

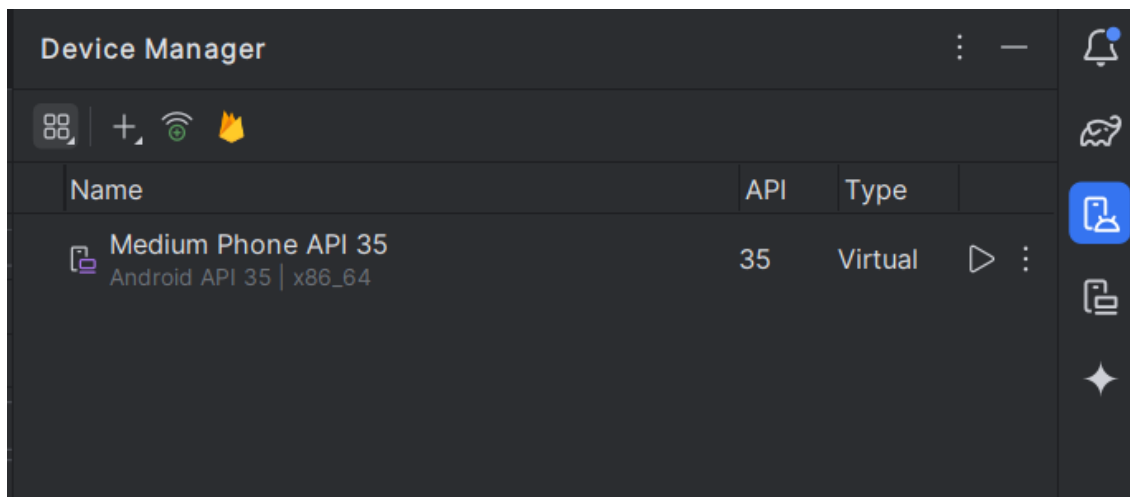
Question 1

Create an Android Virtual Device for Pixel 5 device.

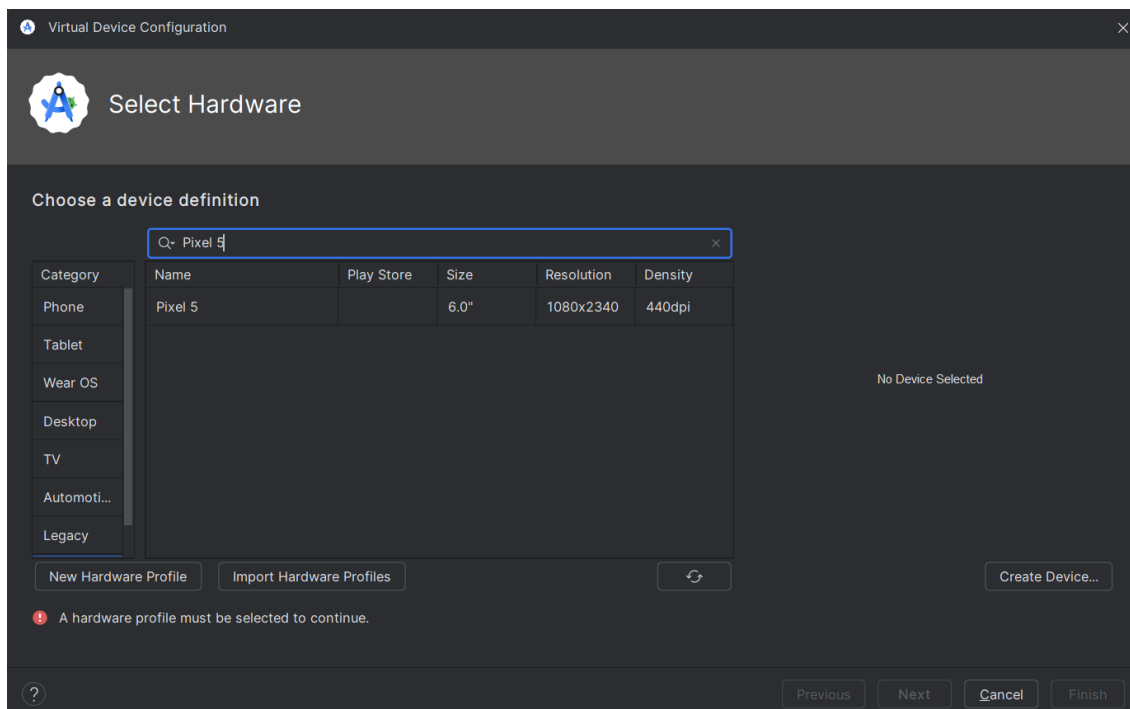
Answer

- Steps :

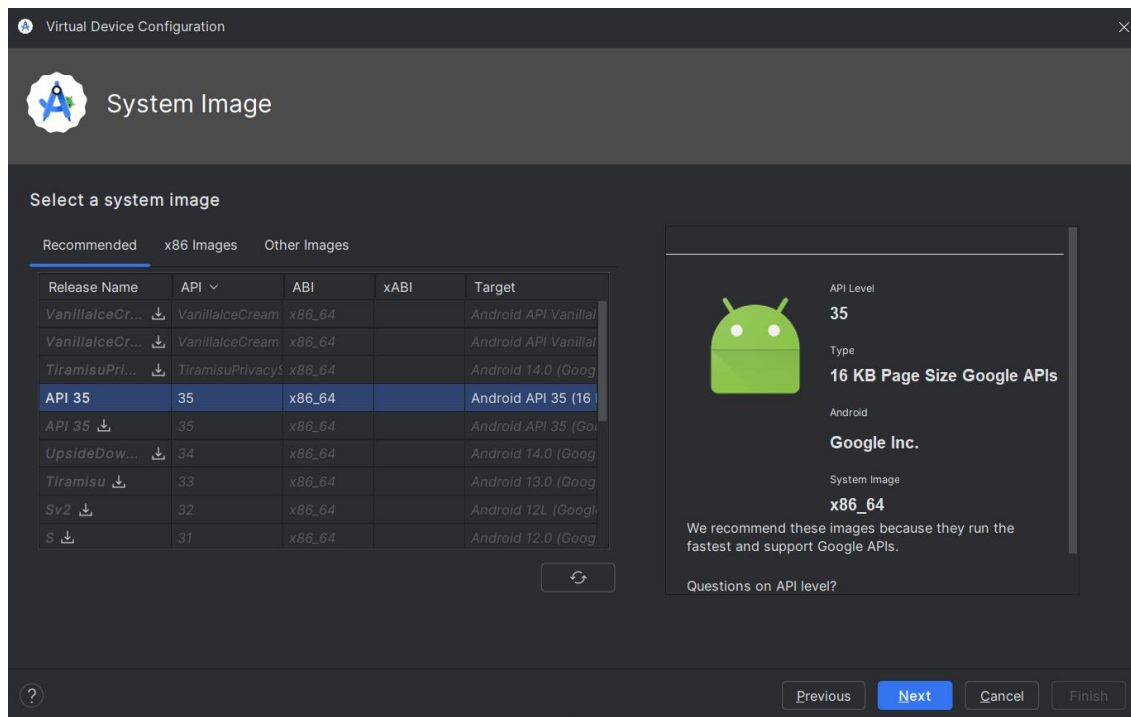
Go to Device Manager (Tools -> Device Manager)



