

ANDROID PROGRAM SLIPS

20 Marks

Slip 3. Create an Android Application to find the factorial of a number and Display the Result on Alert Box.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:gravity="center"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Factorial of Number"
        android:textSize="30dp"
    />

    <EditText
        android:layout_width="298dp"
        android:layout_height="58dp"
        android:hint="Enter the number"
        android:id="@+id/input" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Calculate"
        android:id="@+id/cal" />
</LinearLayout>
```

JAVA FILE

```
package com.example.slip3b1;

import android.annotation.SuppressLint;
import android.app.AlertDialog;
import android.content.DialogInterface;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import java.util.Locale;

public class MainActivity extends AppCompatActivity {

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });

        Button b;
        EditText num;
        b=(Button) findViewById(R.id.cal);
        num=(EditText) findViewById(R.id.input);

        AlertDialog.Builder builder;
        builder = new AlertDialog.Builder(MainActivity.this);

        b.setOnClickListener(new View.OnClickListener() {
```

```

@Override
public void onClick(View view) {
    double i,n,fact=1;
    n=Integer.parseInt(num.getText().toString());
    for(i=1;i<=n;i++) {
        fact=fact*i;
    }
    builder.setTitle("Factorial of Number: ")
        .setMessage("Factorial = "+fact)
        .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialogInterface, int i) {
                finish();;
            }
        })
        .setNegativeButton("No", new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialogInterface, int i) {
                dialogInterface.dismiss();
            }
        })
        .show();
    }
});
}
}

```

(or) Slip 3. 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.

Slip 11. Create First Activity to accept information like Student First Name, Middle Name, Last Name, Date of birth, Address, Email ID and display all information on Second Activity when user click on the Submit button.

Slip 15. Create First Activity to accept information like Employee First Name, Middle Name, Last Name, Salary, Address, Email ID and display all information on Second Activity when user click on Submit button.

XML FILE 1

```
<?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:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">
```

<TextView

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:fontFamily="@font/arbutus"
    android:text="Student Data!"
    android:textSize="40dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

<EditText

```
    android:id="@+id/fname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Name"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/mname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Surname"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/lname"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Class"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/add"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Gender"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/Date"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Hobbies"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/EmailAddress"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Marks"
    android:textSize="30dp" />
```

<Button

```
    android:id="@+id/button"
    android:layout_width="112dp"
    android:layout_height="wrap_content"
    android:textSize="20dp"
    android:text="Button" />
```

</LinearLayout>

JAVA FILE 1

```
package com.example.studentdata;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
```

```

import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });

        Button b1;
        EditText f1,m1,l1,d1,a1,e1;

        b1=(Button) findViewById(R.id.button);
        f1=(EditText) findViewById(R.id.fname);
        m1=(EditText) findViewById(R.id.mname);
        l1=(EditText) findViewById(R.id.lname);
        d1=(EditText) findViewById(R.id.Date);
        a1=(EditText) findViewById(R.id.add);
        e1=(EditText) findViewById(R.id.EmailAddress);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String fir,sec,thi,dob,addr,id;
                fir=f1.getText().toString();
                sec=m1.getText().toString();
                thi=l1.getText().toString();
                dob=d1.getText().toString();
                addr=a1.getText().toString();
                id=e1.getText().toString();

                Intent intent=new Intent(MainActivity.this, MainActivity2.class);
                intent.putExtra("name",fir);
                intent.putExtra("surname",sec);
                intent.putExtra("class",thi);
                intent.putExtra("gender",dob);
            }
        });
    }
}

```

```

        intent.putExtra("hobbies",addr);
        intent.putExtra("marks",id);

        startActivity(intent);
    }
    });
}
}

```

XML FILE 2

```

<?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:id="@+id/main"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity2">

    <TableLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:stretchColumns="1">

        <TableRow>
            <TextView android:text="Name:"/>
            <TextView android:id="@+id/tvName"/>
        </TableRow>

        <TableRow>
            <TextView android:text="Surname:"/>
            <TextView android:id="@+id/tvSurname"/>
        </TableRow>

        <TableRow>
            <TextView android:text="Class:"/>
            <TextView android:id="@+id/tvClass"/>
        </TableRow>

```

```

<TableRow>
    <TextView android:text="Gender:"/>
    <TextView android:id="@+id/tvGender"/>
</TableRow>

<TableRow>
    <TextView android:text="Hobbies:"/>
    <TextView android:id="@+id/tvHobbies"/>
</TableRow>

<TableRow>
    <TextView android:text="Marks:"/>
    <TextView android:id="@+id/tvMarks"/>
</TableRow>

</TableLayout>

</LinearLayout>

```

JAVA FILE 2

```

package com.example.studentdata;

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

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity2 extends AppCompatActivity {

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main2);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

```



```

Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
return insets;
});

```

```

Bundle extras = getIntent().getExtras();
if (extras != null) {
    ((TextView) findViewById(R.id.tvName)).setText(extras.getString("name"));
    ((TextView) findViewById(R.id.tvSurname)).setText(extras.getString("surname"));
    ((TextView) findViewById(R.id.tvClass)).setText(extras.getString("class"));
    ((TextView) findViewById(R.id.tvGender)).setText(extras.getString("gender"));
    ((TextView) findViewById(R.id.tvHobbies)).setText(extras.getString("hobbies"));
    ((TextView) findViewById(R.id.tvMarks)).setText(extras.getString("marks"));
}
}
}

```

Slip 4. Create an Android Application that sends the Notification on click of the button and displays the notification message on the second activity.

XML FILE 1

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:id="@+id/main"
tools:context=".MainActivity">

