1) Write a program to place Name, Age and Mobile number linearly (vertical)on the display screen using Linear layout only XML

```xml
<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:orientation="vertical"

    android:padding="16dp">


    <TextView

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Name:"

        android:textSize="18sp" />


    <EditText

        android:id="@+id/editTextName"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Enter your name" />


    <TextView

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Age:"

        android:textSize="18sp"

        android:layout_marginTop="16dp" />


    <EditText

        android:id="@+id/editTextAge"

        android:layout_width="match_parent"
```

```xml
        android:layout_height="wrap_content"

        android:inputType="number"

        android:hint="Enter your age" />


    <TextView

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Mobile Number:"

        android:textSize="18sp"

        android:layout_marginTop="16dp" />


    <EditText

        android:id="@+id/editTextMobile"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:inputType="phone"

        android:hint="Enter your mobile number" />


</LinearLayout>
```

2) Write a program to display 10 students basic information in a table form using

Table layout dynamically

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

    android:id="@+id/tableLayout"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:padding="16dp">


</TableLayout>
```

```java
import android.os.Bundle;

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);


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


        for (int i = 0; i < 10; i++) {
            TableRow row = new TableRow(this);


            TextView tvId = new TextView(this);
            tvId.setText(String.valueOf(i + 1));
            row.addView(tvId);


            TextView tvName = new TextView(this);
            tvName.setText("Student " + (i + 1));
            row.addView(tvName);


            TextView tvAge = new TextView(this);
            tvAge.setText("20");
            row.addView(tvAge);


            TextView tvClass = new TextView(this);
```

```
        tvClass.setText("Class 10");

        row.addView(tvClass);


        tableLayout.addView(row);

      }

    }

}
```

3) Write a program to accept username and password from the end user using Text View and Edit Text.

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

    android:layout_width="match_parent"

    android:layout_height="match_parent">


    <TextView

        android:id="@+id/textViewUsername"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Username:"/>


    <EditText

        android:id="@+id/editTextUsername"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@id/textViewUsername"/>


    <TextView

        android:id="@+id/textViewPassword"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@id/editTextUsername"
```

```xml
        android:text="Password:"/>

    <EditText

        android:id="@+id/editTextPassword"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_below="@id/textViewPassword"

        android:inputType="textPassword"/>

    <Button

        android:id="@+id/buttonLogin"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@id/editTextPassword"

        android:text="Login"/>

</RelativeLayout>
```

```java
import android.os.Bundle;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

```java
        EditText editTextUsername = findViewById(R.id.editTextUsername);

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

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


        buttonLogin.setOnClickListener(v -> {

            String username = editTextUsername.getText().toString();

            String password = editTextPassword.getText().toString();


            // Check if username and password are not empty

            if (!username.isEmpty() && !password.isEmpty()) {

                // Here you can implement your login logic

                // For now, just displaying the entered username and password in a toast

                String message = "Username: " + username + "\nPassword: " + password;

                Toast.makeText(MainActivity.this, message, Toast.LENGTH_SHORT).show();

            } else {

                Toast.makeText(MainActivity.this, "Please enter both username and password",
Toast.LENGTH_SHORT).show();

            }

        });

    }

}
```

4) Write a program to display all the subjects of sixth semester using Auto Complete

```xml
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:padding="16dp"

    tools:context=".MainActivity">
```

```xml
    <AutoCompleteTextView

        android:id="@+id/autoCompleteTextView"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Select Subject"

        android:completionThreshold="1" />


</RelativeLayout>
```

```java
import android.os.Bundle;

import android.widget.ArrayAdapter;

import android.widget.AutoCompleteTextView;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


        String[] subjects = {

            "Computer Networks",

            "Operating Systems",

            "Database Management Systems",

            "Software Engineering",

            "Compiler Design",

            "Computer Graphics"

        };


        ArrayAdapter<String> adapter = new ArrayAdapter<>(this,
android.R.layout.simple_dropdown_item_1line, subjects);
```

```java
        AutoCompleteTextView autoCompleteTextView = findViewById(R.id.autoCompleteTextView);

        autoCompleteTextView.setAdapter(adapter);

    }

}
```

5) Write a program to create a login form for a social networking site.

