

COURSE OUTCOME 3

PROGRAM : 1

AIM : Implement Adapters and perform exception handling

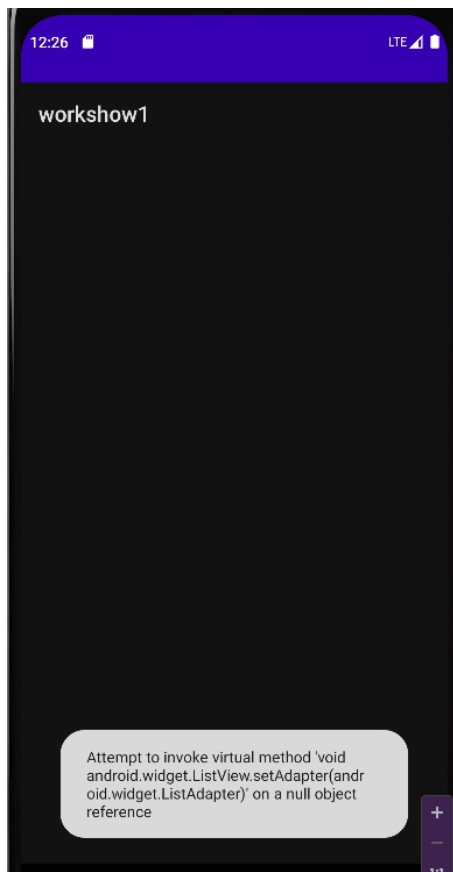
PROGRAM CODE :

MainActivity.java	<pre>/package com.example.workshow1; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; import android.widget.ArrayAdapter; import android.widget.ListView; import android.widget.TextView; import android.widget.Toast; public class MainActivity extends AppCompatActivity { ListView l1; String [] nam = {"Shajahan","Tovino","Ragav","Bineesh"}; protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); try { ArrayAdapter <String> adap = new ArrayAdapter<>(this,android.R.layout.simple_list_item_1,nam); l1.setAdapter(adap); } catch (Exception e){ Toast.makeText(this, e.getMessage(), Toast.LENGTH_SHORT).show(); } } }</pre>
activity_main.xml	<pre><?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=".MainActivity"> <ListView android:id="@+id/l1" android:layout_width="411dp"</pre>

	<pre> android:layout_height="335dp" tools:layout_editor_absoluteX="1dp" tools:layout_editor_absoluteY="1dp" /> <TextView android:id="@+id/t1" android:layout_width="137dp" android:layout_height="44dp" android:textAlignment="center" android:textStyle="bold" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.5" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toBottomOf="@+id/l1" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
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RESULT : The above program is successfully executed and obtained the output

OUTPUT :



PROGRAM : 2

AIM : Implement Intent to navigate between multiple activities

PROGRAM CODE :

APP 1
MainActivity.java

```
/package com.example.co3_q3_app1;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onClick(View view) {
        Intent i = new Intent(Intent.ACTION_VIEW);
        i.setData(Uri.parse("https://tkmce.ac.in/"));
        startActivity(i);
    }
}

@Override
protected void onStop() {
    super.onStop();
    Log.i("State","onStop");
}

@Override
protected void onDestroy() {
    super.onDestroy();
    Log.i("State","onDestroy");
}
}
```

