**1. Develop a program to place Name, Age and mobile number linearly (Vertical) on the**

**display screen using Linear layout.**

**XML Code**

<?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="20dp"  
 android:gravity="center">  
  
 <TextView  
 android:id="@+id/titleTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Linear Layout (Vertical)"  
 android:textStyle="bold"  
 android:layout\_marginBottom="30dp"  
 android:textSize="20sp"  
 android:padding="10dp"/>  
  
 <TextView  
 android:id="@+id/nameTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Name: Siddharth Gaykhe"  
 android:textSize="20sp"  
 android:padding="10dp"/>  
  
 <TextView  
 android:id="@+id/ageTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Age: 19"  
 android:textSize="20sp"  
 android:padding="10dp"/>  
  
 <TextView  
 android:id="@+id/mobileTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Mobile: +919421293532"  
 android:textSize="20sp"  
 android:padding="10dp"/>  
</LinearLayout>

**2 Develop a program to place Name, Age and mobile number centrally on the display screen using Absolute layout..**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<AbsoluteLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="#FFFFFF">  
  
 <TextView  
 android:id="@+id/title"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_x="122dp"  
 android:layout\_y="270dp"  
 android:text="Absolute Layout"  
 android:textColor="#000000"  
 android:textSize="25sp"  
 android:textStyle="bold" />  
  
 <TextView  
 android:id="@+id/name"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_x="100dp"  
 android:layout\_y="336dp"  
 android:text="Name: Siddharth Gaykhe"  
 android:textColor="#000000"  
 android:textSize="20sp" />  
  
 <TextView  
 android:id="@+id/age"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_x="100dp"  
 android:layout\_y="393dp"  
 android:text="Age: 19"  
 android:textColor="#000000"  
 android:textSize="20sp" />  
  
 <TextView  
 android:id="@+id/mobile"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_x="101dp"  
 android:layout\_y="448dp"  
 android:text="Mobile: +919421293532"  
 android:textColor="#000000"  
 android:textSize="20sp" />  
  
</AbsoluteLayout>

**3. Develop a program to display all the data types in object-oriented programming using Frame layout.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/title"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="90dp"  
 android:layout\_marginBottom="12dp"  
 android:text="Data Types in object-oriented programming"  
 android:textSize="24sp"  
 android:textStyle="bold" />  
  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical"  
 android:layout\_gravity="center">  
  
 <TextView  
 android:id="@+id/primitiveHeader"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Primitive Data Types"  
 android:textStyle="bold"  
 android:textSize="20sp"  
 android:layout\_marginBottom="10dp"/>  
  
 <TextView  
 android:id="@+id/textInteger"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Integer (int):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:id="@+id/textFloat"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Float (float):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:id="@+id/textBoolean"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Boolean (boolean):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:id="@+id/textString"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="String (String):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="20dp"/>  
  
 <TextView  
 android:id="@+id/collectionHeader"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Collection Data Types"  
 android:textStyle="bold"  
 android:textSize="20sp"  
 android:layout\_marginBottom="10dp"/>  
  
 <TextView  
 android:id="@+id/textList"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="List (List):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:id="@+id/textSet"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Set (Set):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:id="@+id/textMap"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Map (Map):"  
 android:textSize="18sp"  
 android:layout\_marginBottom="20dp"/>  
  
 <TextView  
 android:id="@+id/userDefinedHeader"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="User-Defined Data Types"  
 android:textStyle="bold"  
 android:textSize="20sp"  
 android:layout\_marginBottom="10dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Classes (e.g., MyClass)"  
 android:textSize="18sp"  
 android:layout\_marginBottom="6dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Objects (Instances of Classes)"  
 android:textSize="18sp"/>  
  
 </LinearLayout>  
  
</FrameLayout>

**4 Develop a program to display 10 students basic information in a table form using Table layout.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:id="@+id/main"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:padding="10px"  
 android:text="10 Student Information "  
 android:layout\_marginBottom="40dp"  
 android:textSize="20sp"  
 android:textStyle="bold" />  
  
 <TableLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:stretchColumns="1">  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="Roll No"  
 android:textColor="#F4511E"  
 android:textSize="15sp"  
 android:textStyle="bold"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Name"  
 android:textColor="#F4511E"  
 android:textSize="15sp"  
 android:textStyle="bold"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="Marks"  
 android:textColor="#F4511E"  
 android:textSize="15sp"  
 android:textStyle="bold"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="1"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Siddharth Gaykhe"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="92"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="2"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Anushka Ghule"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="88"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="3"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Om Hire"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="95"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="4"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Rutik Gaikwad"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="99.99"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="5"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Shrutika Hodger"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="94.30"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="6"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Om Pagar"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="77"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="7"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Sumit pagare"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="67"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="8"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Ishwari Khebade"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="77"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="9"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Sanskruti Dhikale"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="100"  
 android:gravity="center"/>  
 </TableRow>  
  
