set the selected date to the EditText

                String selectedDate = dayOfMonth + "/" + (month + 1) + "/" + year;

                editTextDate.setText(selectedDate);

              }

            },

            year, month, dayOfMonth);

        datePickerDialog.show();

    }

}
```

Q4) Create an Android Application that Demonstrate Custom ListView which shows the BookName and Author Name

Q3) Create an Android Application that Demonstrate Switch and Toggle Button.

MainActivity.java

import …

```java
public class MainActivity extends AppCompatActivity {

  @Override

  protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    Switch switchButton = findViewById(R.id.switchButton);

    ToggleButton toggleButton = findViewById(R.id.toggleButton);


    switchButton.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {

      @Override

      public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

        if (isChecked) {

          // Switch is ON

          Toast.makeText(MainActivity.this, "Switch is ON",
Toast.LENGTH_SHORT).show();

        } else {

          // Switch is OFF

          Toast.makeText(MainActivity.this, "Switch is OFF",
Toast.LENGTH_SHORT).show();
```

```
                    }

                }

            });

        toggleButton.setOnCheckedChangeListener(new
CompoundButton.OnCheckedChangeListener() {

            @Override

            public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {

                if (isChecked) {

                    // ToggleButton is ON

                    Toast.makeText(MainActivity.this, "ToggleButton is ON",
Toast.LENGTH_SHORT).show();

                } else {

                    // ToggleButton is OFF

                    Toast.makeText(MainActivity.this, "ToggleButton is OFF",
Toast.LENGTH_SHORT).show();

                }

            }

        });

    }

}
```

Q4) Create table Company (id, name, address, phno). Create Application for Performing the following operation on the table.

a. Insert New Company Details.

b. Show All the Company Details.

Slip 25

Q3) Create an Android Application that Demonstrate RatingBar and Display the

number of stars selected on Toast and TextView.

import …

public class MainActivity extends AppCompatActivity {

  @Override

  protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);

    RatingBar ratingBar = findViewById(R.id.ratingBar);

    final TextView textViewRating = findViewById(R.id.textViewRating);

    ratingBar.setOnRatingBarChangeListener(new RatingBar.OnRatingBarChangeListener() {

      @Override

      public void onRatingChanged(RatingBar ratingBar, float rating, boolean fromUser) {

        // Update TextView with the number of stars selected

        textViewRating.setText("Rating: " + rating);

        // Show a toast with the number of stars selected

        Toast.makeText(MainActivity.this, "Rating: " + rating, Toast.LENGTH_SHORT).show();

      }

    });

  }

}

Q4) Create Table Employee(Eno, Ename, Designation,Salary). Create Android

Application for performing the following operation on the table. (Using SQLite

Database)

i) Insert New Employee Details.

ii) Display all the Employee details

Q3) Create an Android Application to accept a number and display the multiplication

table. (Use table Layout)

```java
import android.os.Bundle;

import android.view.Gravity;

import android.widget.EditText;

import android.widget.TableLayout;

import android.widget.TableRow;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


        EditText editTextNumber = findViewById(R.id.editTextNumber);
```

```java
TableLayout tableLayout = findViewById(R.id.tableLayout);


editTextNumber.setOnEditorActionListener((v, actionId, event) -> {

    if (actionId == EditorInfo.IME_ACTION_DONE) {

        // Clear previous table rows if any

        tableLayout.removeAllViews();


        // Get the number entered by the user

        int number = Integer.parseInt(editTextNumber.getText().toString());


        // Generate multiplication table and add rows to TableLayout

        for (int i = 1; i <= 10; i++) {

            TableRow row = new TableRow(MainActivity.this);

            TableRow.LayoutParams layoutParams = new
TableRow.LayoutParams(TableRow.LayoutParams.MATCH_PARENT,
TableRow.LayoutParams.WRAP_CONTENT);

            row.setLayoutParams(layoutParams);


            TextView textViewNumber = new TextView(MainActivity.this);

            textViewNumber.setText(String.valueOf(number));

            textViewNumber.setGravity(Gravity.CENTER);

            textViewNumber.setLayoutParams(new TableRow.LayoutParams(0,
TableRow.LayoutParams.WRAP_CONTENT, 1f));