```

```

<Button
    android:id="@+id/btnSend"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Send Hello Message"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    android:layout_marginTop="200dp"/>

```

</androidx.constraintlayout.widget.ConstraintLayout>

JAVA FILE 1

```
package com.example.slip12a;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });

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

        btnSend.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(MainActivity.this, MainActivity2.class);
                intent.putExtra("message", "Hello!");
                startActivity(intent);
            }
        });
    }
}
```

XML FILE 2

```
<?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:id="@+id/main"
    android:gravity="center"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity2">

    <TextView
        android:id="@+id/tvMessage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello there"
        android:textSize="22sp"
        android:textStyle="bold" />

</LinearLayout>
```

JAVA FILE 2

```
package com.example.slip12a;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity2 extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```

EdgeToEdge.enable(this);
setContentView(R.layout.activity_main2);
ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
    Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
    v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
    return insets;
});

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

Intent intent = getIntent();
String message = intent.getStringExtra("message");
tvMessage.setText(message);
}
}

```

Slip 6. Create an Android Application that Demonstrates ListView and Onclick of List Display the Toast.

Slip 10. Demonstrate Array Adapter using List View to display list of fruits.

Slip 20. Demonstrate Array Adapter using List View to display list of Country.

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="50dp"
        android:background="@color/material_dynamic_primary70"
        android:text="Fruits list"
        android:textSize="40dp" />

```

</LinearLayout>

```
String[] fruits = {"Apple", "Orange", "Grape", "Papaya", "Guava"};
```

```

        ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>(MainActivity.this,
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,fruits);
        listView.setAdapter(arrayAdapter);

        listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
                String str = adapterView.getItemAtPosition(i).toString();
                Toast.makeText(MainActivity.this, "Selected "+str, Toast.LENGTH_SHORT).show();
            }
        });
    }
}

```

Slip 5. Create an Android application that creates a custom Alert Dialog containing Friends Name and onClick of Friend Name Button greet accordingly.

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="20dp">

    <Button
        android:id="@+id/btnShowDialog"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Show Friends List"/>
</LinearLayout>

```

JAVA FILE

```

package com.example.slip5b1;

import android.app.AlertDialog;
import android.content.DialogInterface;
import android.os.Bundle;

```

```

import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private Button btnShowDialog;
    private String[] friends = {"Amit", "Priya", "Rahul", "Neha", "Suresh"};

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

        btnShowDialog = findViewById(R.id.btnShowDialog);

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

    private void showFriendsDialog() {
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        builder.setTitle("Select a Friend");

        builder.setItems(friends, new DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialog, int which) {
                String selectedFriend = friends[which];
                Toast.makeText(MainActivity.this, "Hello, " + selectedFriend + "!",
                Toast.LENGTH_SHORT).show();
            }
        });

        builder.setNegativeButton("Cancel", null);
        builder.create().show();
    }
}

```

Slip 8. Create application to send email with attachment.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="20dp">

    <EditText
        android:id="@+id/etEmail"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter recipient email"
        android:inputType="textEmailAddress"/>

    <EditText
        android:id="@+id/etSubject"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter subject"/>

    <EditText
        android:id="@+id/etMessage"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter message"
        android:inputType="textMultiLine"/>

    <Button
        android:id="@+id/btnAttach"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Attach File"/>

    <Button
        android:id="@+id/btnSend"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Send Email"/>
```


</LinearLayout>

JAVA FILE

```
package com.example.slip8b2;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.activity.result.ActivityResultLauncher;
import androidx.activity.result.contract.ActivityResultContracts;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText etEmail, etSubject, etMessage;
    private Button btnAttach, btnSend;
    private Uri fileUri;

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

        etEmail = findViewById(R.id.etEmail);
        etSubject = findViewById(R.id.etSubject);
        etMessage = findViewById(R.id.etMessage);
        btnAttach = findViewById(R.id.btnAttach);
        btnSend = findViewById(R.id.btnSend);

        ActivityResultLauncher<Intent> filePicker = registerForActivityResult(
            new ActivityResultContracts.StartActivityForResult(),
            result -> {
                if (result.getResultCode() == RESULT_OK && result.getData() != null) {
                    fileUri = result.getData().getData();
                    Toast.makeText(MainActivity.this, "File Attached!",
                        Toast.LENGTH_SHORT).show();
                }
            }
        );
    }
}
```

```

    });

    btnAttach.setOnClickListener(v -> {
        Intent intent = new Intent(Intent.ACTION_GET_CONTENT);
        intent.setType("*/*"); // Allow any file type
        intent.addCategory(Intent.CATEGORY_OPENABLE);
        filePicker.launch(Intent.createChooser(intent, "Select a file"));
    });

    btnSend.setOnClickListener(v -> sendEmail());
}

private void sendEmail() {
    String email = etEmail.getText().toString();
    String subject = etSubject.getText().toString();
    String message = etMessage.getText().toString();

    if (email.isEmpty() || subject.isEmpty() || message.isEmpty()) {
        Toast.makeText(this, "Please fill all fields!", Toast.LENGTH_SHORT).show();
        return;
    }