 <TableRow>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="10"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="2"  
 android:padding="10px"  
 android:text="Pratiksha Patil"  
 android:gravity="center"/>  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:padding="10px"  
 android:text="67"  
 android:gravity="center"/>  
 </TableRow>  
  
 </TableLayout>  
  
</LinearLayout>

**5 Develop a program to implement relative layout.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/topLeft"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="16dp"  
 android:padding="16dp"  
 android:background="#FFEB3B"  
 android:text="Top-Left" />  
  
 <TextView  
 android:id="@+id/topRight"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentTop="true"  
 android:layout\_alignParentEnd="true"  
 android:layout\_marginTop="16dp"  
 android:layout\_marginEnd="16dp"  
 android:padding="16dp"  
 android:background="#4CAF50"  
 android:text="Top-Right" />  
  
 <TextView  
 android:id="@+id/bottomLeft"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginBottom="16dp"  
 android:padding="16dp"  
 android:background="#F44336"  
 android:text="Bottom-Left" />  
  
 <TextView  
 android:id="@+id/bottomRight"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentBottom="true"  
 android:layout\_alignParentEnd="true"  
 android:layout\_marginEnd="16dp"  
 android:layout\_marginBottom="16dp"  
 android:padding="16dp"  
 android:background="#2196F3"  
 android:text="Bottom-Right" />  
  
 <TextView  
 android:id="@+id/centerHorizontal"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="100dp"  
 android:padding="16dp"  
 android:background="#9C27B0"  
 android:text="Center Horizontal" />  
  
 <TextView  
 android:id="@+id/centerVertical"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerVertical="true"  
 android:layout\_marginStart="16dp"  
 android:padding="16dp"  
 android:background="#00BCD4"  
 android:text="Left of Center Vertical" />  
  
 <TextView  
 android:id="@+id/toRightOfCenterVertical"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_toEndOf="@+id/centerVertical"  
 android:layout\_alignTop="@+id/centerVertical"  
 android:layout\_marginStart="16dp"  
 android:padding="16dp"  
 android:background="#009688"  
 android:text="Right of Center Vertical" />  
  
  
</RelativeLayout>

**6.**  **Develop a program to accept username and password from the end user using Text View and Edit Text.**

**XML Code**

<?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:gravity="center"  
 android:padding="24dp">  
  
 <ImageView  
 android:id="@+id/logoImageView"  
 android:layout\_width="100dp"  
 android:layout\_height="100dp"  
 android:layout\_marginBottom="20dp"  
 android:src="@drawable/img" />  
  
 <EditText  
 android:id="@+id/usernameEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Username"  
 android:inputType="textPersonName" />  
  
 <EditText  
 android:id="@+id/passwordEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Password"  
 android:inputType="textPassword"  
 android:layout\_marginTop="10dp" />  
  
 <Button  
 android:id="@+id/loginButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Login"  
 android:layout\_marginTop="15dp" />  
  
 <TextView  
 android:id="@+id/resultTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text=""  
 android:textSize="18sp"  
 android:textStyle="bold"  
 android:layout\_marginTop="20dp"/>  
</LinearLayout>

**Java Code**

package com.example.pr6\_user\_pass\_text\_edittext;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.\*;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private final String user = "admin";  
 private final String pass = "1234";  
  
 EditText usernameEditText, passwordEditText;  
 Button loginButton;  
 TextView resultTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 usernameEditText = findViewById(R.id.*usernameEditText*);  
 passwordEditText = findViewById(R.id.*passwordEditText*);  
 loginButton = findViewById(R.id.*loginButton*);  
 resultTextView = findViewById(R.id.*resultTextView*);  
  
 loginButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String inputUser = usernameEditText.getText().toString();  
 String inputPass = passwordEditText.getText().toString();  
  
 if (inputUser.equals(user) && inputPass.equals(pass)) {  
 Toast.*makeText*(MainActivity.this,"Login Success",Toast.*LENGTH\_SHORT*).show();  
 } else {  
 Toast.*makeText*(MainActivity.this,"Login Failed",Toast.*LENGTH\_SHORT*).show();  
   
 }  
 }  
 });  
 }  
}

**7 Develop program to accept and display personal information of the student.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:orientation="vertical"  
 android:padding="24dp"  
 android:gravity="center\_horizontal"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <EditText  
 android:id="@+id/nameEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Name"  
 android:inputType="textPersonName" />  
  
 <!-- Age -->  
 <EditText  
 android:id="@+id/ageEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Age"  
 android:inputType="number"  
 android:layout\_marginTop="10dp" />  
  
 <!-- Roll Number -->  
 <EditText  
 android:id="@+id/rollEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Roll Number"  
 android:inputType="text"  
 android:layout\_marginTop="10dp" />  
  