            TextView textViewMultiplication = new TextView(MainActivity.this);
```

```java
                textViewMultiplication.setText(" x ");

                textViewMultiplication.setGravity(Gravity.CENTER);

                textViewMultiplication.setLayoutParams(new TableRow.LayoutParams(0,
TableRow.LayoutParams.WRAP_CONTENT, 1f));


                TextView textViewResult = new TextView(MainActivity.this);

                textViewResult.setText(String.valueOf(number * i));

                textViewResult.setGravity(Gravity.CENTER);

                textViewResult.setLayoutParams(new TableRow.LayoutParams(0,
TableRow.LayoutParams.WRAP_CONTENT, 1f));


            row.addView(textViewNumber);

            row.addView(textViewMultiplication);

            row.addView(textViewResult);


            tableLayout.addView(row);

        }


    // Return true to indicate that the event has been handled

    return true;

    }

    // Return false if you have not consumed the action

    return false;

});
```

```
    }

}
```

Q4) Create the following layout using spinner

Q3) Write an Android program to perform Zoom In, Zoom Out operation and display

Hybrid view, on Google Map.

Q4) Construct an Android Application to accept a number and calculate Factorial and Sum of Digits of a given number using Context Menu.

```
import …

public class MainActivity extends AppCompatActivity

  EditText editTextNumber;


  @Override

  protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    editTextNumber = findViewById(R.id.editTextNumber);


    // Register the EditText for context menu

    registerForContextMenu(editTextNumber);

  }


  @Override
```

```java
    public void onCreateContextMenu(ContextMenu menu, View v, ContextMenu.ContextMenuInfo
menuInfo) {

        super.onCreateContextMenu(menu, v, menuInfo);

        getMenuInflater().inflate(R.menu.context_menu, menu);

    }


    @Override

    public boolean onContextItemSelected(MenuItem item) {

        int id = item.getItemId();

        if (id == R.id.menuFactorial) {

            calculateFactorial();

            return true;

        } else if (id == R.id.menuSumOfDigits) {

            calculateSumOfDigits();

            return true;

        }

        return super.onContextItemSelected(item);

    }


    private void calculateFactorial() {

        String input = Objects.requireNonNull(editTextNumber.getText()).toString().trim();

        if (!input.isEmpty()) {

            int number = Integer.parseInt(input);

            int factorial = 1;

            for (int i = 1; i <= number; i++) {
```

```java
                factorial *= i;

            }

            displayResult("Factorial: " + factorial);

        }

    }


    private void calculateSumOfDigits() {

        String input = Objects.requireNonNull(editTextNumber.getText()).toString().trim();

        if (!input.isEmpty()) {

            int number = Integer.parseInt(input);

            int sum = 0;

            while (number > 0) {

                sum += number % 10;

                number /= 10;

            }

            displayResult("Sum of Digits: " + sum);

        }

    }


    private void displayResult(String result) {

        editTextNumber.setText(result);

    }

}
```

Slip 28

Q3) create an android application which reads the person, greet message from one activity and display the greet message on another activity on click Button (Use Intent).

```java
public class MainActivity extends AppCompatActivity {

    EditText input_txt;
    Button btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        input_txt = findViewById(R.id.input_txt);
        btn = findViewById(R.id.btn);

        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                String inmsg = input_txt.getText().toString();

                Intent intvar = new Intent(MainActivity.this, Activity2.class);

                intvar.putExtra("intxt",inmsg);
                startActivity(intvar);
            }
        });
    }
}
```

Activity2.java

```java
package com.example.slip1a;

import …

public class Activity2 extends AppCompatActivity {

    TextView outputtxt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_2);

        outputtxt = findViewById(R.id.output_txt);

        Intent intvar = getIntent();

        String outmsg = intvar.getStringExtra("intxt");

        outputtxt.setText(outmsg);
    }
}
```

Q4) Create custom List View in Android Application

CustomAdapter.java

```java
import android.content.Context;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import android.widget.ArrayAdapter;

import android.widget.TextView;

import java.util.ArrayList;


public class CustomAdapter extends ArrayAdapter<Item> {


    public CustomAdapter(Context context, ArrayList<Item> items) {

        super(context, 0, items);

    }


    @Override

    public View getView(int position, View convertView, ViewGroup parent) {

        // Get the data item for this position

        Item item = getItem(position);


        // Check if an existing view is being reused, otherwise inflate the view

        if (convertView == null) {

            convertView = LayoutInflater.from(getContext()).inflate(R.layout.list_item, parent, false);
```