    Intent emailIntent = new Intent(Intent.ACTION_SEND);
    emailIntent.setType("message/rfc822");
    emailIntent.putExtra(Intent.EXTRA_EMAIL, new String[]{email});
    emailIntent.putExtra(Intent.EXTRA_SUBJECT, subject);
    emailIntent.putExtra(Intent.EXTRA_TEXT, message);

    if (fileUri != null) {
        emailIntent.putExtra(Intent.EXTRA_STREAM, fileUri);
    }

    try {
        startActivity(Intent.createChooser(emailIntent, "Choose an Email Client"));
    } catch (Exception e) {
        Toast.makeText(this, "No email clients installed!", Toast.LENGTH_SHORT).show();
    }
}
}

```

MANIFEST

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE"/>
    <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Slip8b2"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>

```

Slip 4. Create an android Application for performing the following operation on the table Customer (id, name, address, phno). (use SQLite database) i) Insert New Customer Details. ii) Show All the Customer Details on Toast Message.

Slip 9. 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 Company details

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"

```

```
xmlns:tools="http://schemas.android.com/tools"
android:id="@+id/main"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:gravity="center"
android:orientation="vertical"
tools:context=".MainActivity">
```

<TextView

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Company Details"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/id"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Company ID"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/name"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Company Name"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/address"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Company Address"
    android:textSize="30dp" />
```

<EditText

```
    android:id="@+id/phno"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Phone No."
    android:textSize="30dp" />
```

<Button

```
    android:id="@+id/addDetails"
```

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:backgroundTint="@color/material_dynamic_tertiary10"
    android:text="Add Details" />
```

<Button

```
    android:id="@+id/showDetails"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:backgroundTint="@color/material_dynamic_tertiary10"
    android:text="Show Details" />
```

<ListView

```
    android:id="@+id/list"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
```

</LinearLayout>

JAVA FILE

```
package com.example.companydetails;

import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

    @Override
```

```

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    EdgeToEdge.enable(this);
    setContentView(R.layout.activity_main);
    ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
        Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
        v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
        return insets;
    });

    EditText id,name,address,phone;
    Button addDetail,showDetail;
    ListView listView;
    dbHandler dbHandler;

    id=(EditText) findViewById(R.id.id);
    name=(EditText) findViewById(R.id.name);
    address=(EditText) findViewById(R.id.address);
    phone=(EditText) findViewById(R.id.phno);
    addDetail=(Button) findViewById(R.id.addDetails);
    showDetail=(Button) findViewById(R.id.showDetails);
    listView=(ListView) findViewById(R.id.list);
    dbHandler=new dbHandler(MainActivity.this);

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

            if (TextUtils.isEmpty(id.getText().toString())) {
                Toast.makeText(MainActivity.this, "Please Enter the Records",
                    Toast.LENGTH_SHORT).show();
            }
            else {

                dbHandler.addNewCourse(id.getText().toString(),name.getText().toString(),address.getText
                    ().toString(),phone.getText().toString());
                Toast.makeText(MainActivity.this, "Record inserted successfully",
                    Toast.LENGTH_SHORT).show();
                id.setText("");
                name.setText("");
                address.setText("");
                phone.setText("");
            }
        }
    }
}

```

```

});

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

        ArrayList<String> arrayList=new ArrayList<>();
        ArrayList<companyDetails> companyDetails=dbHandler.showDetails();

        for (int i=0;i<companyDetails.size();i++) {
            arrayList.add(String.valueOf(companyDetails.get(i).id));
            arrayList.add(companyDetails.get(i).name);
            arrayList.add(companyDetails.get(i).address);
            arrayList.add(String.valueOf(companyDetails.get(i).phone));
        }

        ArrayAdapter<String> arrayAdapter=new ArrayAdapter<String>(MainActivity.this,
        androidx.appcompat.R.layout.support_simple_spinner_dropdown_item,arrayList);
        listView.setAdapter(arrayAdapter);
    }
});
}
}

```

dbHandler.java

```

package com.example.companydetails;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

import java.util.ArrayList;

public class dbHandler extends SQLiteOpenHelper {

    private static final String DB_NAME="companyDB";
    private static final int DB_VERSION=1;
    private static final String TABLE_NAME="companyDetails";

```

```

private static final String ID_COL="id";
private static final String COMPANYNAME_COL="companyName";
private static final String COMPANYADDESS_COL="companyAdd";
private static final String COMPANYPHONE_COL="companyPhone";

public dbHandler(@Nullable Context context) {
    super(context, DB_NAME, null, DB_VERSION);
}

@Override
public void onCreate(SQLiteDatabase db) {
    String newQuery="CREATE TABLE "+TABLE_NAME+"("+ ID_COL+" INTEGER PRIMARY
KEY,"+COMPANYNAME_COL+" TEXT,"+COMPANYADDESS_COL+"
TEXT,"+COMPANYPHONE_COL+" INTEGER);";
    db.execSQL(newQuery);
}

public void addNewCourse(String companyID,String companyName,String
comapnyAddress,String comapnyPhone) {
    SQLiteDatabase db=this.getWritableDatabase();
    ContentValues values=new ContentValues();

    values.put(ID_COL,companyID);
    values.put(COMPANYNAME_COL,companyName);
    values.put(COMPANYADDESS_COL,comapnyAddress);
    values.put(COMPANYPHONE_COL,comapnyPhone);
    db.insert(TABLE_NAME,null,values);
    db.close();
}

public ArrayList<companyDetails> showDetails() {

    ArrayList<companyDetails> companyDetails=new ArrayList<>();
    SQLiteDatabase db=getReadableDatabase();
    Cursor cursor=db.rawQuery("SELECT * FROM "+TABLE_NAME,null);

    while (cursor.moveToNext()) {
        companyDetails company=new companyDetails();
        company.id=cursor.getInt(0);
        company.name=cursor.getString(1);
        company.address=cursor.getString(2);
        company.phone=cursor.getInt(3);
        companyDetails.add(company);
    }
}

```