 <!-- Branch -->  
 <EditText  
 android:id="@+id/branchEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Branch"  
 android:inputType="text"  
 android:layout\_marginTop="10dp" />  
  
 <!-- Submit Button -->  
 <Button  
 android:id="@+id/submitButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Show Info"  
 android:layout\_marginTop="15dp" />  
  
 <!-- Display Result -->  
 <TextView  
 android:id="@+id/resultTextView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text=""  
 android:textSize="18sp"  
 android:textStyle="bold"  
 android:layout\_marginTop="20dp"/>  
</LinearLayout>

**Java Code**

package com.example.pr7\_studentinfo;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.\*;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 EditText nameEditText, ageEditText, rollEditText, branchEditText;  
 Button submitButton;  
 TextView resultTextView;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Connect UI elements  
 nameEditText = findViewById(R.id.*nameEditText*);  
 ageEditText = findViewById(R.id.*ageEditText*);  
 rollEditText = findViewById(R.id.*rollEditText*);  
 branchEditText = findViewById(R.id.*branchEditText*);  
 submitButton = findViewById(R.id.*submitButton*);  
 resultTextView = findViewById(R.id.*resultTextView*);  
  
 // Handle button click  
 submitButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 // Get input values  
 String name = nameEditText.getText().toString();  
 String age = ageEditText.getText().toString();  
 String roll = rollEditText.getText().toString();  
 String branch = branchEditText.getText().toString();  
  
 // Display info  
 String result = "Student Info:\n\n" +  
 "Name: " + name + "\n" +  
 "Age: " + age + "\n" +  
 "Roll No: " + roll + "\n" +  
 "Branch: " + branch;  
  
 resultTextView.setText(result);  
 }  
 });  
 }  
}

**8. Develop a program implement bill payment system using EditText, Checkbox, Button.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:orientation="vertical"  
 android:padding="24dp"  
 android:gravity="center\_horizontal"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent">  
  
 <!-- Name -->  
 <EditText  
 android:id="@+id/nameEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Name"  
 android:inputType="textPersonName" />  
  
 <!-- Amount -->  
 <EditText  
 android:id="@+id/amountEditText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Amount"  
 android:inputType="numberDecimal"  
 android:layout\_marginTop="10dp" />  
  
 <!-- Bill Types -->  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Select Bill Type(s):"  
 android:textStyle="bold"  
 android:layout\_marginTop="15dp" />  
  
 <CheckBox  
 android:id="@+id/electricityCheckBox"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Electricity" />  
  
 <CheckBox  
 android:id="@+id/waterCheckBox"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Water" />  
  
 <CheckBox  
 android:id="@+id/internetCheckBox"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Internet" />  
  
 <!-- Submit Button -->  
 <Button  
 android:id="@+id/payButton"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Pay Bill"  
 android:layout\_marginTop="20dp" />  
</LinearLayout>

**Java Code**

package com.example.pr8\_bill\_payment;  
  
  
package com.example.pr8\_bill\_payment;  
  
  
import android.annotation.SuppressLint;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.\*;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 EditText nameEditText, amountEditText;  
 CheckBox electricityCheckBox, waterCheckBox, internetCheckBox;  
 Button payButton;  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Link UI elements  
 nameEditText = findViewById(R.id.*nameEditText*);  
 amountEditText = findViewById(R.id.*amountEditText*);  
 electricityCheckBox = findViewById(R.id.*electricityCheckBox*);  
 waterCheckBox = findViewById(R.id.*waterCheckBox*);  
 internetCheckBox = findViewById(R.id.*internetCheckBox*);  
 payButton = findViewById(R.id.*payButton*);  
 TextView result = findViewById(R.id.*result*);  
  
 // Button click  
 payButton.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String name = nameEditText.getText().toString().trim();  
 String amount = amountEditText.getText().toString().trim();  
 StringBuilder services = new StringBuilder();  
  
 if (electricityCheckBox.isChecked()) services.append("Electricity ");  
 if (waterCheckBox.isChecked()) services.append("Water ");  
 if (internetCheckBox.isChecked()) services.append("Internet ");  
  
 if (name.isEmpty() || amount.isEmpty() || services.length() == 0) {  
 Toast.*makeText*(MainActivity.this, "Please enter all details and select at least one service", Toast.*LENGTH\_SHORT*).show();  
 } else {  
 String message = "Payment Details:\nName: " + name +  
 "\nAmount: ₹" + amount +  
 "\nBill Type: " + services.toString().trim();  
 result.setText(message);  
   