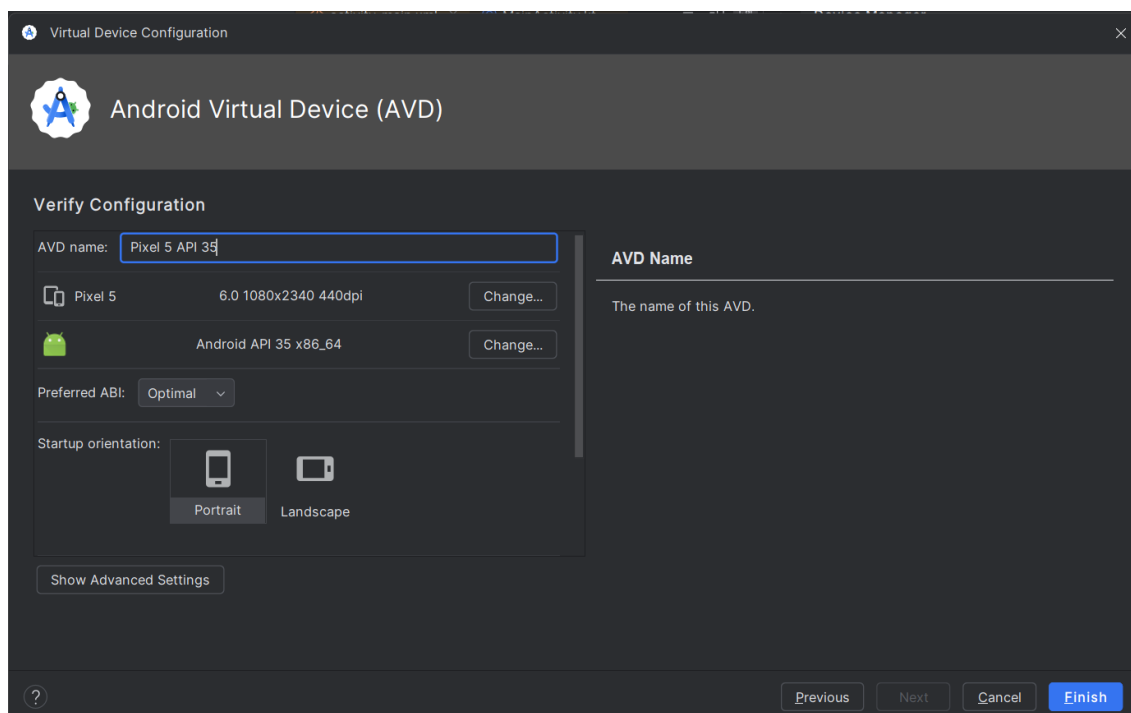
Click + Icon -> Create Virtual Device



Search Pixel 5 And Select That And Hit Next



Select API And Hit Next



Give AVD Name And Other Configuration And Hit Finish

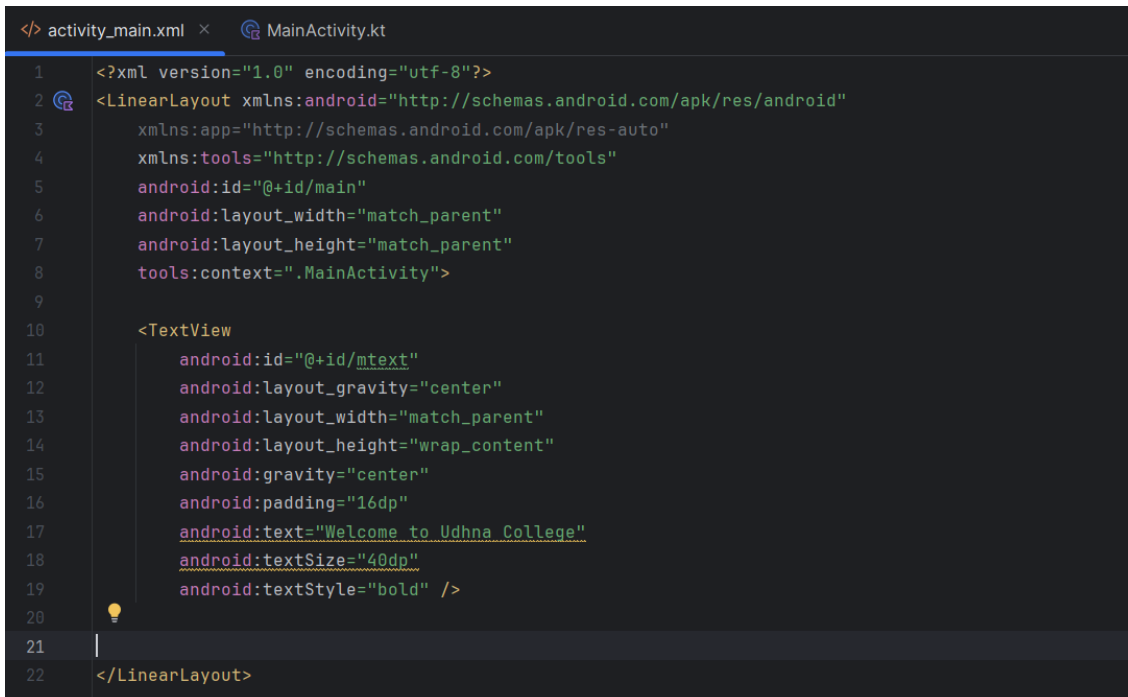
Name	API	Type		
Medium Phone API 35 Android API 35 x86_64	35	Virtual	▶	⋮
Pixel 5 API 35 Android API 35 x86_64	35	Virtual	▶	⋮

Question 2

Create an Android project with an empty activity using Linear Layout and display message “Welcome to Udhna College”.