```

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

```

(or) Slip 11. Create new contact for designing following layout.

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:orientation="vertical"
    android:layout_width="700dp"
    android:layout_height="400dp"
    tools:context=".MainActivity">

```

```

    <LinearLayout
        android:layout_width="700dp"
        android:layout_height="330dp"
        android:orientation="horizontal" >

```

```

    <LinearLayout
        android:layout_width="350dp"
        android:layout_height="400dp"
        android:orientation="vertical" >

```

```

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="InsertNewContactUsingIntent"
        android:textSize="20dp"
        android:background="@color/black"
        android:textColor="@color/white"/>

```

```

    <TextView

```

```
    android:layout_width="300dp"
    android:layout_height="300dp"
    android:gravity="center"
    android:text="Insert Contact"
    android:textSize="30dp" />
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="350dp"
    android:layout_height="400dp"
    android:orientation="vertical">
```

```
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
```

```
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:gravity="center"
            android:background="@drawable/background1"
            android:orientation="vertical">
```

```
                <LinearLayout
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:gravity="center"
                    android:orientation="vertical">
```

```
                        <ImageView
                            android:layout_width="wrap_content"
                            android:layout_height="wrap_content"
                            android:scrollbarSize="30dp"
                            android:src="@mipmap/contact1" />
```

```
                </LinearLayout>
```

```
            <LinearLayout
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:orientation="horizontal">
```

```
<ImageView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:scrollbarSize="30dp"
    android:background="@drawable/background1"
    android:src="@mipmap/call" />
```

```
<ImageView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:scrollbarSize="30dp"
    android:background="@drawable/background1"
    android:src="@mipmap/call1" />
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:background="@drawable/background1"
    android:orientation="vertical">
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Create Contact"
    android:textSize="20dp" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Update Existing"
    android:textSize="20dp" />
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="349dp"
    android:layout_height="60dp"
    android:background="@drawable/background1"
```

```
android:orientation="horizontal">
```

```
<TextView
```

```
    android:layout_width="209dp"
```

```
    android:layout_height="60dp"
```

```
    android:text="(650)253-000"
```

```
    android:textColor="@color/material_dynamic_neutral10"
```

```
    android:textSize="30dp" />
```

```
<ImageView
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="60dp"
```

```
    android:background="@drawable/background1"
```

```
    android:src="@mipmap/call3" />
```

```
<ImageView
```

```
    android:layout_width="59dp"
```

```
    android:layout_height="60dp"
```

```
    android:background="@drawable/background1"
```

```
    android:src="@mipmap/call4" />
```

```
</LinearLayout>
```

```
<Button
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Record Inserted"
```

```
    android:textSize="20dp"
```

```
    android:layout_gravity="center" />
```

```
</LinearLayout>
```

```
</LinearLayout>
```

```
</LinearLayout>
```

Slip 12. Create a custom "Contact" layout to hold multiple pieces of information, including: Photo, Name, Contact Number, E-mail id.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:orientation="vertical"
    android:gravity="center"
    android:background="@color/material_dynamic_primary90"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
```

<TextView

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Contact Information"
    android:textSize="30dp" />
```

<ImageView

```
    android:layout_width="80sp"
    android:layout_height="80sp"
    android:id="@+id/image"
    android:src="@mipmap/contact_photo" />
```

<EditText

```
    android:layout_width="151sp"
    android:layout_height="wrap_content"
    android:hint="Name"
    android:textSize="20sp" />
```

<EditText

```
    android:id="@+id/Phone"
    android:layout_width="155sp"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Contact Number"
    android:inputType="phone" />
```

<EditText

```
    android:id="@+id/EmailAddress"
    android:layout_width="155sp"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="E-mail id"
```

android:inputType="textEmailAddress" />

</LinearLayout>

Slip 1. Create an Android Application that demonstrate DatePicker and DatePickerDialog.

(or) Slip 12. Create an application to demonstrate date and time picker.

Slip 16. Create an Android Application that Demonstrate TimePicker and display Selected Time on TextView.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">
```

<TextView

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Date Picker"
    android:textSize="30dp"
    />
```

<EditText

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:hint="Choose the Date"
    android:textSize="30dp"
    android:id="@+id/date"/>
```

<TextView

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Time Picker"
```

```
        android:textSize="30dp"  
    />
```

```
<EditText  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:hint="Choose the Time"  
    android:textSize="30dp"  
    android:id="@+id/time"/>
```

```
</LinearLayout>
```