APP2 activity_main.xml 	<pre><?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=".MainActivity"> <Button android:id="@+id/button" android:layout_width="308dp" android:layout_height="50dp" android:onClick="onClick" android:text="Go to TKMCE Website" android:textAllCaps="false" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.495" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.317" /> </androidx.constraintlayout.widget.ConstraintLayout></pre>
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APP2
MainActivity.java

```
package com.example.co3_q3_app2;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;

import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.Toast;

import java.net.URL;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Intent i = getIntent();
        Uri uri = i.getData();

        URL pageurl = null;
        if(uri !=null){
            try{
                pageurl = new
URL(uri.getScheme(),uri.getHost(),uri.getPath());
            }
            catch ( Exception e) {

                Toast.makeText(getApplicationContext(),"Error",Toast.LENGTH
_LONG).show();
            }
        }
        WebView wb =(WebView) findViewById(R.id.webvi);
        wb.setWebViewClient(new WebViewClient());

        wb.loadUrl(String.valueOf(pageurl));

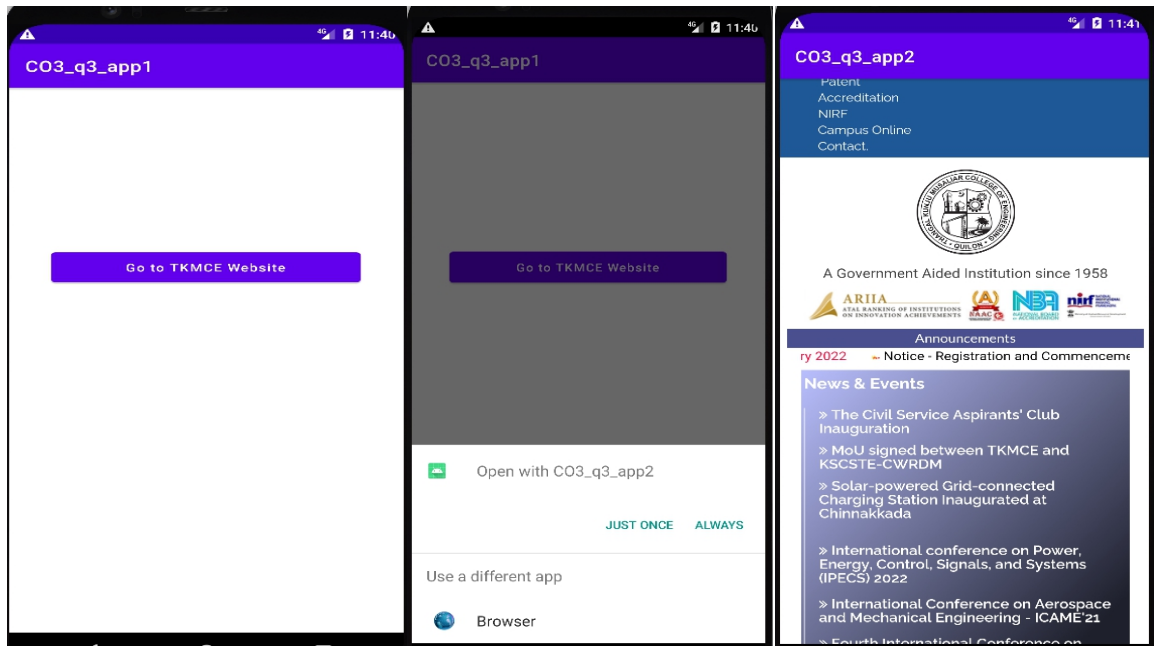
    }
}
```

APP2 activity_main.xml 	<pre><?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=".MainActivity"> <WebView android:id="@+id/webvi" android:layout_width="409dp" android:layout_height="729dp" android:layout_marginStart="1dp" android:layout_marginTop="1dp" android:layout_marginEnd="1dp" android:layout_marginBottom="1dp" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" /> </androidx.constraintlayout.widget.ConstraintLayout></pre>
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APP2 AndroidManifest.xml	<pre> <?xml version="1.0" encoding="utf-8"?> <manifest xmlns:android="http://schemas.android.com/apk/res/android" xmlns:tools="http://schemas.android.com/tools" package="com.example.co3_q3_app2"> <uses-permission android:name="android.permission.INTERNET"></uses- permission> <application android:allowBackup="true" android:icon="@mipmap/ic_launcher" android:label="@string/app_name" android:roundIcon="@mipmap/ic_launcher_round" android:supportsRtl="true" android:theme="@style/Theme.CO3_q3_app2"> <activity android:name=".MainActivity" android:exported="true"> <intent-filter tools:ignore ="AppLinkUrlError"> <action android:name="android.intent.action.VIEW" /> <category android:name="android.intent.category.DEFAULT" /> <data android:scheme="https"/> </intent-filter> </activity> </application> </manifest> </pre>
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RESULT : The above program is successfully executed and obtained the output

OUTPUT :