```java
        }


        // Lookup view for data population

        TextView textViewTitle = convertView.findViewById(R.id.textViewTitle);

        TextView textViewDescription = convertView.findViewById(R.id.textViewDescription);


        // Populate the data into the template view using the data object

        textViewTitle.setText(item.getTitle());

        textViewDescription.setText(item.getDescription());


        // Return the completed view to render on screen

        return convertView;

    }

}
```

Item.java

```java
public class Item {

    private String title;

    private String description;


    public Item(String title, String description) {

        this.title = title;

        this.description = description;

    }


    public String getTitle() {
```

```java
        return title;

    }


    public String getDescription() {

        return description;

    }

}
```

MainActivity.java

```java
import android.os.Bundle;

import android.widget.ListView;

import androidx.appcompat.app.AppCompatActivity;

import java.util.ArrayList;


public class MainActivity extends AppCompatActivity {


    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


        // Create some sample data

        ArrayList<Item> items = new ArrayList<>();

        items.add(new Item("Title 1", "Description 1"));

        items.add(new Item("Title 2", "Description 2"));

        items.add(new Item("Title 3", "Description 3"));
```

```java
        // Create the adapter to convert the array to views

        CustomAdapter adapter = new CustomAdapter(this, items);


        // Attach the adapter to a ListView

        ListView listView = findViewById(R.id.listView);

        listView.setAdapter(adapter);

    }

}
```

Slip 29
Q3) Create an Application to accept Movie details like name release year, collection and display the same information on next activity.

MainActivity.java

```java
import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;


public class MovieDetailsActivity extends AppCompatActivity {


    EditText editTextMovieName, editTextReleaseYear, editTextCollection;

    Button buttonSubmit;


    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_movie_details);


    editTextMovieName = findViewById(R.id.editTextMovieName);

    editTextReleaseYear = findViewById(R.id.editTextReleaseYear);

    editTextCollection = findViewById(R.id.editTextCollection);

    buttonSubmit = findViewById(R.id.buttonSubmit);


    buttonSubmit.setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            // Get movie details entered by the user

            String movieName = editTextMovieName.getText().toString();

            int releaseYear = Integer.parseInt(editTextReleaseYear.getText().toString());

            double collection = Double.parseDouble(editTextCollection.getText().toString());


            // Create an Intent to start the next activity

            Intent intent = new Intent(MovieDetailsActivity.this, DisplayMovieDetailsActivity.class);


            // Pass movie details to the next activity using Intent extras

            intent.putExtra("MOVIE_NAME", movieName);

            intent.putExtra("RELEASE_YEAR", releaseYear);

            intent.putExtra("COLLECTION", collection);
```

```java
            // Start the next activity

            startActivity(intent);

        }

    });

  }

}

MainActivity2.java

import android.content.Intent;

import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;


public class DisplayMovieDetailsActivity extends AppCompatActivity {


    TextView textViewMovieName, textViewReleaseYear, textViewCollection;


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_display_movie_details);


        textViewMovieName = findViewById(R.id.textViewMovieName);

        textViewReleaseYear = findViewById(R.id.textViewReleaseYear);

        textViewCollection = findViewById(R.id.textViewCollection);
```

```java
    // Receive movie details passed from the previous activity

    Intent intent = getIntent();

    String movieName = intent.getStringExtra("MOVIE_NAME");

    int releaseYear = intent.getIntExtra("RELEASE_YEAR", 0);

    double collection = intent.getDoubleExtra("COLLECTION", 0.0);


    // Display movie details

    textViewMovieName.setText("Movie Name: " + movieName);

    textViewReleaseYear.setText("Release Year: " + releaseYear);

    textViewCollection.setText("Collection: $" + collection + " million");

  }

}
```

Q4) Construct an application to accept a number and calculate palindrome and Reverse of Number using Menu.

MainActivity.java

```java
import android.content.Intent;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {


  EditText editTextNumber;
```

```java
@Override
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    editTextNumber = findViewById(R.id.editTextNumber);
}


@Override
public boolean onCreateOptionsMenu(Menu menu) {

    getMenuInflater().inflate(R.menu.main_menu, menu);

    return true;

}


@Override
public boolean onOptionsItemSelected(MenuItem item) {

    int id = item.getItemId();


    switch (id) {

        case R.id.menuPalindrome:

            checkPalindrome();

            return true;

        case R.id.menuReverse:

            calculateReverse();
```

```java
            return true;

