COURSE OUTCOME-3

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20MCA311

PROGRAM 1

AIM:

Implement Adapters and perform exception handling
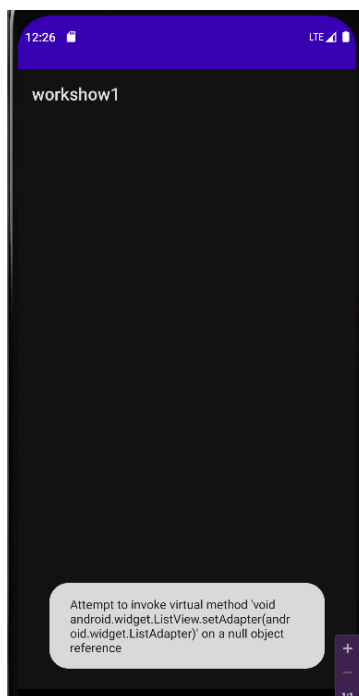
PROGRAM CODE

| MainActivity.java | ```java
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();
      }}}
``` |
| activity_main.xml | ```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=".MainActivity">
   <ListView
      android:id="@+id/l1"
      android:layout_width="411dp"
      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> |

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

OUTPUT

PROGRAM 2

AIM:

Implement Intent to navigate between multiple activities

PROGRAM CODE

| MainActivity.java | ```java
package com.example.explicit;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.util.Patterns;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.util.Objects;
public class MainActivity extends AppCompatActivity {
    EditText Name;
    EditText address;
    EditText email;
    Button Submit;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Name = findViewById(R.id.s1);
        address = findViewById(R.id.s2);
        email = findViewById(R.id.s3);
        Submit = findViewById(R.id.b1);  }
    public void callSecondActivity(View view) {
        Intent i = new Intent(getApplicationContext(),
MainActivity2.class);
        String str = "Name    :        "+ Name.getText().toString();
        i.putExtra("Value1", str);
        String str1 ="Address  :       "+ address.getText().toString();
        i.putExtra("Value2", str1);
        String str2 = "Email   :        "+ email.getText().toString();
        i.putExtra("Value3", str2);
        startActivity(i);
    }}
``` |