PROGRAM : 3

AIM : Develop application that works with explicit intents

PROGRAM CODE :

MainActivity.java

```
package com.example.co3_q3;

import androidx.appcompat.app.AppCompatActivity;

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

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void callActivity(View view) {
        Intent i = new Intent(getApplicationContext(),
MainActivity2.class);
        final EditText editText1 =
(EditText)findViewById(R.id.name);
        String msg = editText1.getText().toString();
        final EditText editText2 =
(EditText)findViewById(R.id.address);
        String add = editText2.getText().toString();
        final EditText editText3 =
(EditText)findViewById(R.id.email);
        String em = editText3.getText().toString();
        i.putExtra("Value1", msg);
        i.putExtra("Value2", add);
        i.putExtra("Value3", em);
        startActivity(i);
    }
}
```

activity_main.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"
    android:onClick="callActivity"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Name"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.437"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.148" />

    <EditText
        android:id="@+id/address"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Address"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.437"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.313" />

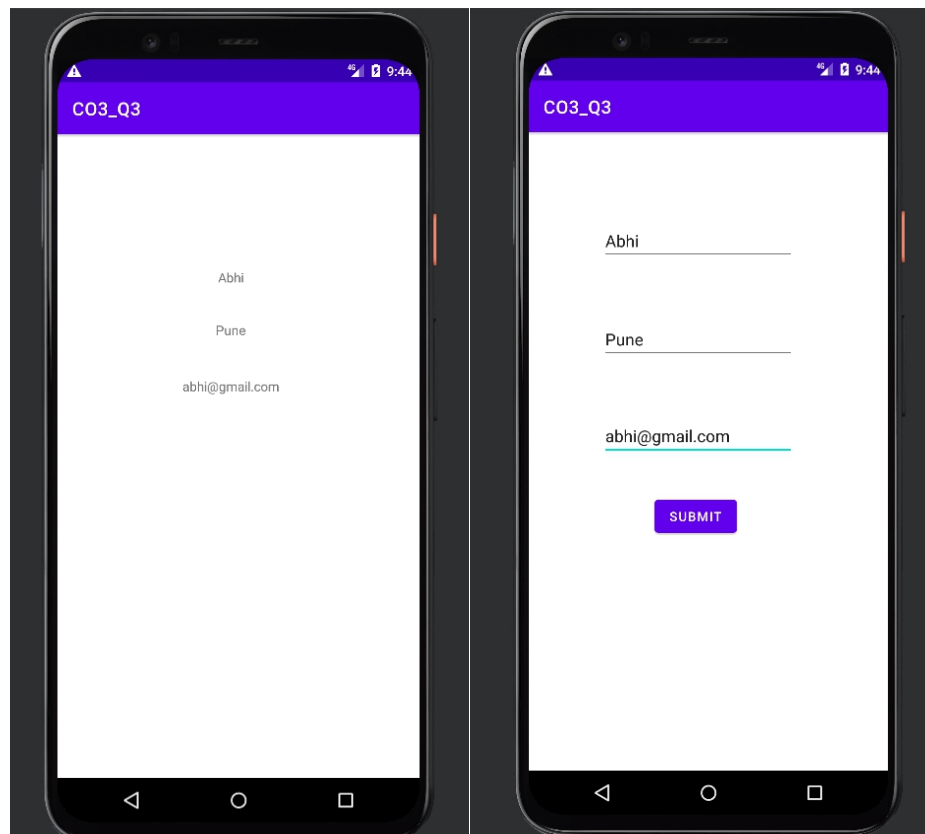
    <EditText
        android:id="@+id/email"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Email"
        android:inputType="textPersonName"
        android:onClick="callActivity"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.437"
```

	<pre> app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.475" /> <Button android:id="@+id/button" android:layout_width="wrap_content" android:layout_height="wrap_content" android:text="Submit" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.454" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.609" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