Answer

- Code Preview :

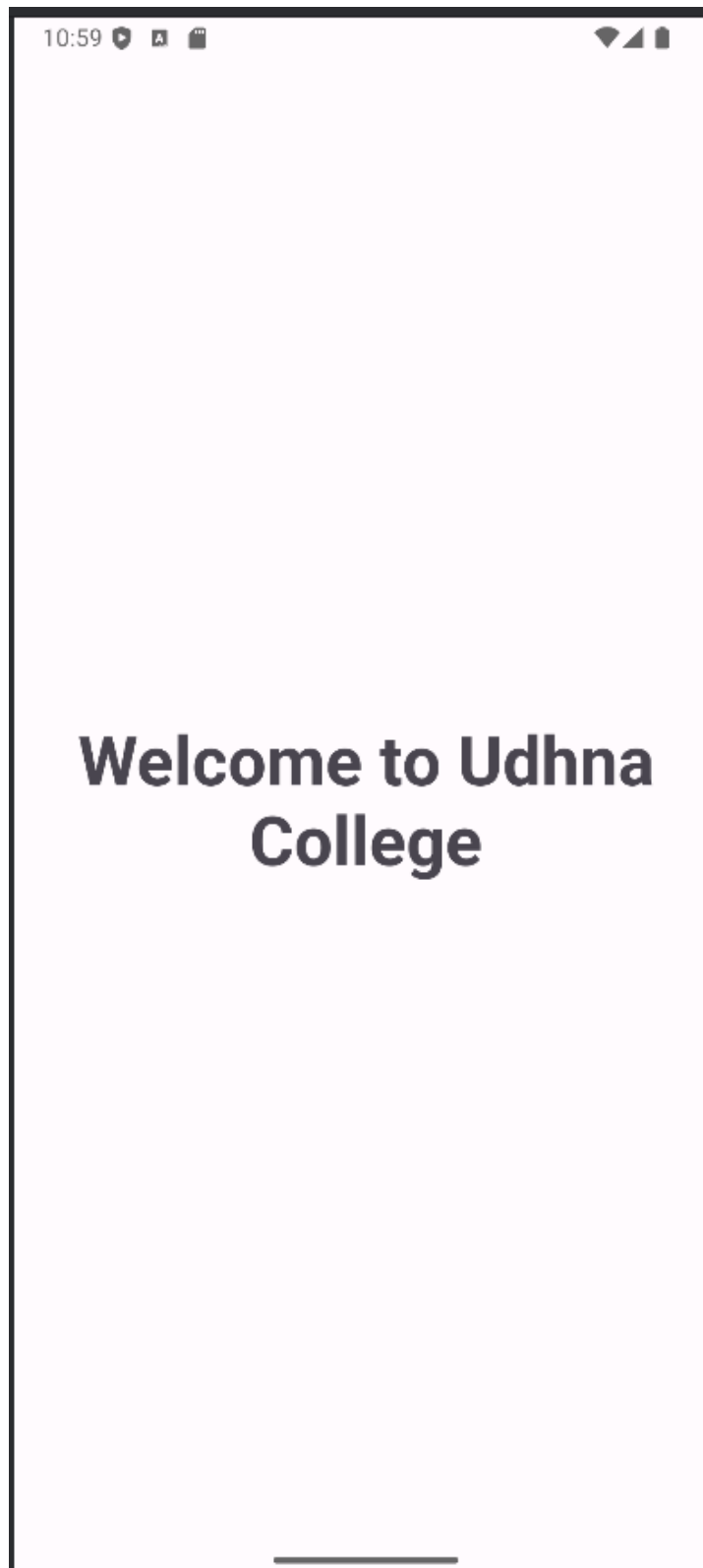


```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"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

    <TextView
        android:id="@+id/text"
        android:layout_gravity="center"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:padding="16dp"
        android:text="Welcome to Udhna College"
        android:textSize="40dp"
        android:textStyle="bold" />

</LinearLayout>
```

- Output :



Question 3

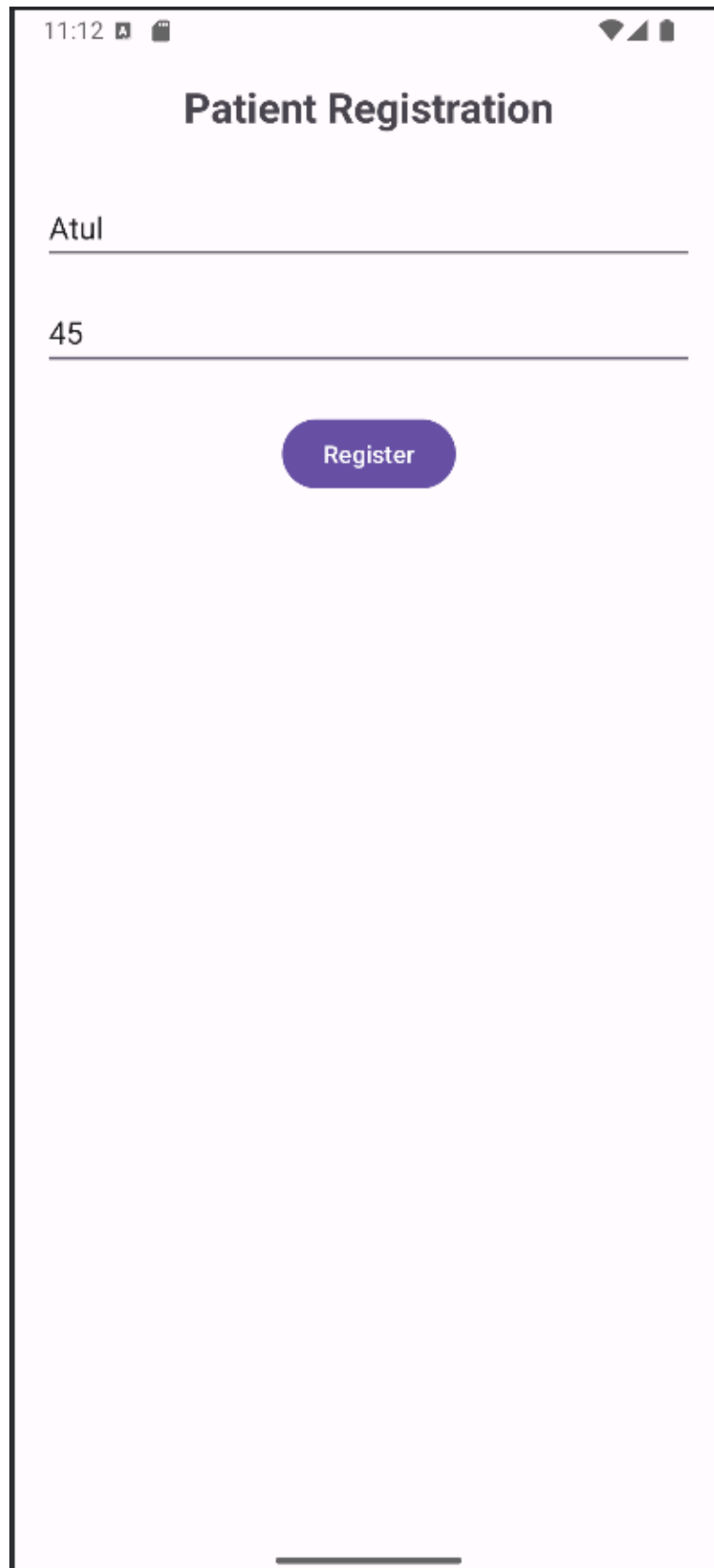
Create an Android project with empty activity and design a Patient Registration view.

