

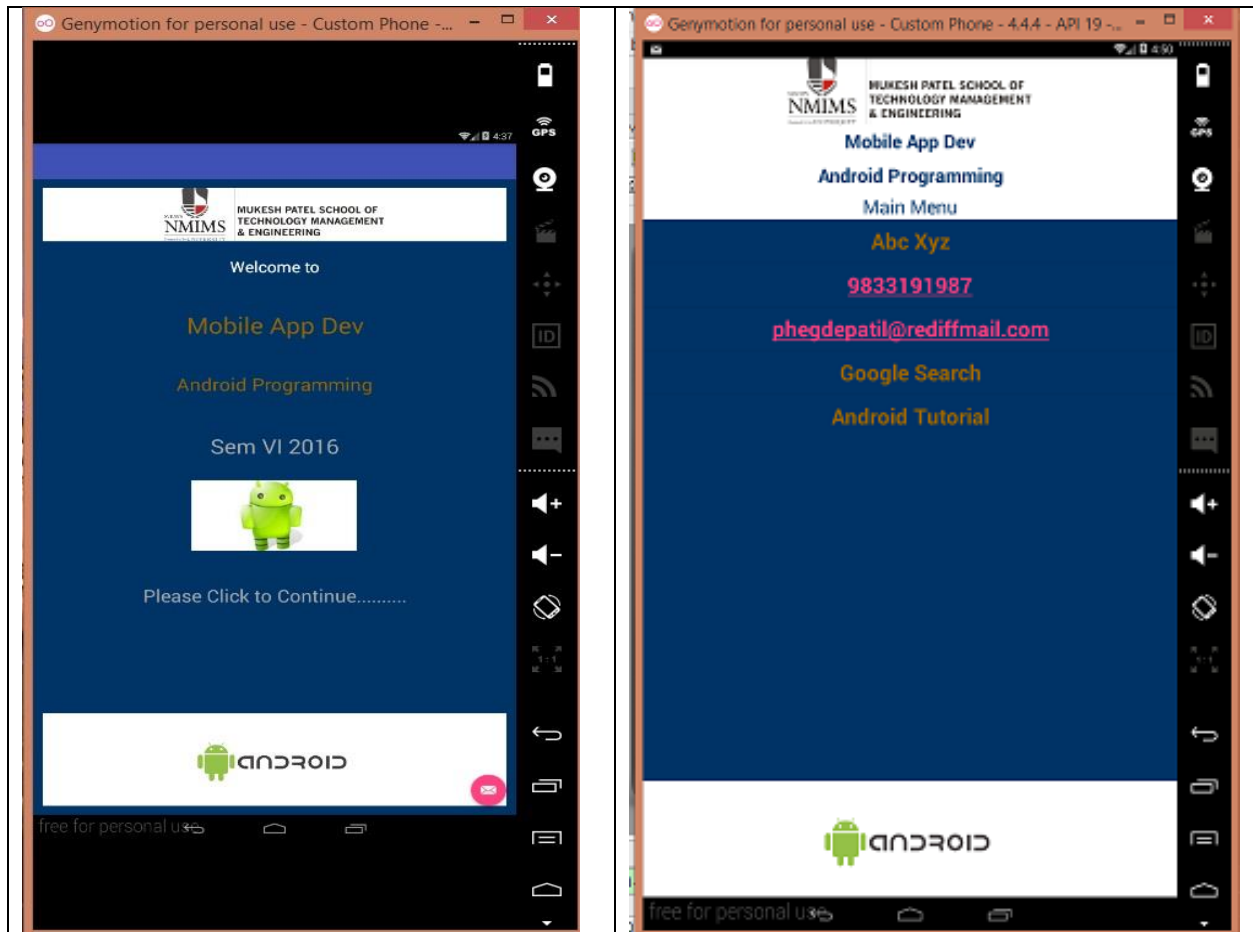
Android Development

PRACTICAL 3

Part A

AIM: Android Multiple Activities, ArrayAdapter and <string-array>, ListView and call Linkify.

Scenario: Create an app which has two activities. The first activity is a WelcomeScreen on Click on the screen anywhere would open the second activity which displays a Menu using ListView. The contents of the menu are the Name of the person, Phone Number, Email Address, Google Website, Android Tutorial Website. In the second activity when the user clicks on Name it displays the photo of the person in a third activity. When Email Address is clicked it called the inbuilt email portal. When phone number clicked it calls the in-built phone dialer app. When Google or Android Tutorial clicked it opens the website.