JAVA FILE

```
package com.example.datetimepicker;  
  
import android.annotation.SuppressLint;  
import android.app.DatePickerDialog;  
import android.app.TimePickerDialog;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.DatePicker;  
import android.widget.EditText;  
import android.widget.TimePicker;  
  
import androidx.activity.EdgeToEdge;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.graphics.Insets;  
import androidx.core.view.ViewCompat;  
import androidx.core.view.WindowInsetsCompat;  
  
import java.util.Calendar;  
  
public class MainActivity extends AppCompatActivity {  
  
    int year,month,day,hr,min;  
  
    @SuppressWarnings("MissingInflatedId")  
    @Override  
  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        EdgeToEdge.enable(this);
```

```

setContentView(R.layout.activity_main);
ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
    Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
    v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
    return insets;
});

```

```

EditText date,time;
date=(EditText) findViewById(R.id.date);
time=(EditText) findViewById(R.id.time);

```

```

Calendar calendar=Calendar.getInstance();
date.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        year =calendar.get(Calendar.YEAR);
        month =calendar.get(Calendar.MONTH);
        day =calendar.get(Calendar.DAY_OF_MONTH);
    }
});

```

```

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

datePickerDialog.show();
}
});

```

```

time.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        hr =calendar.get(Calendar.HOUR);
        min =calendar.get(Calendar.MINUTE);

        TimePickerDialog timePickerDialog;
        timePickerDialog = new TimePickerDialog(MainActivity.this, new
TimePickerDialog.OnTimeSetListener() {
            @Override
            public void onTimeSet(TimePicker view, int hourOfDay, int minute) {
                time.setText(hr + ":" + min);
            }
        });
    }
});

```



```

        }
        },hr, min,true);

        timePickerDialog.show();
    }
    });
}
}

```

Slip 14 Create the following layout which is changing android spinner text size with styles.

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

```

<TextView

```

    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:background="@color/design_default_color_primary_variant"
    android:textColor="@color/white"
    android:text="Spinner Style"
    android:textSize="40dp"
/>

```

<TextView

```

    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Coffee?"
    android:textSize="35dp"
    android:id="@+id/text" />

```

<Spinner

```

    android:layout_width="wrap_content"

```

</LinearLayout>

```
sp=(Spinner) findViewById(R.id.spinner);
```

```
String[] list = {"Filter", "Americano", "Latte", "Espresso", "Cappucino", "Mocha", "Skinny  
Latte", "Espresso Corretto"};
```

```
ArrayAdapter<String> arrayAdapter = new ArrayAdapter<String>(MainActivity.this,  
androidx.appcompat.R.layout.support_simple_spinner_dropdown_item, list);  
sp.setAdapter(arrayAdapter);
```

```
sp.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {  
        String str = adapterView.getItemAtPosition(i).toString();  
        Toast.makeText(MainActivity.this, "Selected "+str, Toast.LENGTH_SHORT).show();  
    }  
  
    @Override  
    public void onNothingSelected(AdapterView<?> adapterView) {  
  
    }  
});  
}
```

(or) Slip 14. Create an Android application to send email.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:app="http://schemas.android.com/apk/res-auto"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:id="@+id/main"  
    android:orientation="vertical"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    tools:context=".MainActivity">
```

<TextView

```
    android:layout_width="match_parent"  
    android:layout_height="60dp"  
    android:background="@color/material_dynamic_tertiary30"  
    android:textColor="@color/white"
```

```
    android:text="Send Email"
    android:textSize="50dp" />
```

```
<EditText
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:hint="To: "
    android:textSize="20dp"
    android:id="@+id/name" />
```

```
<EditText
    android:layout_width="match_parent"
    android:layout_height="80dp"
    android:hint="Subject: "
    android:textSize="20dp"
    android:id="@+id/subject" />
```

```
<EditText
    android:layout_width="match_parent"
    android:layout_height="180dp"
    android:hint="Type Content Here: "
    android:textSize="20dp"
    android:id="@+id/msg" />
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:text="Send"
    android:textSize="30dp"
    android:id="@+id/submit" />
```

```
</LinearLayout>
```

JAVA FILE

```
package com.example.sendemail;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```

import android.widget.EditText;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });

        EditText name,subject,msg;
        Button send;

        name=(EditText) findViewById(R.id.name);
        subject=(EditText) findViewById(R.id.subject);
        msg=(EditText) findViewById(R.id.msg);
        send=(Button) findViewById(R.id.submit);

        send.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                sendMail();
            }
            private void sendMail() {
                Intent intent=new Intent(Intent.ACTION_SEND.trim());
                String[] reci={name.getText().toString().trim()};

                intent.putExtra(Intent.EXTRA_EMAIL,reci);
                intent.putExtra(Intent.EXTRA_SUBJECT,subject.getText().toString());
                intent.putExtra(Intent.EXTRA_TEXT,msg.getText().toString());

                intent.setType("message/rfc822");
            }
        });
    }
}

```

```

        startActivity(Intent.createChooser(intent,"Choose email"));
    }
    });
}
}

```

Slip 15. Create simple application with Login Screen. On successful login, gives message go to next Activity (Without Using Database).