Answer

- Code Preview :

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:id="@+id/main"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     tools:context=".MainActivity">
9
10    <TextView
11        android:id="@+id/Heading"
12        android:layout_width="wrap_content"
13        android:layout_height="wrap_content"
14        android:text="Patient Registration"
15        android:textSize="24sp"
16        android:textStyle="bold"
17        app:layout_constraintTop_toTopOf="parent"
18        app:layout_constraintStart_toStartOf="parent"
19        app:layout_constraintEnd_toEndOf="parent"
20        android:padding="16dp"/>
21    <EditText
22        android:id="@+id/edtPatientName"
23        android:layout_width="0dp"
24        android:layout_height="wrap_content"
25        android:hint="Patient Name"
26        app:layout_constraintStart_toStartOf="parent"
27        app:layout_constraintEnd_toEndOf="parent"
28        app:layout_constraintTop_toBottomOf="@id/Heading"
29        android:layout_margin="16dp"/>
30
31    <EditText
32        android:id="@+id/edtPatientAge"
33        android:layout_width="0dp"
34        android:layout_height="wrap_content"
35        android:hint="Patient Age"
36        app:layout_constraintStart_toStartOf="parent"
37        app:layout_constraintEnd_toEndOf="parent"
38        app:layout_constraintTop_toBottomOf="@id/edtPatientName"
39        android:layout_margin="16dp"/>
40
41    <!-- Add more UI components as needed (e.g., gender, address, etc.) -->
42
43    <Button
44        android:id="@+id/btnRegister"
45        android:layout_width="wrap_content"
46        android:layout_height="wrap_content"
47        android:text="Register"
48        app:layout_constraintStart_toStartOf="parent"
49        app:layout_constraintEnd_toEndOf="parent"
50        app:layout_constraintTop_toBottomOf="@id/edtPatientAge"
51        android:layout_marginTop="24dp"/>
52
53 </androidx.constraintlayout.widget.ConstraintLayout>
```

- Output :



The screenshot displays a mobile application interface for patient registration. At the top, the status bar shows the time as 11:12 and various system icons. The app's title, "Patient Registration", is centered at the top in a bold, dark font. Below the title, there are two input fields. The first field contains the text "Atul" and is followed by a horizontal line. The second field contains the text "45" and is also followed by a horizontal line. Centered below these fields is a purple, rounded rectangular button with the text "Register" in white. The background of the app is a light pink color. A black horizontal line is visible at the bottom of the screen, likely representing the home indicator bar on an iPhone.

Question 4

Create an Android project with empty activity using relative layout and design a Student Login Page.

Answer

- Code Preview :