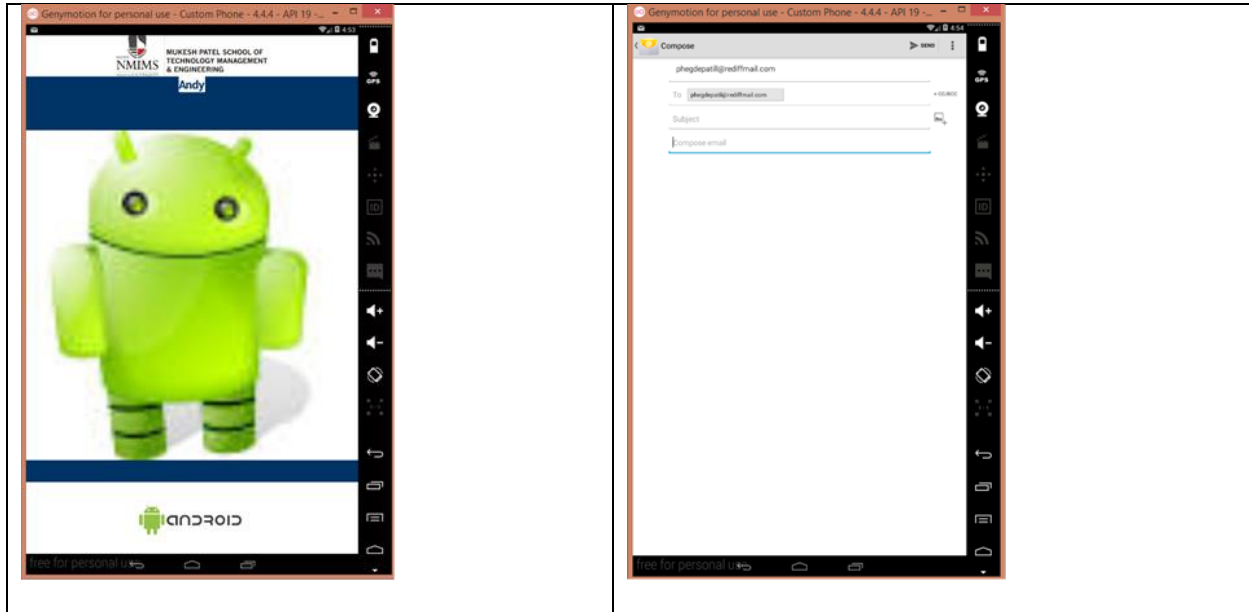


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Part B (to be completed by students)

(Students must submit the soft copy as per the following segments. The soft copy must be uploaded on the Blackboard. The filename should be Batch_RollNo_Exp_No)

Roll No.: K033	Name: Rajpreet Singh Khurana
Prog/Yr/Sem: B.Tech Cybersec Sem 4	Batch: K1
Date of Experiment: 29/01/25	Date of Submission: 30/10/25

1. Program Scenario and Program code: (Write Scenario and Paste your program code (Java, xml resource and layout)).

Java codes:

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MainActivity.java:

```
package com.example.a037_exp3;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {
    LinearLayout ll;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ll=findViewById(R.id.lay_wel);
        ll.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new Intent(MainActivity.this, Second.class));
            }
        });
    };//
}
```

Second.java:

```
package com.example.a037_exp3;

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

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```
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.text.util.Linkify;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.TextView;

public class Second extends AppCompatActivity {
    ListView lvdt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
        lvdt=findViewById(R.id.lv_dt);
        String[] lv_item=getResources().getStringArray(R.array.menu_items);
        ArrayAdapter<String> adapt = new ArrayAdapter<String>(this,
R.layout.list_item, lv_item);
        lvdt.setAdapter(adapt);
        lvdt.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
                TextView tv=(TextView) view;
                String str=tv.getText().toString();
                switch (position)
                {
                    case 0:
                        startActivity(new Intent(Second.this,Third.class));
                        break;
                    case 1:
                        str="tel: "+str;
                        startActivity(new Intent(Intent.ACTION_DIAL,
Uri.parse(str)));
                }
            }
        });
    }
}
```

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```
                break;
            case 2:
                Linkify.addLinks(tv, Linkify.EMAIL_ADDRESSES);
                break;
            case 3:
                startActivity(new
Intent(Intent.ACTION_VIEW,Uri.parse("http://www.google.com")));
                break;
            case 4:
                startActivity(new
Intent(Intent.ACTION_VIEW,Uri.parse("http://www.tutorialpoint.com/address")));
                break;
        }
    }
});
}
}
```

Third.java:

```
package com.example.a037_exp3;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class Third extends AppCompatActivity {

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

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XML

files:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:orientation="vertical"
    xmlns:tools="http://schemas.android.com/tools"
    android:weightSum="10"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:background="@color/black"
    android:padding="@dimen/medium"
    android:gravity="center_horizontal"
    android:id="@+id/lay_wel"
    >

    <ImageView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:src="@drawable/logo"
        android:layout_weight="2" />