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

```

<TextView

```

    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Login Form"
    android:textSize="40dp" />

```

<EditText

```

    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Email ID"
    android:id="@+id/email"
    android:textSize="30dp" />

```

<EditText

```

    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter Password"
    android:id="@+id/pass"
    android:textSize="30dp" />

```

```

<Button
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Login"
    android:id="@+id/button"
    android:textSize="30dp" />

</LinearLayout>

```

JAVA FILE

```

package com.example.loginform;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
            return insets;
        });
    }
}

```

```

EditText email_id,password;
Button button;

email_id=(EditText) findViewById(R.id.email);
password=(EditText) findViewById(R.id.pass);

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

button.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String input_email=email_id.getText().toString();
        String input_pass=password.getText().toString();

        if(input_email.isEmpty() && input_pass.isEmpty()) {
            Toast.makeText(MainActivity.this, "Please Enter Fields",
Toast.LENGTH_SHORT).show();
        }
        else {
            if (input_email.equals("admin@gmail.com") && input_pass.equals("admin")) {
                Intent intent=new Intent(MainActivity.this,MainActivity2.class);
                startActivity(intent);
            }
            else {
                Toast.makeText(MainActivity.this, "Login Failed",
Toast.LENGTH_SHORT).show();
            }
        }
    }
});
}
}

```

XML FILE 2

```

<?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:id="@+id/main"
    android:orientation="vertical"

```



```
android:gravity="center"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity2">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="WELCOME TO APPLICATION"
    android:textSize="30dp" />
```

```
</LinearLayout>
```

Slip 16. Create a Simple calculator.

XML FILE

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:background="@drawable/calculator"
    tools:context=".MainActivity">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Simple Calculator!"
    android:textSize="40dp"
    android:textColor="@color/design_default_color_primary_variant"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<EditText
    android:id="@+id/fno"
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:hint="Enter First Number" />
```

<EditText

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:hint="Enter Second Number"
android:id="@+id/sno"/>
```

<LinearLayout

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:orientation="horizontal"
android:gravity="center" >
```

<Button

```
android:id="@+id/button1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:paddingLeft="20dp"
android:text="+"
android:textColorLink="#E91E63" />
```

<Button

```
android:id="@+id/button2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginLeft="4dp"
android:text="-"
android:textColorLink="#E91E63" />
```

<Button

```
android:id="@+id/button3"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginLeft="4dp"
android:text="*"
android:textColorLink="#E91E63" />
```

<Button

```
android:id="@+id/button4"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
```

```
        android:layout_marginLeft="4dp"
        android:text="/"
        android:textColorLink="#E91E63" />
```

```
</LinearLayout>
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/output"
    android:textSize="40dp"
    android:hint="Answer" />
```

```
</LinearLayout>
```

JAVA FILE

```
package com.example.simplecalculator;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
```

```
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {
            Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);
        });
    }
}
```

```
        return insets;
    });
```

```
TextView t1;
EditText fnum ,snum;
Button b1,b2,b3,b4;
```

```
t1=(TextView) findViewById(R.id.output);
fnum=(EditText) findViewById(R.id.fno);
snum=(EditText) findViewById(R.id.sno);
b1=(Button) findViewById(R.id.button1);
b2=(Button) findViewById(R.id.button2);
b3=(Button) findViewById(R.id.button3);
b4=(Button) findViewById(R.id.button4);
```

```
b1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int N1,N2,N3;
        N1=Integer.parseInt(fnum.getText().toString());
        N2=Integer.parseInt(snum.getText().toString());
        N3=N1+N2;
        t1.setText(" "+N3);
    }
});
```

```
b2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int N1,N2,N3;
        N1=Integer.parseInt(fnum.getText().toString());
        N2=Integer.parseInt(snum.getText().toString());
        N3=N1-N2;
        t1.setText(" "+N3);
    }
});
```

```
b3.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int N1,N2,N3;
        N1=Integer.parseInt(fnum.getText().toString());
        N2=Integer.parseInt(snum.getText().toString());
        N3=N1*N2;
```

```

        t1.setText(" "+N3);
    }
});

b4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int N1,N2,N3;
        N1=Integer.parseInt(fnum.getText().toString());
        N2=Integer.parseInt(snum.getText().toString());
        N3=N1/N2;
        t1.setText(" "+N3);
    }
});
}
}

```

Slip 17. Create an Android Application to accept two numbers and find power and Average. Display the result on the next activity using Context Menu.

XML FILE

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="20dp">

```

<EditText

```

    android:id="@+id/etNumber"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:hint="Enter a number"
    android:inputType="number"/>

```

<TextView

```

    android:id="@+id/tvResult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

```

```
    android:text="Long Press to Calculate"
    android:textSize="18sp"
    android:padding="10dp"
    android:background="#CCCCCC"
    android:gravity="center"/>
```

```
</LinearLayout>
```

JAVA FILE

```
package com.example.slip17b2;

import android.os.Bundle;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText etNumber;
    private TextView tvResult;

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

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

        registerForContextMenu(tvResult);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v,
    ContextMenu.ContextMenuInfo menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);
        menu.setHeaderTitle("Select Operation");
        menu.add(0, v.getId(), 0, "Calculate Factorial");
    }
}
```