```
1 <?xml version="1.0" encoding="utf-8"?>
2
3 <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
4     xmlns:app="http://schemas.android.com/apk/res-auto"
5     xmlns:tools="http://schemas.android.com/tools"
6     android:id="@+id/main"
7     android:layout_width="match_parent"
8     android:layout_height="match_parent"
9     tools:context=".MainActivity">
10
11     <TextView
12         android:id="@+id/tvTitle"
13         android:layout_width="wrap_content"
14         android:layout_height="wrap_content"
15         android:text="Student Login"
16         android:textSize="24sp"
17         android:textStyle="bold"
18         android:layout_centerHorizontal="true"
19         android:layout_marginTop="32dp"/>
20
21     <EditText
22         android:id="@+id/etUsername"
23         android:layout_width="match_parent"
24         android:layout_height="wrap_content"
25         android:hint="Username"
26         android:layout_below="@id/tvTitle"
27         android:layout_marginTop="24dp"/>
28
29     <EditText
30         android:id="@+id/etPassword"
31         android:layout_width="match_parent"
32         android:layout_height="wrap_content"
33         android:hint="Password"
34         android:inputType="textPassword"
35         android:layout_below="@id/etUsername"
36         android:layout_marginTop="16dp"/>
37
38     <Button
39         android:id="@+id/btnLogin"
40         android:layout_width="match_parent"
41         android:layout_height="wrap_content"
42         android:text="Login"
43         android:layout_below="@id/etPassword"
44         android:layout_marginTop="24dp"/>
45
46 </RelativeLayout>
```

- Output :

11:20

Student Login

Mayur

.....

Login

Question 5

Create an Android project with an empty activity using table layout and Design a Student Mark Entry view.(At least 5 subjects)

Answer

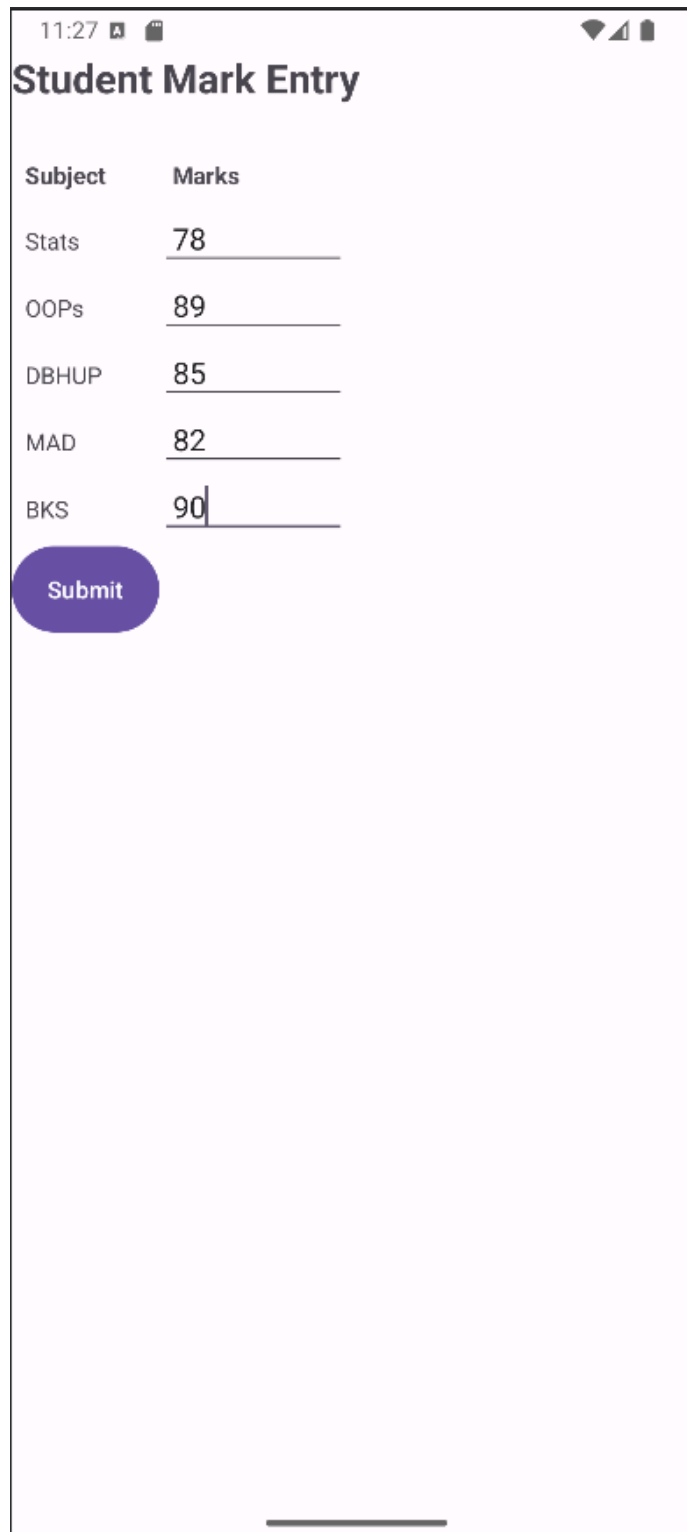
- Code Preview :

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <TableLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:id="@+id/main"
6      android:layout_width="match_parent"
7      android:layout_height="match_parent"
8      tools:context=".MainActivity">
9
10     <TextView
11         android:id="@+id/tvTitle"
12         android:layout_width="wrap_content"
13         android:layout_height="wrap_content"
14         android:text="Student Mark Entry"
15         android:textSize="24sp"
16         android:textStyle="bold"
17         android:layout_gravity="center"
18         android:layout_marginBottom="24dp"/>
19
20     <TableRow>
21         <TextView
22             android:layout_width="wrap_content"
23             android:layout_height="wrap_content"
24             android:text="Subject"
25             android:textStyle="bold"
26             android:padding="8dp"/>
27         <TextView
28             android:layout_width="wrap_content"
29             android:layout_height="wrap_content"
30             android:text="Marks"
31             android:textStyle="bold"
32             android:padding="8dp"/>
33     </TableRow>
34
35     <!-- Subject Rows -->
36     <TableRow>
37         <TextView
38             android:layout_width="wrap_content"
39             android:layout_height="wrap_content"
40             android:text="Stats"
41             android:padding="8dp"/>
42         <EditText
43             android:layout_width="wrap_content"
44             android:layout_height="wrap_content"
45             android:inputType="number"
46             android:hint="Enter marks"
47             android:padding="8dp"/>
48     </TableRow>
```

```
48     </TableRow>
49
50     <TableRow>
51         <TextView
52             android:layout_width="wrap_content"
53             android:layout_height="wrap_content"
54             android:text="00Ps"
55             android:padding="8dp"/>
56         <EditText
57             android:layout_width="wrap_content"
58             android:layout_height="wrap_content"
59             android:inputType="number"
60             android:hint="Enter marks"
61             android:padding="8dp"/>
62     </TableRow>
63
64     <TableRow>
65         <TextView
66             android:layout_width="wrap_content"
67             android:layout_height="wrap_content"
68             android:text="DBHUP"
69             android:padding="8dp"/>
70         <EditText
71             android:layout_width="wrap_content"
72             android:layout_height="wrap_content"
73             android:inputType="number"
74             android:hint="Enter marks"
75             android:padding="8dp"/>
76     </TableRow>
77
78     <TableRow>
79         <TextView
80             android:layout_width="wrap_content"
81             android:layout_height="wrap_content"
82             android:text="MAD"
83             android:padding="8dp"/>
84         <EditText
85             android:layout_width="wrap_content"
86             android:layout_height="wrap_content"
87             android:inputType="number"
88             android:hint="Enter marks"
89             android:padding="8dp"/>
90     </TableRow>
91
92     <TableRow>
93         <TextView
94             android:layout_width="wrap_content"
95             android:layout_height="wrap_content"
96             android:text="BKS"
97             android:padding="8dp"/>
98         <EditText
99             android:layout_width="wrap_content"
100             android:layout_height="wrap_content"
101             android:inputType="number"
102             android:hint="Enter marks"
103             android:padding="8dp"/>
104     </TableRow>
```

```
105
106     <TableRow>
107         <Button
108             android:id="@+id/btnSubmit"
109             android:layout_width="wrap_content"
110             android:layout_height="wrap_content"
111             android:text="Submit"
112             android:layout_gravity="center"
113             android:padding="16dp"/>
114     </TableRow>
115
116 </TableLayout>
```

- Output :



11:27

Student Mark Entry

Subject	Marks
Stats	78
OOPs	89
DBHUP	85
MAD	82
BKS	90

Submit

Question 6

Create an Android project with empty activity using and design a Bank transaction Entry view (A/C No, Name , Date , Debit, Credit, Balance)