    <TextView
        android:layout_gravity="center_horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/lbl1"
        android:textColor="@color/blue"
        android:textStyle="bold" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/lbl2"
        android:textColor="@color/blue" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

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```
        android:text="@string/lbl3"
        android:textColor="@color/blue"
    />
    <ImageView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:src="@drawable/android"
    />
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/lbl4"
        android:textColor="@color/blue"
    />
    <ImageView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:src="@drawable/android"
        android:layout_weight="2"
    />

</LinearLayout>
```

Activity_second.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".Second"
    android:weightSum="10">

    <ImageView
```

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```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:src="@drawable/logo"
        android:layout_weight="2"
    />
    <ListView
        android:id="@+id/lv_dt"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_weight="6"/>

    <ImageView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:src="@drawable/and2"
        android:layout_weight="2"
    />

</LinearLayout>
```

Activity_third.xml:

```
<?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"
    tools:context=".Third">

</androidx.constraintlayout.widget.ConstraintLayout>
```

List_items.xml:

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


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```
android:textSize="@dimen/large"
android:textColor="@color/white"
android:background="@color/black"
android:textStyle="bold"
android:gravity="center_horizontal"
android:layout_height="wrap_content">
```

```
</TextView>
```

Strings.xml:

```
<resources>
    <string name="app_name">K033_Lab_3

    </string>
    <string-array name="options">
        <item>Third Activity</item>
        <item>8169250332r</item>
        <item>rajpret.khurana24@nmims.in</item>
        <item>www.google.com</item>
        <item>www.wikipedia.com</item>
    </string-array>
</resources>
```

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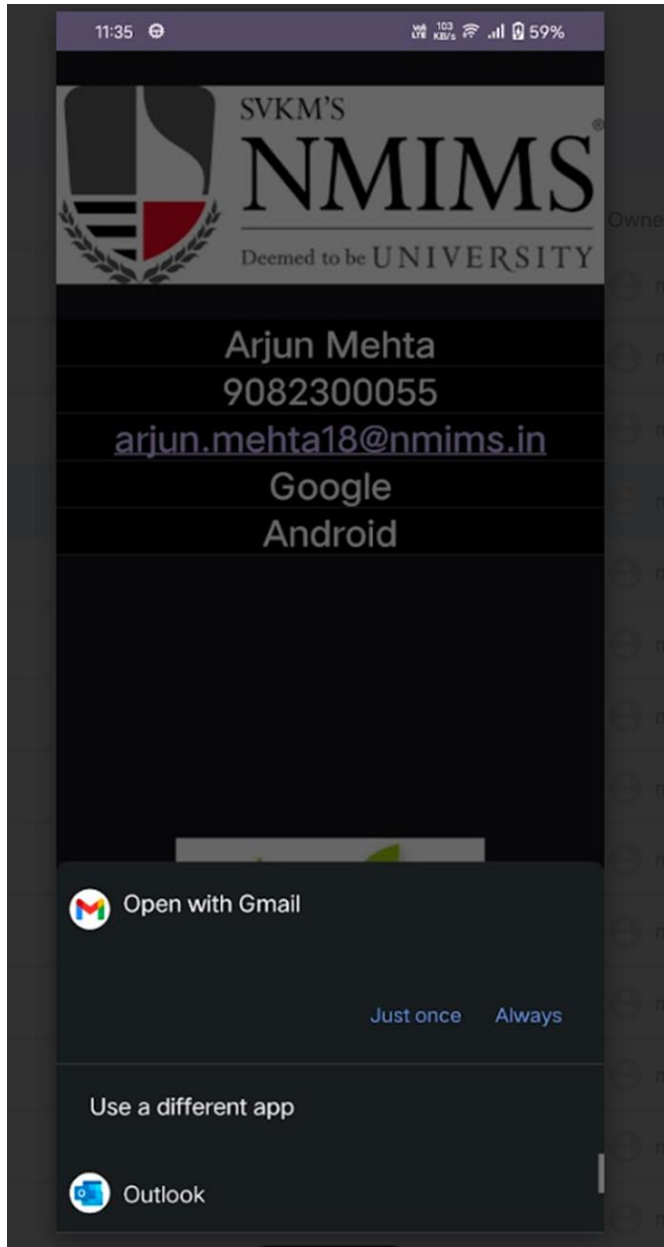


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2. **Output:** (Paste your program input and output screen shots).

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- 3. Observations:** A brief description of the design aspects and working of the code in your own words.

We used array adapter and many other imported libraries to code the following app.

- 4. Questions:** Draw & Explain with respect to layouts the Scene Graph of the experiment.
- 5. Conclusion (Learning Outcomes):** How were the outcomes defined for the experiment in Part A fulfilled through the scenarios?
We were able to apply the concept of intent to create multiple screens of an application!