```

        menu.add(0, v.getId(), 0, "Calculate Sum of Digits");
    }

    @Override
    public boolean onContextItemSelected(MenuItem item) {
        String numStr = etNumber.getText().toString();

        if (numStr.isEmpty()) {
            Toast.makeText(this, "Please enter a number!", Toast.LENGTH_SHORT).show();
            return false;
        }

        int num = Integer.parseInt(numStr);

        if (item.getTitle().equals("Calculate Factorial")) {
            long factorial = calculateFactorial(num);
            Toast.makeText(this, "Factorial: " + factorial, Toast.LENGTH_LONG).show();
        } else if (item.getTitle().equals("Calculate Sum of Digits")) {
            int sum = calculateSumOfDigits(num);
            Toast.makeText(this, "Sum of Digits: " + sum, Toast.LENGTH_LONG).show();
        }

        return true;
    }

    private long calculateFactorial(int n) {
        if (n == 0 || n == 1) return 1;
        long fact = 1;
        for (int i = 2; i <= n; i++) {
            fact *= i;
        }
        return fact;
    }

    private int calculateSumOfDigits(int num) {
        int sum = 0;
        while (num > 0) {
            sum += num % 10;
            num /= 10;
        }
        return sum;
    }
}

```

Slip 18. Create an Android Application to accept two numbers and find power and Average. Display the result on the next activity using Context Menu.

XML FILE 1

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="20dp">

    <EditText
        android:id="@+id/etNumber1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter First Number"
        android:inputType="numberDecimal"/>

    <EditText
        android:id="@+id/etNumber2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter Second Number"
        android:inputType="numberDecimal"/>

    <TextView
        android:id="@+id/tvOptions"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Long Press to Calculate"
        android:textSize="18sp"
        android:padding="10dp"
        android:background="#CCCCCC"
        android:gravity="center"/>

</LinearLayout>
```

JAVA FILE 1


```

package com.example.slip18b2;

import android.content.Intent;
import android.os.Bundle;
import android.view.ContextMenu;
import android.view.MenuItem;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText etNumber1, etNumber2;
    private TextView tvOptions;

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

        etNumber1 = findViewById(R.id.etNumber1);
        etNumber2 = findViewById(R.id.etNumber2);
        tvOptions = findViewById(R.id.tvOptions);

        registerForContextMenu(tvOptions);
    }

    @Override
    public void onCreateContextMenu(ContextMenu menu, View v,
    ContextMenu.ContextMenuInfo menuInfo) {
        super.onCreateContextMenu(menu, v, menuInfo);
        menu.setHeaderTitle("Select Operation");
        menu.add(0, v.getId(), 0, "Calculate Power");
        menu.add(0, v.getId(), 0, "Calculate Average");
    }

    @Override
    public boolean onContextItemSelected(MenuItem item) {
        String num1Str = etNumber1.getText().toString();
        String num2Str = etNumber2.getText().toString();

        if (num1Str.isEmpty() || num2Str.isEmpty()) {

```

```

        Toast.makeText(this, "Please enter both numbers!", Toast.LENGTH_SHORT).show();
        return false;
    }

    double num1 = Double.parseDouble(num1Str);
    double num2 = Double.parseDouble(num2Str);
    double result = 0;
    String operation = "";

    if (item.getTitle().equals("Calculate Power")) {
        result = Math.pow(num1, num2);
        operation = "Power";
    } else if (item.getTitle().equals("Calculate Average")) {
        result = (num1 + num2) / 2;
        operation = "Average";
    }

    // Send data to the next Activity
    Intent intent = new Intent(MainActivity.this, MainActivity2.class);
    intent.putExtra("operation", operation);
    intent.putExtra("result", result);
    startActivity(intent);

    return true;
}
}

```

XML FILE 2

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="20dp">

    <TextView
        android:id="@+id/tvResult"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="20sp"

```

```
        android:textStyle="bold"/>
</LinearLayout>
```

JAVA FILE 2

```
package com.example.slip18b2;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity2 extends AppCompatActivity {

    private TextView tvResult;

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

        tvResult = findViewById(R.id.tvResult);

        String operation = getIntent().getStringExtra("operation");
        double result = getIntent().getDoubleExtra("result", 0);

        tvResult.setText(operation + " Result: " + result);
    }
}
```

Slip 19 . Design Following Screens using Table Layout. Display the entered text on next activity.

XML FILE 1

```
<?xml version="1.0" encoding="utf-8"?>
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    android:stretchColumns="1">

    <TextView
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Membership Form"
android:textSize="22sp"
android:textStyle="bold"
android:gravity="center"
android:layout_span="2"
android:paddingBottom="10dp"/>
```

```
<TableRow>
```

```
    <TextView android:text="Full Name" android:layout_width="wrap_content"/>
    <EditText android:id="@+id/etName" android:layout_width="match_parent"/>
```

```
</TableRow>
```

```
<TableRow>
```

```
    <TextView android:text="Gender" />
    <RadioGroup
        android:id="@+id/radioGroupGender"
        android:orientation="horizontal">
```

```
        <RadioButton
            android:id="@+id/rbMale"
            android:text="Male"
            android:layout_height="wrap_content"
            android:layout_width="wrap_content"/>
```

```
        <RadioButton
            android:id="@+id/rbFemale"
            android:text="Female"
            android:layout_height="wrap_content"
            android:layout_width="wrap_content"/>
```

```
        <RadioButton
            android:id="@+id/rbOther"
            android:text="Other"
            android:layout_height="wrap_content"
            android:layout_width="wrap_content" />
```

```
    </RadioGroup>
```

```
</TableRow>
```

```
<TableRow>
```

```
    <TextView android:text="Current Weight"/>
    <EditText android:id="@+id/etWeight" android:layout_width="match_parent"/>
```

```

        <TextView android:text="Height"/>
        <EditText android:id="@+id/etHeight" android:layout_width="match_parent"/>
    </TableRow>

    <TableRow>
        <TextView android:text="Goal Weight"/>
        <EditText android:id="@+id/etGoalWeight" android:layout_width="match_parent"/>