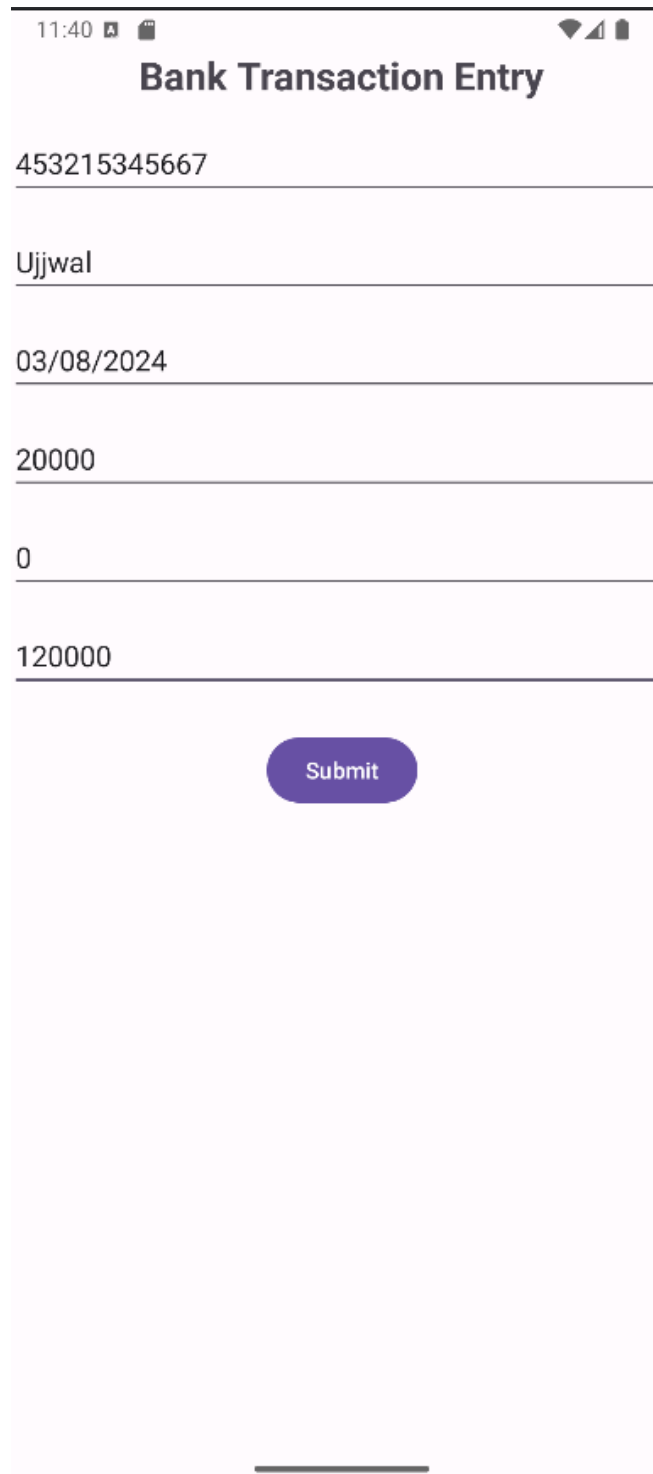
Answer

- Code Preview :

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:id="@+id/main"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     tools:context=".MainActivity">
9
10    <TextView
11        android:id="@+id/tvTitle"
12        android:layout_width="wrap_content"
13        android:layout_height="wrap_content"
14        android:text="Bank Transaction Entry"
15        android:textSize="24sp"
16        android:textStyle="bold"
17        app:layout_constraintTop_toTopOf="parent"
18        app:layout_constraintStart_toStartOf="parent"
19        app:layout_constraintEnd_toEndOf="parent"
20        android:layout_marginBottom="24dp"/>
21
22    <EditText
23        android:id="@+id/etAccountNo"
24        android:layout_width="0dp"
25        android:layout_height="wrap_content"
26        android:hint="Enter A/C No"
27        app:layout_constraintTop_toBottomOf="@id/tvTitle"
28        app:layout_constraintStart_toStartOf="parent"
29        app:layout_constraintEnd_toEndOf="parent"
30        android:layout_marginTop="16dp"/>
31
32    <EditText
33        android:id="@+id/etName"
34        android:layout_width="0dp"
35        android:layout_height="wrap_content"
36        android:hint="Enter Name"
37        app:layout_constraintTop_toBottomOf="@id/etAccountNo"
38        app:layout_constraintStart_toStartOf="parent"
39        app:layout_constraintEnd_toEndOf="parent"
40        android:layout_marginTop="16dp"/>
41
42    <EditText
43        android:id="@+id/etDate"
44        android:layout_width="0dp"
45        android:layout_height="wrap_content"
46        android:hint="Enter Date"
47        android:inputType="date"
48        app:layout_constraintTop_toBottomOf="@id/etName"
49        app:layout_constraintStart_toStartOf="parent"
50        app:layout_constraintEnd_toEndOf="parent"
51        android:layout_marginTop="16dp"/>
```