    }


    return super.onOptionsItemSelected(item);

}


private void checkPalindrome() {

    String input = editTextNumber.getText().toString().trim();

    if (!input.isEmpty()) {

        int number = Integer.parseInt(input);

        int originalNumber = number;

        int reversedNumber = 0;


        // Reverse the number

        while (number != 0) {

            int digit = number % 10;

            reversedNumber = reversedNumber * 10 + digit;

            number /= 10;

        }


        // Check if the original number is equal to its reverse

        boolean isPalindrome = originalNumber == reversedNumber;


        // Display result

        String result = isPalindrome ? "Palindrome" : "Not Palindrome";
```

```java
        displayResult(result);

    }

}


private void calculateReverse() {

    String input = editTextNumber.getText().toString().trim();

    if (!input.isEmpty()) {

        int number = Integer.parseInt(input);

        int reversedNumber = 0;


        // Reverse the number

        while (number != 0) {

            int digit = number % 10;

            reversedNumber = reversedNumber * 10 + digit;

            number /= 10;

        }


        // Display result

        displayResult("Reverse: " + reversedNumber);

    }

}


private void displayResult(String result) {

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

    intent.putExtra("RESULT", result);
```

```java
        startActivity(intent);

    }

}
```

MainnActivity2.java

```java
import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;


public class ResultActivity extends AppCompatActivity {


    TextView textViewResult;


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_result);


        textViewResult = findViewById(R.id.textViewResult);


        // Retrieve result from the intent

        String result = getIntent().getStringExtra("RESULT");


        // Display the result

        textViewResult.setText(result);

    }
```

```
}
```

Slip 30
 Q3) Create first activity to accept information like Student first name , middle name, last name, date of birth, Address, email, and display all information on second activity when user clicks on submit button.

```java
MainActivity.java
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

   EditText editTextFirstName, editTextMiddleName, editTextLastName, editTextDOB,
editTextAddress, editTextEmail;
   Button buttonSubmit;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      editTextFirstName = findViewById(R.id.editTextFirstName);
      editTextMiddleName = findViewById(R.id.editTextMiddleName);
      editTextLastName = findViewById(R.id.editTextLastName);
      editTextDOB = findViewById(R.id.editTextDOB);
      editTextAddress = findViewById(R.id.editTextAddress);
      editTextEmail = findViewById(R.id.editTextEmail);
      buttonSubmit = findViewById(R.id.buttonSubmit);

      buttonSubmit.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
           // Get student information entered by the user
           String firstName = editTextFirstName.getText().toString();
           String middleName = editTextMiddleName.getText().toString();
           String lastName = editTextLastName.getText().toString();
           String dob = editTextDOB.getText().toString();
           String address = editTextAddress.getText().toString();
           String email = editTextEmail.getText().toString();

           // Create an Intent to start the second activity
```

```java
        Intent intent = new Intent(MainActivity.this, DisplayInfoActivity.class);

        // Pass student information to the second activity using Intent extras
        intent.putExtra("FIRST_NAME", firstName);
        intent.putExtra("MIDDLE_NAME", middleName);
        intent.putExtra("LAST_NAME", lastName);
        intent.putExtra("DOB", dob);
        intent.putExtra("ADDRESS", address);
        intent.putExtra("EMAIL", email);

        // Start the second activity
        startActivity(intent);
      }
    });
  }
}
```

MainActivity2.java

```java
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class DisplayInfoActivity extends AppCompatActivity {

  TextView textViewInfo;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_display_info);

    textViewInfo = findViewById(R.id.textViewInfo);

    // Receive student information passed from the previous activity
    Intent intent = getIntent();
    String firstName = intent.getStringExtra("FIRST_NAME");
    String middleName = intent.getStringExtra("MIDDLE_NAME");
    String lastName = intent.getStringExtra("LAST_NAME");
    String dob = intent.getStringExtra("DOB");
    String address = intent.getStringExtra("ADDRESS");
    String email = intent.getStringExtra("EMAIL");

    // Display the student information
    String info = "Student Information:\n" +
```