```xml
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:padding="16dp">


    <EditText

        android:id="@+id/editTextEmail"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Email"

        android:inputType="textEmailAddress"

        android:layout_marginBottom="16dp"/>


    <EditText

        android:id="@+id/editTextPassword"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:hint="Password"

        android:inputType="textPassword"

        android:layout_below="@id/editTextEmail"/>


    <Button

        android:id="@+id/buttonLogin"

        android:layout_width="match_parent"
```

```xml
        android:layout_height="wrap_content"

        android:text="Login"

        android:layout_below="@id/editTextPassword"

        android:layout_marginTop="16dp"/>


</RelativeLayout>
```

```java
import android.os.Bundle;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

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 editTextEmail = findViewById(R.id.editTextEmail);

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

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


        buttonLogin.setOnClickListener(v -> {

            String email = editTextEmail.getText().toString();

            String password = editTextPassword.getText().toString();


            // Here you can implement your login logic

            // For now, just displaying a toast with entered credentials

            String message = "Email: " + email + "\nPassword: " + password;

            Toast.makeText(MainActivity.this, message, Toast.LENGTH_SHORT).show();
```

```
        });
    }
}
```

6) Write a program to create a login form for student registration system.

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

    <EditText
        android:id="@+id/editTextUsername"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Username"
        android:inputType="text"/>

    <EditText
        android:id="@+id/editTextPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/editTextUsername"
        android:layout_marginTop="8dp"
        android:hint="Password"
        android:inputType="textPassword"/>

    <Button
        android:id="@+id/buttonLogin"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```xml
        android:text="Login"

        android:layout_below="@id/editTextPassword"

        android:layout_marginTop="16dp"/>
```

```
</RelativeLayout>
```

```java
import android.os.Bundle;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

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 editTextUsername = findViewById(R.id.editTextUsername);

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

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


        buttonLogin.setOnClickListener(v -> {

            String username = editTextUsername.getText().toString();

            String password = editTextPassword.getText().toString();


            // Here you can implement your login logic

            // For now, just displaying a toast with entered credentials

            String message = "Username: " + username + "\nPassword: " + password;

            Toast.makeText(MainActivity.this, message, Toast.LENGTH_SHORT).show();

        });
```

```
    }
}
```

7) Write a program to show five checkboxes and toast selected checkboxes.

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

    <CheckBox
        android:id="@+id/checkBox1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Checkbox 1"/>

    <CheckBox
        android:id="@+id/checkBox2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Checkbox 2"/>

    <CheckBox
        android:id="@+id/checkBox3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Checkbox 3"/>

    <CheckBox
        android:id="@+id/checkBox4"
        android:layout_width="wrap_content"
```

```xml
        android:layout_height="wrap_content"

        android:text="Checkbox 4"/>


    <CheckBox

        android:id="@+id/checkBox5"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Checkbox 5"/>


    <Button

        android:id="@+id/buttonShowSelection"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:layout_marginTop="16dp"

        android:text="Show Selected Checkboxes"/>


</LinearLayout>
```

```java
import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.CheckBox;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);
```

```java
CheckBox checkBox1 = findViewById(R.id.checkBox1);

CheckBox checkBox2 = findViewById(R.id.checkBox2);

CheckBox checkBox3 = findViewById(R.id.checkBox3);

CheckBox checkBox4 = findViewById(R.id.checkBox4);

CheckBox checkBox5 = findViewById(R.id.checkBox5);