```
52
53     <EditText
54         android:id="@+id/etDebit"
55         android:layout_width="0dp"
56         android:layout_height="wrap_content"
57         android:hint="Enter Debit Amount"
58         android:inputType="numberDecimal"
59         app:layout_constraintTop_toBottomOf="@id/etDate"
60         app:layout_constraintStart_toStartOf="parent"
61         app:layout_constraintEnd_toEndOf="parent"
62         android:layout_marginTop="16dp"/>
63
64     <EditText
65         android:id="@+id/etCredit"
66         android:layout_width="0dp"
67         android:layout_height="wrap_content"
68         android:hint="Enter Credit Amount"
69         android:inputType="numberDecimal"
70         app:layout_constraintTop_toBottomOf="@id/etDebit"
71         app:layout_constraintStart_toStartOf="parent"
72         app:layout_constraintEnd_toEndOf="parent"
73         android:layout_marginTop="16dp"/>
74
75     <EditText
76         android:id="@+id/etBalance"
77         android:layout_width="0dp"
78         android:layout_height="wrap_content"
79         android:hint="Enter Balance"
80         android:inputType="numberDecimal"
81         app:layout_constraintTop_toBottomOf="@id/etCredit"
82         app:layout_constraintStart_toStartOf="parent"
83         app:layout_constraintEnd_toEndOf="parent"
84         android:layout_marginTop="16dp"/>
85
86     <Button
87         android:id="@+id/btnSubmit"
88         android:layout_width="wrap_content"
89         android:layout_height="wrap_content"
90         android:text="Submit"
91         app:layout_constraintTop_toBottomOf="@id/etBalance"
92         app:layout_constraintStart_toStartOf="parent"
93         app:layout_constraintEnd_toEndOf="parent"
94         android:layout_marginTop="24dp"/>
95
96 </androidx.constraintlayout.widget.ConstraintLayout>
```

- Output :



The screenshot displays a mobile application interface for entering bank transaction details. The title 'Bank Transaction Entry' is centered at the top. Below the title, there are five input fields, each containing a sample value: '453215345667', 'Ujjwal', '03/08/2024', '20000', and '0'. A sixth input field at the bottom contains the value '120000'. A purple 'Submit' button is positioned below the input fields. The status bar at the top shows the time as 11:40 and various system icons. A home indicator bar is visible at the bottom of the screen.

Field	Value
Account Number	453215345667
Name	Ujjwal
Date	03/08/2024
Amount	20000
Balance	0
Total	120000

Question 7

Create an Android project with empty activity using linear layout and design a Library Books Entry view (Book Title , Authors Name, Publication ,Date, Price)

Answer

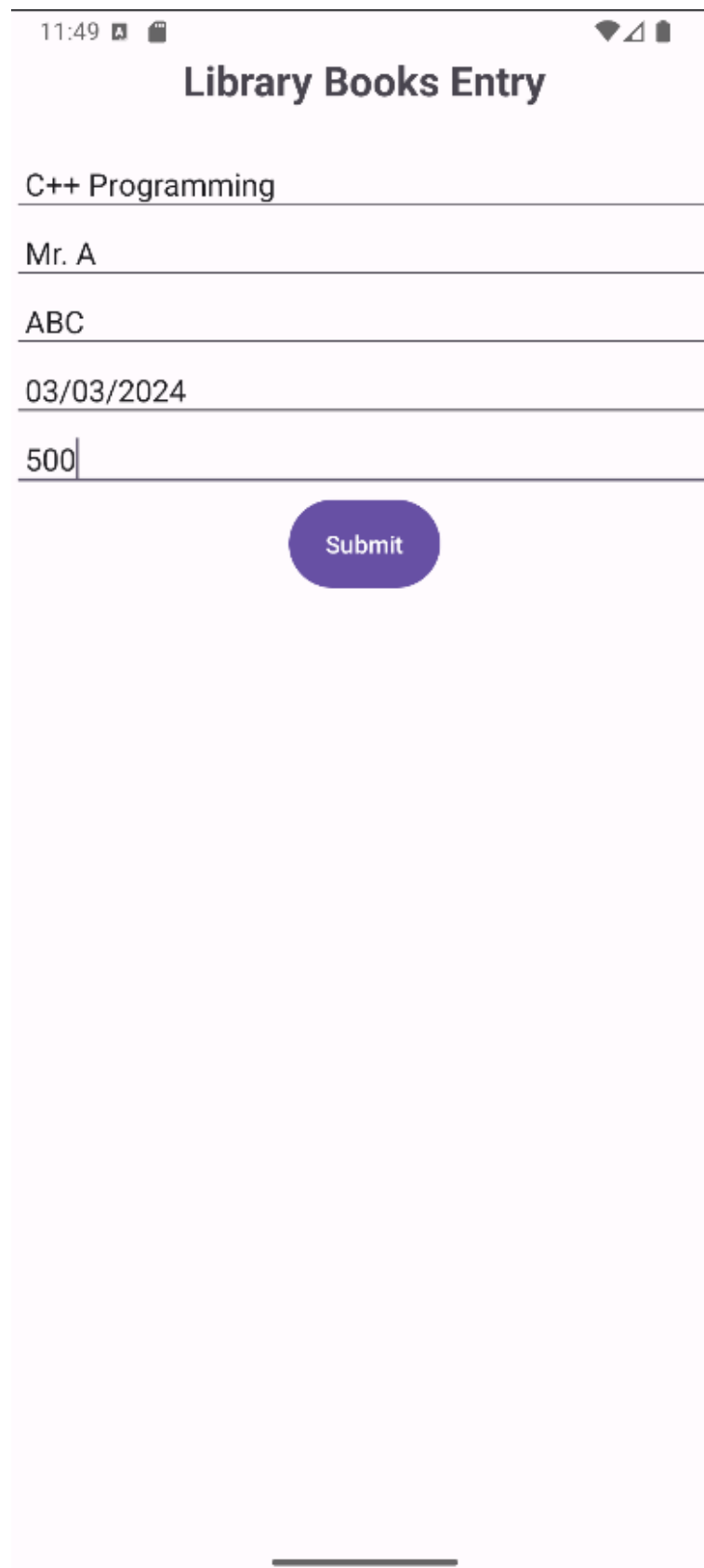
- Code Preview :

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:id="@+id/main"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     android:orientation="vertical"
9     tools:context=".MainActivity">
10
11     <TextView
12         android:id="@+id/tvTitle"
13         android:layout_width="wrap_content"
14         android:layout_height="wrap_content"
15         android:text="Library Books Entry"
16         android:textSize="24sp"
17         android:textStyle="bold"
18         android:layout_gravity="center"
19         android:layout_marginBottom="24dp"/>
20
21     <EditText
22         android:id="@+id/etBookTitle"
23         android:layout_width="match_parent"
24         android:layout_height="wrap_content"
25         android:hint="Enter Book Title"
26         android:padding="8dp"/>
27
28     <EditText
29         android:id="@+id/etAuthorName"
30         android:layout_width="match_parent"
31         android:layout_height="wrap_content"
32         android:hint="Enter Author's Name"
33         android:padding="8dp"/>
34
35     <EditText
36         android:id="@+id/etPublication"
37         android:layout_width="match_parent"
38         android:layout_height="wrap_content"
39         android:hint="Enter Publication"
40         android:padding="8dp"/>
41
42     <EditText
43         android:id="@+id/etDate"
44         android:layout_width="match_parent"
45         android:layout_height="wrap_content"
46         android:hint="Enter Date"
47         android:inputType="date"
48         android:padding="8dp"/>
```



```
48         android:padding="8dp"/>
49
50         <EditText
51             android:id="@+id/etPrice"
52             android:layout_width="match_parent"
53             android:layout_height="wrap_content"
54             android:hint="Enter Price"
55             android:inputType="numberDecimal"
56             android:padding="8dp"/>
57
58         <Button
59             android:id="@+id/btnSubmit"
60             android:layout_width="wrap_content"
61             android:layout_height="wrap_content"
62             android:text="Submit"
63             android:layout_gravity="center"
64             android:padding="16dp"/>
65
66     </LinearLayout>
```