MainActivity2.java	<pre> package com.example.co3_q3; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; import android.widget.TextView; public class MainActivity2 extends AppCompatActivity { TextView view1; TextView view2; TextView view3; @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main2); view1 = (TextView) findViewById(R.id.view1); view2 = (TextView) findViewById(R.id.view2); view3 = (TextView) findViewById(R.id.view3); Bundle extras = getIntent().getExtras(); String value1 = extras.getString("Value1"); String value2 = extras.getString("Value2"); String value3 = extras.getString("Value3"); view1.setText(value1); view2.setText(value2); view3.setText(value3); } } </pre>

activity_main2.xml	<pre><?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=".MainActivity2"> <TextView android:id="@+id/view3" android:layout_width="189dp" android:layout_height="36dp" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.459" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.398" /> <TextView android:id="@+id/view1" android:layout_width="189dp" android:layout_height="36dp" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.459" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.22" /> <TextView android:id="@+id/view2" android:layout_width="189dp" android:layout_height="36dp" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.459" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.306" /> </androidx.constraintlayout.widget.ConstraintLayout></pre>
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RESULT : The above program is successfully executed and obtained the output

OUTPUT :



PROGRAM : 5

AIM : Develop an application that uses ArrayAdapter with ListView.

PROGRAM CODE :

MainActivity.java
a

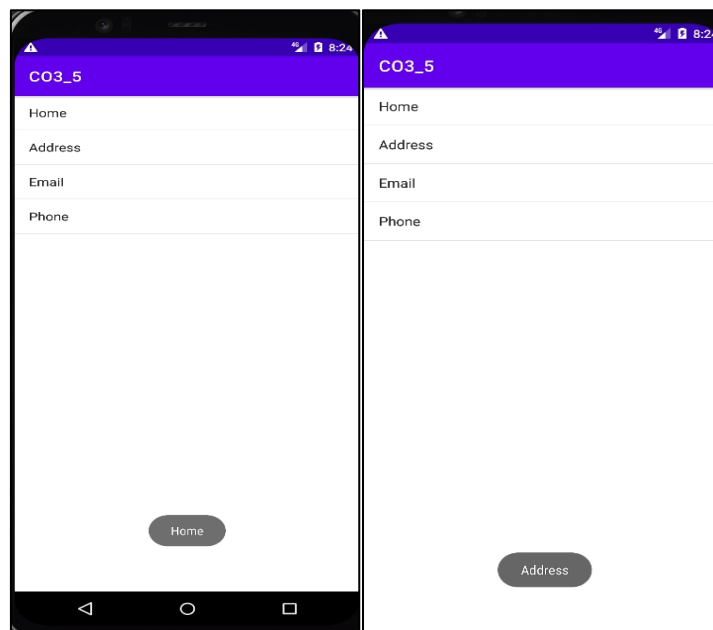
```
//Develop an application that uses ArrayAdapter with ListView.
package com.example.co3_5;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    ListView l1;
    String[] listItems = {"Home","Address","Email","Phone"};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        l1 = (ListView) findViewById(R.id.List1);
        ArrayAdapter<String> myAdapter=new
        ArrayAdapter<String>(MainActivity.this,
        android.R.layout.simple_list_item_1,listItems);
        l1.setAdapter(myAdapter);
        l1.setOnItemClickListener(new
        AdapterView.OnItemClickListener() {