 }  
 }  
 });  
 }  
}

**9 Develop program to create a toggle button to display ON / OFF Bluetooth on the display screen.**

**AndroidManifest.xml**

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

<uses-permission android:name="android.permission.BLUETOOTH\_ADMIN" />

**XML Code**

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

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

android:orientation="vertical"

android:gravity="center"

android:padding="24dp"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<TextView

android:id="@+id/titleText"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Bluetooth Controller"

android:textSize="22sp"

android:textStyle="bold"

android:layout\_marginBottom="20dp" />

<ToggleButton

android:id="@+id/bluetoothToggle"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textOn="Bluetooth ON"

android:textOff="Bluetooth OFF"

android:layout\_marginBottom="20dp" />

<TextView

android:id="@+id/statusText"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Bluetooth is OFF"

android:textSize="18sp" />

</LinearLayout>

**Java Code**

package com.example.bluetoothcontroller;

import android.bluetooth.BluetoothAdapter;

import android.os.Bundle;

import android.widget.\*;

import android.view.View;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

ToggleButton bluetoothToggle;

TextView statusText;

BluetoothAdapter bluetoothAdapter;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

bluetoothToggle = findViewById(R.id.bluetoothToggle);

statusText = findViewById(R.id.statusText);

bluetoothAdapter = BluetoothAdapter.getDefaultAdapter();

if (bluetoothAdapter == null) {

statusText.setText("Bluetooth not supported");

bluetoothToggle.setEnabled(false);

} else {

bluetoothToggle.setChecked(bluetoothAdapter.isEnabled());

updateStatusText(bluetoothAdapter.isEnabled());

bluetoothToggle.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

if (bluetoothToggle.isChecked()) {

bluetoothAdapter.enable();

Toast.makeText(MainActivity.this, "Bluetooth Turned ON", Toast.LENGTH\_SHORT).show();

updateStatusText(true);

} else {

bluetoothAdapter.disable();

Toast.makeText(MainActivity.this, "Bluetooth Turned OFF", Toast.LENGTH\_SHORT).show();

updateStatusText(false);

}

}

});

}

}

private void updateStatusText(boolean isOn) {

if (isOn) {

statusText.setText("Bluetooth is ON");

} else {

statusText.setText("Bluetooth is OFF");

}

}

}

**10 Develop a program to create a login form for student registration system**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:id="@+id/layout"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:padding="20dp"  
 android:gravity="center">  
  
 <TextView  
 android:id="@+id/appTitle"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Student Registration Login"  
 android:textSize="22sp"  
 android:textStyle="bold"  
 android:layout\_marginBottom="20dp" />  
  
 <EditText  
 android:id="@+id/fullName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Full Name"  
 android:layout\_marginBottom="10dp"/>  
  
 <EditText  
 android:id="@+id/email"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Email"  
 android:inputType="textEmailAddress"  
 android:layout\_marginBottom="10dp"/>  
  
 <EditText  
 android:id="@+id/mobile"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Mobile Number"  
 android:inputType="phone"  
 android:layout\_marginBottom="10dp"/>  
  
 <EditText  
 android:id="@+id/course"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Course"  
 android:layout\_marginBottom="10dp"/>  
  
 <EditText  
 android:id="@+id/username"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Username"  
 android:layout\_marginBottom="10dp"/>  
  
 <EditText  
 android:id="@+id/password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Password"  
 android:inputType="textPassword"  
 android:layout\_marginBottom="20dp"/>  
  
 <Button  
 android:id="@+id/loginButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Register/Login"/>  
  
</LinearLayout>

**Java Code**

package com.example.studentlogin;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

EditText fullName, email, mobile, course, username, password;

Button loginButton;

// Predefined credentials

String correctUsername = "student123";

String correctPassword = "pass123";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

fullName = findViewById(R.id.fullName);

email = findViewById(R.id.email);

mobile = findViewById(R.id.mobile);

course = findViewById(R.id.course);

username = findViewById(R.id.username);

password = findViewById(R.id.password);

loginButton = findViewById(R.id.loginButton);

loginButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String name = fullName.getText().toString().trim();

String mail = email.getText().toString().trim();

String phone = mobile.getText().toString().trim();

String courseName = course.getText().toString().trim();

String user = username.getText().toString().trim();

String pass = password.getText().toString().trim();

if (name.isEmpty() || mail.isEmpty() || phone.isEmpty() || courseName.isEmpty()

|| user.isEmpty() || pass.isEmpty()) {

Toast.makeText(MainActivity.this, "Please fill all fields", Toast.LENGTH\_SHORT).show();

} else if (user.equals(correctUsername) && pass.equals(correctPassword)) {

String msg = "✔ Login Successful\n" +

"Name: " + name + "\n" +

"Email: " + mail + "\n" +

"Mobile: " + phone + "\n" +

"Course: " + courseName;

Toast.makeText(MainActivity.this, msg, Toast.LENGTH\_LONG).show();

} else {

Toast.makeText(MainActivity.this, "❌ Login Failed: Invalid Username/Password", Toast.LENGTH\_SHORT).show();

}

}

});

}

}