```java
            "First Name: " + firstName + "\n" +
            "Middle Name: " + middleName + "\n" +
            "Last Name: " + lastName + "\n" +
            "Date of Birth: " + dob + "\n" +
            "Address: " + address + "\n" +
            "Email: " + email;
        textViewInfo.setText(info);
    }
}
```

Q4) Create table employee(Eno, Ename, Designation, Salary). Create Android application for performing the following operation on the table (SQLite Database)

i)Insert new employee detail.
ii) Display all employee details.

DatabaseHelper.java

```java
 import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import java.util.ArrayList;
import java.util.List;

public class DatabaseHelper extends SQLiteOpenHelper {

    private static final int DATABASE_VERSION = 1;
    private static final String DATABASE_NAME = "EmployeeManager";
    private static final String TABLE_EMPLOYEE = "employee";
    private static final String KEY_ENO = "eno";
    private static final String KEY_ENAME = "ename";
    private static final String KEY_DESIGNATION = "designation";
    private static final String KEY_SALARY = "salary";

    public DatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        String CREATE_EMPLOYEE_TABLE = "CREATE TABLE " + TABLE_EMPLOYEE + "("
            + KEY_ENO + " INTEGER PRIMARY KEY,"
            + KEY_ENAME + " TEXT,"
            + KEY_DESIGNATION + " TEXT,"
            + KEY_SALARY + " REAL" + ")";
```

```java
      db.execSQL(CREATE_EMPLOYEE_TABLE);
  }

  @Override
  public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
      db.execSQL("DROP TABLE IF EXISTS " + TABLE_EMPLOYEE);
      onCreate(db);
  }

  public void addEmployee(Employee employee) {
      SQLiteDatabase db = this.getWritableDatabase();
      ContentValues values = new ContentValues();
      values.put(KEY_ENO, employee.getEno());
      values.put(KEY_ENAME, employee.getEname());
      values.put(KEY_DESIGNATION, employee.getDesignation());
      values.put(KEY_SALARY, employee.getSalary());
      db.insert(TABLE_EMPLOYEE, null, values);
      db.close();
  }

  public List<Employee> getAllEmployees() {
      List<Employee> employeeList = new ArrayList<>();
      String selectQuery = "SELECT * FROM " + TABLE_EMPLOYEE;
      SQLiteDatabase db = this.getWritableDatabase();
      Cursor cursor = db.rawQuery(selectQuery, null);
      if (cursor.moveToFirst()) {
          do {
              Employee employee = new Employee();
              employee.setEno(cursor.getInt(0));
              employee.setEname(cursor.getString(1));
              employee.setDesignation(cursor.getString(2));
              employee.setSalary(cursor.getDouble(3));
              employeeList.add(employee);
          } while (cursor.moveToNext());
      }
      cursor.close();
      return employeeList;
  }
}

Employee.java

public class Employee {
  private int eno;
  private String ename;
  private String designation;
```

```java
    private double salary;

    public Employee() {}

    public Employee(int eno, String ename, String designation, double salary) {
        this.eno = eno;
        this.ename = ename;
        this.designation = designation;
        this.salary = salary;
    }

    public int getEno() {
        return eno;
    }

    public void setEno(int eno) {
        this.eno = eno;
    }

    public String getEname() {
        return ename;
    }

    public void setEname(String ename) {
        this.ename = ename;
    }

    public String getDesignation() {
        return designation;
    }

    public void setDesignation(String designation) {
        this.designation = designation;
    }

    public double getSalary() {
        return salary;
    }

    public void setSalary(double salary) {
        this.salary = salary;
    }
}
```

MainActivity.java

import ..

```java
public class MainActivity extends AppCompatActivity {

    TextView textView;
    Button addButton, displayButton;
    DatabaseHelper db;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        textView = findViewById(R.id.textView);
        addButton = findViewById(R.id.addButton);
        displayButton = findViewById(R.id.displayButton);
        db = new DatabaseHelper(this);

        addButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Insert new employee detail
                db.addEmployee(new Employee(101, "John Doe", "Developer", 50000));
                textView.setText("Employee added successfully!");
            }
        });

        displayButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Display all employee details
                List<Employee> employeeList = db.getAllEmployees();
                StringBuilder builder = new StringBuilder();
                for (Employee employee : employeeList) {
                    builder.append("Employee No: ").append(employee.getEno())
                            .append(", Name: ").append(employee.getEname())
                            .append(", Designation: ").append(employee.getDesignation())
                            .append(", Salary: ").append(employee.getSalary()).append("\n");
                }
                textView.setText(builder.toString());
            }
        });
    }
}
```