- Output :



The screenshot displays a mobile application interface with a light pink background. At the top, the status bar shows the time 11:49 and various icons. The app title 'Library Books Entry' is centered at the top in a bold, dark font. Below the title, there are five input fields, each with a horizontal line underneath. The first field contains 'C++ Programming', the second 'Mr. A', the third 'ABC', the fourth '03/03/2024', and the fifth '500'. A purple rounded rectangular button labeled 'Submit' is positioned below the input fields. At the bottom of the screen, there is a horizontal line representing the home indicator.

Field	Value
Book Title	C++ Programming
Author	Mr. A
Category	ABC
Date	03/03/2024
Price	500

Question 8

Create an Android project with empty activity and design Student Registration View and handle button click event and display message "Registration Successfully".

Answer


- Code Preview : (XML)

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:id="@+id/main"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     android:orientation="vertical"
9     tools:context=".MainActivity">
10
11     <EditText
12         android:id="@+id/etName"
13         android:layout_width="match_parent"
14         android:layout_height="wrap_content"
15         android:hint="Enter Name"
16         android:padding="8dp"/>
17
18     <EditText
19         android:id="@+id/etEmail"
20         android:layout_width="match_parent"
21         android:layout_height="wrap_content"
22         android:hint="Enter Email"
23         android:inputType="textEmailAddress"
24         android:padding="8dp"/>
25
26     <EditText
27         android:id="@+id/etPhone"
28         android:layout_width="match_parent"
29         android:layout_height="wrap_content"
30         android:hint="Enter Phone Number"
31         android:inputType="phone"
32         android:padding="8dp"/>
33
34     <Button
35         android:id="@+id/btnRegister"
36         android:layout_width="wrap_content"
37         android:layout_height="wrap_content"
38         android:text="Register"
39         android:layout_gravity="center"
40         android:padding="16dp"/>
41
42 </LinearLayout>
```

(Java File)

```
1 package com.example.q7;
2
3 import android.os.Bundle;
4 import android.view.View;
5 import android.widget.Button;
6 import android.widget.EditText;
7 import android.widget.Toast;
8 import androidx.appcompat.app.AppCompatActivity;
9
10 public class MainActivity extends AppCompatActivity {
11
12     private EditText etName, etEmail, etPhone; 2 usages
13     private Button btnRegister; 2 usages
14
15     @Override
16     protected void onCreate(Bundle savedInstanceState) {
17         super.onCreate(savedInstanceState);
18         setContentView(R.layout.activity_main);
19
20         etName = findViewById(R.id.etName);
21         etEmail = findViewById(R.id.etEmail);
22         etPhone = findViewById(R.id.etPhone);
23         btnRegister = findViewById(R.id.btnRegister);
24
25         btnRegister.setOnClickListener(new View.OnClickListener() {
26             @Override
27             public void onClick(View v) {
28                 String name = etName.getText().toString();
29                 String email = etEmail.getText().toString();
30                 String phone = etPhone.getText().toString();
31
32                 if (!name.isEmpty() && !email.isEmpty() && !phone.isEmpty()) {
33                     Toast.makeText(context: MainActivity.this, text: "Registration Successfully", Toast.LENGTH_SHORT).show();
34                 } else {
35                     Toast.makeText(context: MainActivity.this, text: "Please fill all fields", Toast.LENGTH_SHORT).show();
36                 }
37             }
38         });
39
40 }
```

- Ouptut :




12:02

Sami

sami012@gmail.com

8987634212

Register

 Registration Successfully

Question 9

Create an Android project with empty activity in which take two radio button and get text from that which is selected by user and display text using toast.

Answer

- Code Preview : (XML)

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:id="@+id/main"
6     android:layout_width="match_parent"
7     android:layout_height="match_parent"
8     android:orientation="vertical"
9     tools:context=".MainActivity">
10
11     <RadioGroup
12         android:id="@+id/radioGroup"
13         android:layout_width="match_parent"
14         android:layout_height="wrap_content">
15
16         <RadioButton
17             android:id="@+id/radioButton1"
18             android:layout_width="wrap_content"
19             android:layout_height="wrap_content"
20             android:text="Option 1"/>
21
22         <RadioButton
23             android:id="@+id/radioButton2"
24             android:layout_width="wrap_content"
25             android:layout_height="wrap_content"
26             android:text="Option 2"/>
27     </RadioGroup>
28
29     <Button
30         android:id="@+id/btnShowToast"
31         android:layout_width="wrap_content"
32         android:layout_height="wrap_content"
33         android:text="Result"
34         android:layout_gravity="center"
35         android:layout_marginTop="24dp"/>
36
37 </LinearLayout>
```

(Java File)

```
1 package com.example.q9;  
2  
3 > import ...  
10  
11 public class MainActivity extends AppCompatActivity {  
12  
13     private RadioGroup radioGroup; 2 usages  
14     private Button btnShowToast; 2 usages  
15  
16     @Override  
17     protected void onCreate(Bundle savedInstanceState) {  
18         super.onCreate(savedInstanceState);  
19         setContentView(R.layout.activity_main);  
20  
21         radioGroup = findViewById(R.id.radioGroup);  
22         btnShowToast = findViewById(R.id.btnShowToast);  
23  
24         btnShowToast.setOnClickListener(new View.OnClickListener() {  
25             @Override  
26             public void onClick(View v) {  
27                 int selectedId = radioGroup.getCheckedRadioButtonId();  
28                 RadioButton selectedRadioButton = findViewById(selectedId);  
29  
30                 if (selectedRadioButton != null) {  
31                     String selectedText = selectedRadioButton.getText().toString();  
32                     Toast.makeText(context: MainActivity.this, selectedText, Toast.LENGTH_SHORT).show();  
33                 } else {  
34                     Toast.makeText(context: MainActivity.this, text: "No option selected", Toast.LENGTH_SHORT).show();  
35                 }  
36             }  
37         });  
38  
39
```

- Output :