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

buttonShowSelection.setOnClickListener(new View.OnClickListener() {

  @Override

  public void onClick(View v) {

    StringBuilder selectedCheckboxes = new StringBuilder();

    if (checkBox1.isChecked()) {

      selectedCheckboxes.append("Checkbox 1\n");

    }

    if (checkBox2.isChecked()) {

      selectedCheckboxes.append("Checkbox 2\n");

    }

    if (checkBox3.isChecked()) {

      selectedCheckboxes.append("Checkbox 3\n");

    }

    if (checkBox4.isChecked()) {

      selectedCheckboxes.append("Checkbox 4\n");

    }

    if (checkBox5.isChecked()) {

      selectedCheckboxes.append("Checkbox 5\n");

    }


    if (selectedCheckboxes.length() > 0) {

      selectedCheckboxes.insert(0, "Selected Checkboxes:\n");
```

```
            Toast.makeText(MainActivity.this, selectedCheckboxes.toString(),
Toast.LENGTH_SHORT).show();

        } else {

            Toast.makeText(MainActivity.this, "No checkboxes selected",
Toast.LENGTH_SHORT).show();

        }

      }

    });

  }

}
```

8) Write a program to display circular progress bar.

```xml
<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:padding="16dp"

    tools:context=".MainActivity">


    <ProgressBar

        android:id="@+id/progressBarCircular"

        style="?android:attr/progressBarStyleLarge"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_centerInParent="true" />


</RelativeLayout>
```

```java
import android.os.Bundle;

import android.os.Handler;

import android.widget.ProgressBar;

import androidx.appcompat.app.AppCompatActivity;
```

```java
public class MainActivity extends AppCompatActivity {

    private ProgressBar progressBarCircular;
    private int progressStatus = 0;
    private Handler handler = new Handler();

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

        progressBarCircular = findViewById(R.id.progressBarCircular);

        // Start long-running operation in a background thread
        new Thread(() -> {
            while (progressStatus < 100) {
                progressStatus += 1;

                // Update the progress status
                handler.post(() -> progressBarCircular.setProgress(progressStatus));

                try {
                    // Sleep for 50 milliseconds
                    Thread.sleep(50);
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
        }).start();
    }
}
```

9) Write a program to display 15 buttons using grid view.

```xml
<?xml version="1.0" encoding="utf-8"?>
<GridView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/gridViewButtons"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:numColumns="3"
    android:horizontalSpacing="16dp"
    android:verticalSpacing="16dp"
    android:padding="16dp"/>
```

```java
import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.GridView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {

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


        GridView gridViewButtons = findViewById(R.id.gridViewButtons);


        // Data for buttons
        String[] buttonNames = new String[15];
        for (int i = 0; i < 15; i++) {
```

```
        buttonNames[i] = "Button " + (i + 1);

    }


    // Adapter for GridView

    ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1,
buttonNames);

    gridViewButtons.setAdapter(adapter);


    // Click listener for buttons

    gridViewButtons.setOnItemClickListener(new AdapterView.OnItemClickListener() {

        @Override

        public void onItemClick(AdapterView<?> parent, View view, int position, long id) {

            String buttonText = buttonNames[position];

            Toast.makeText(MainActivity.this, buttonText + " clicked", Toast.LENGTH_SHORT).show();

        }

    });

    }

}
```

10)Write a program to create button "Start Dialer". When you click on this button it should open the phone dialer.

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


    <Button
```

```xml
        android:id="@+id/buttonStartDialer"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Start Dialer"

        android:layout_centerInParent="true"/>


</RelativeLayout>
```

```java
import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;


public class MainActivity extends AppCompatActivity {


    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);


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

        buttonStartDialer.setOnClickListener(new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                // Create an Intent with action ACTION_DIAL

                Intent intent = new Intent(Intent.ACTION_DIAL);


                // Set the data (phone number) for the intent

                intent.setData(Uri.parse("tel:"));
```

```
            // Start the intent

            startActivity(intent);

        }

    });

  }

}
```