            @Override
            public void onItemClick(AdapterView<?> parent,
            View view, int position, long id) {
                String item_name=listItems[position];
                Toast.makeText(MainActivity.this,item_name,
                Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

activity_main.xml	<pre> <?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=".MainActivity"> <ListView android:id="@+id/List1" android:layout_width="409dp" android:layout_height="729dp" tools:layout_editor_absoluteX="1dp" tools:layout_editor_absoluteY="1dp" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
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RESULT : The above program is successfully executed and obtained the output

OUTPUT :



PROGRAM : 4

AIM : Implement Options Menu to navigate to activities

PROGRAM CODE :

MainActivity.java

```
//Implement Options Menu to navigate to activities.
package com.example.co3_q4;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.option_menu, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
            case R.id.i1:
                Intent i1 = new
                Intent(getApplicationContext(),MainActivity2.class);
                startActivity(i1);
                return true;
            case R.id.si1:
                Intent si2 = new
                Intent(getApplicationContext(),MainActivity3.class);
```

	<pre> startActivity(si2); return true; case R.id.si2: Intent si3 = new Intent(getApplicationContext(),MainActivity4.class); startActivity(si3); return true; default: return super.onOptionsItemSelected(item); } } } </pre>
activity_main.xml	<pre> <?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=".MainActivity"> <TextView android:layout_width="wrap_content" android:layout_height="wrap_content" android:text="Home" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintLeft_toLeftOf="parent" app:layout_constraintRight_toRightOf="parent" app:layout_constraintTop_toTopOf="parent" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
MainActivity2.java	<pre> package com.example.co3_q4; import androidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.os.Bundle; import android.view.Menu; import android.view.MenuInflater; import android.view.MenuItem; public class MainActivity2 extends AppCompatActivity { @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main2); } @Override </pre>

	<pre> public boolean onCreateOptionsMenu(Menu menu) { MenuInflater inflater = getMenuInflater(); inflater.inflate(R.menu.option_menu, menu); return true; } @Override public boolean onOptionsItemSelected(MenuItem item) { switch (item.getItemId()) { case R.id.i1: Intent i1 = new Intent(getApplicationContext(),MainActivity2.class); startActivity(i1); return true; case R.id.si1: Intent si2 = new Intent(getApplicationContext(),MainActivity3.class); startActivity(si2); return true; case R.id.si2: Intent si3 = new Intent(getApplicationContext(),MainActivity4.class); startActivity(si3); return true; default: return super.onOptionsItemSelected(item); } } } </pre>
activity_main2.xml	<pre> <?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=".MainActivity2"> <TextView android:id="@+id/textView" android:layout_width="105dp" android:layout_height="35dp" android:text="Address" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.549" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" </pre>

	<pre> app:layout_constraintVertical_bias="0.248" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
MainActivity3.java	<pre> package com.example.co3_q4; import androidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.os.Bundle; import android.view.Menu; import android.view.MenuInflater; import android.view.MenuItem; public class MainActivity3 extends AppCompatActivity { @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main3); } @Override public boolean onCreateOptionsMenu(Menu menu) { MenuInflater inflater = getMenuInflater(); inflater.inflate(R.menu.option_menu, menu); return true; } @Override public boolean onOptionsItemSelected(MenuItem item) { switch (item.getItemId()) { case R.id.i1: Intent i1 = new Intent(getApplicationContext(),MainActivity2.class); startActivity(i1); return true; case R.id.si1: Intent si2 = new Intent(getApplicationContext(),MainActivity3.class); startActivity(si2); return true; case R.id.si2: Intent si3 = new Intent(getApplicationContext(),MainActivity4.class); startActivity(si3); return true; default: return super.onOptionsItemSelected(item); } } } </pre>

activity_main3.xml	<pre> <?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=".MainActivity3"> <TextView android:id="@+id/textView2" android:layout_width="102dp" android:layout_height="43dp" android:text="Email" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.498" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.297" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
MainActivity4.java	<pre> package com.example.co3_q4; import androidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.os.Bundle; import android.view.Menu; import android.view.MenuInflater; import android.view.MenuItem; public class MainActivity4 extends AppCompatActivity { @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main4); } @Override public boolean onCreateOptionsMenu(Menu menu) { MenuInflater inflater = getMenuInflater(); inflater.inflate(R.menu.option_menu, menu); return true; } @Override public boolean onOptionsItemSelected(MenuItem item) { switch (item.getItemId()) { </pre>

	<pre> case R.id.i1: Intent i1 = new Intent(getApplicationContext(),MainActivity2.class); startActivity(i1); return true; case R.id.si1: Intent si2 = new Intent(getApplicationContext(),MainActivity3.class); startActivity(si2); return true; case R.id.si2: Intent si3 = new Intent(getApplicationContext(),MainActivity4.class); startActivity(si3); return true; default: return super.onOptionsItemSelected(item); } } </pre>
activity_main4.xml	<pre> <?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=".MainActivity4"> <TextView android:id="@+id/textView3" android:layout_width="110dp" android:layout_height="25dp" android:text="Phone" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.498" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.212" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>

RESULT : The above program is successfully executed and obtained the output

OUTPUT :