        <TextView android:text="Age"/>
        <EditText android:id="@+id/etAge" android:layout_width="match_parent"/>
    </TableRow>

    <TableRow>
        <TextView android:text="Phone"/>
        <EditText android:id="@+id/etPhone" android:layout_width="match_parent"/>
    </TableRow>

    <TableRow>
        <TextView android:text="Address"/>
        <EditText android:id="@+id/etAddress" android:layout_width="match_parent"/>
    </TableRow>

    <TableRow>
        <CheckBox android:id="@+id/checkbox" android:text="I have read, understood, and
accept membership rules"/>
    </TableRow>

    <TableRow>
        <Button android:id="@+id/btnSubmit" android:text="SUBMIT"/>
    </TableRow>

</TableLayout>

```

JAVA FILE 1

```

package com.example.slip19b1;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;

```

```

import android.widget.RadioButton;
import android.widget.RadioGroup;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText etName, etWeight, etHeight, etGoalWeight, etAge, etPhone, etAddress;
    RadioGroup radioGroupGender;
    CheckBox checkBox;
    Button btnSubmit;

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

        etName = findViewById(R.id.etName);
        etWeight = findViewById(R.id.etWeight);
        etHeight = findViewById(R.id.etHeight);
        etGoalWeight = findViewById(R.id.etGoalWeight);
        etAge = findViewById(R.id.etAge);
        etPhone = findViewById(R.id.etPhone);
        etAddress = findViewById(R.id.etAddress);
        radioGroupGender = findViewById(R.id.radioGroupGender);
        checkBox = findViewById(R.id.checkBox);
        btnSubmit = findViewById(R.id.btnSubmit);

        btnSubmit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String name = etName.getText().toString();
                String weight = etWeight.getText().toString();
                String height = etHeight.getText().toString();
                String goalWeight = etGoalWeight.getText().toString();
                String age = etAge.getText().toString();
                String phone = etPhone.getText().toString();
                String address = etAddress.getText().toString();

                int selectedId = radioGroupGender.getCheckedRadioButtonId();
                RadioButton selectedRadioButton = findViewById(selectedId);
                String gender = (selectedRadioButton != null) ?
selectedRadioButton.getText().toString() : "Not Selected";

                String membershipAccepted = checkBox.isChecked() ? "Accepted" : "Not
Accepted";

```

```

        Intent intent = new Intent(MainActivity.this, MainActivity2.class);
        intent.putExtra("name", name);
        intent.putExtra("gender", gender);
        intent.putExtra("weight", weight);
        intent.putExtra("height", height);
        intent.putExtra("goalWeight", goalWeight);
        intent.putExtra("age", age);
        intent.putExtra("phone", phone);
        intent.putExtra("address", address);
        intent.putExtra("membershipAccepted", membershipAccepted);
        startActivity(intent);
    }
});
}
}

```

XML FILE 2

```

<?xml version="1.0" encoding="utf-8"?>
<TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    android:stretchColumns="1">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submitted Details"
        android:textSize="22sp"
        android:textStyle="bold"
        android:gravity="center"
        android:layout_span="2"
        android:paddingBottom="10dp"/>

    <TableRow>
        <TextView
            android:text="Full Name"/>
        <TextView android:id="@+id/tvName"/>
    </TableRow>

    <TableRow>

```

```
<TextView android:text="Gender"/>
<TextView android:id="@+id/tvGender"/>
</TableRow>

<TableRow>
<TextView android:text="Current Weight"/>
<TextView android:id="@+id/tvWeight"/>
</TableRow>

<TableRow>
<TextView android:text="Height"/>
<TextView android:id="@+id/tvHeight"/>
</TableRow>

<TableRow>
<TextView android:text="Goal Weight"/>
<TextView android:id="@+id/tvGoalWeight"/>
</TableRow>

<TableRow>
<TextView android:text="Age"/>
<TextView android:id="@+id/tvAge"/>
</TableRow>

<TableRow>
<TextView android:text="Phone"/>
<TextView android:id="@+id/tvPhone"/>
</TableRow>

<TableRow>
<TextView android:text="Address"/>
<TextView android:id="@+id/tvAddress"/>
</TableRow>

<TableRow>
<TextView android:text="Membership"/>
<TextView android:id="@+id/tvMembership"/>
</TableRow>

</TableLayout>
```



```

package com.example.slip19b1;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity2 extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);

        ((TextView) findViewById(R.id.tvName)).setText(getIntent().getStringExtra("name"));
        ((TextView)
findViewById(R.id.tvGender)).setText(getIntent().getStringExtra("gender"));
        ((TextView)
findViewById(R.id.tvWeight)).setText(getIntent().getStringExtra("weight"));
        ((TextView) findViewById(R.id.tvHeight)).setText(getIntent().getStringExtra("height"));
        ((TextView)
findViewById(R.id.tvGoalWeight)).setText(getIntent().getStringExtra("goalWeight"));
        ((TextView) findViewById(R.id.tvAge)).setText(getIntent().getStringExtra("age"));
        ((TextView) findViewById(R.id.tvPhone)).setText(getIntent().getStringExtra("phone"));
        ((TextView)
findViewById(R.id.tvAddress)).setText(getIntent().getStringExtra("address"));
        ((TextView)
findViewById(R.id.tvMembership)).setText(getIntent().getStringExtra("membershipAccepted"));
    }
}

```