| MainActivity2.java | ```java
package com.example.explicit;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
import android.widget.Toast;
public class MainActivity2 extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        TextView t1;
        TextView t2;
        TextView t3;
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        t1 = (TextView) findViewById(R.id.t1);
        t2 = (TextView) findViewById(R.id.t2);
        t3 = (TextView) findViewById(R.id.t3);
        Intent intent = getIntent();
        String str = intent.getStringExtra("Value1");
        String str1 = intent.getStringExtra("Value2");
        String str2 = intent.getStringExtra("Value3");
        t1.setText(str);
        t2.setText(str1);
        t3.setText(str2);
    }
}
``` |
| Activity_main.xml | ```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=".MainActivity">
<TextView
    android:id="@+id/r1"
    android:layout_width="191dp"
    android:layout_height="39dp"
    android:background="#009688"
``` |

```xml
        android:text="Registration Form"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.581"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.111" />
    <TextView
        android:id="@+id/a1"
        android:layout_width="113dp"
        android:layout_height="33dp"
        android:text="Name"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.167"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.289" />
    <EditText
        android:id="@+id/s1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.919"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.276" />
    <TextView
        android:id="@+id/a2"
        android:layout_width="115dp"
        android:layout_height="32dp"
        android:text="Address"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.162"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.417" />
    <EditText
        android:id="@+id/s2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
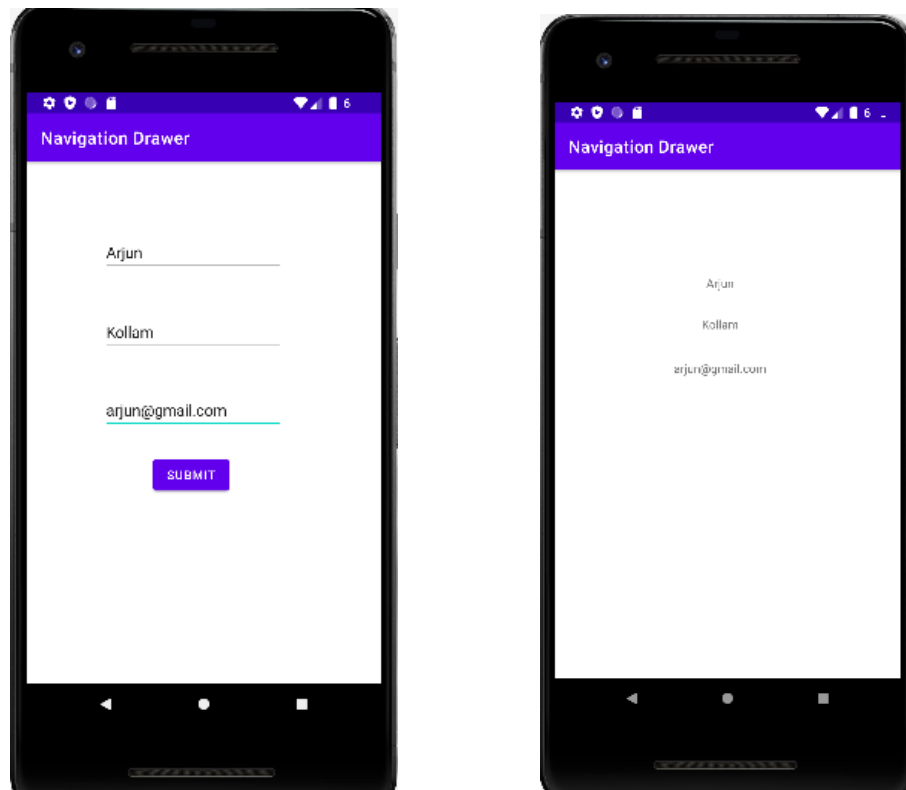        android:inputType="textPersonName"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.919"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.406" />
    <TextView
        android:id="@+id/a3"
        android:layout_width="116dp"
        android:layout_height="30dp"
        android:text="Email"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.167"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.525" />
    <EditText
        android:id="@+id/s3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.915"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.525" />
    <Button
        android:id="@+id/b1"
        android:layout_width="140dp"
        android:layout_height="54dp"
        android:background="#009688"
        android:onClick="callSecondActivity"
        android:text="Submit"
        android:textColorLink="#03A9F4"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.557"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.749" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

| Activity_main2.xml | ```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=".MainActivity2">
    <TextView
        android:id="@+id/t1"
        android:layout_width="312dp"
        android:layout_height="73dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.517"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.387" />
    <TextView
        android:id="@+id/t2"
        android:layout_width="309dp"
        android:layout_height="77dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.509"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.559" />
    <TextView
        android:id="@+id/t3"
        android:layout_width="313dp"
        android:layout_height="70dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.728" />
    <TextView
        android:id="@+id/textView3"
        android:layout_width="391dp"
        android:layout_height="100dp"
        android:background="#009688"
        android:text="DETAILS"
``` |

	android:textSize="36sp" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.147" /> </androidx.constraintlayout.widget.ConstraintLayout>

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

OUTPUT

PROGRAM 3

AIM: Develop application that works with explicit intents

PROGRAM CODE

APP1	
| MainActivity.java | ```java
package com.example.explicitintent;
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://www.instagram.com/?hl=en"));
        startActivity(i);}}
``` |
| activity_main.xml | ```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=".MainActivity">
    <Button
        android:id="@+id/button"
        android:layout_width="308dp"
        android:layout_height="50dp"
        android:onClick="onClick"
        android:text="Click to go INSTAGRAM"
        android:textAllCaps="false"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.495"
``` |
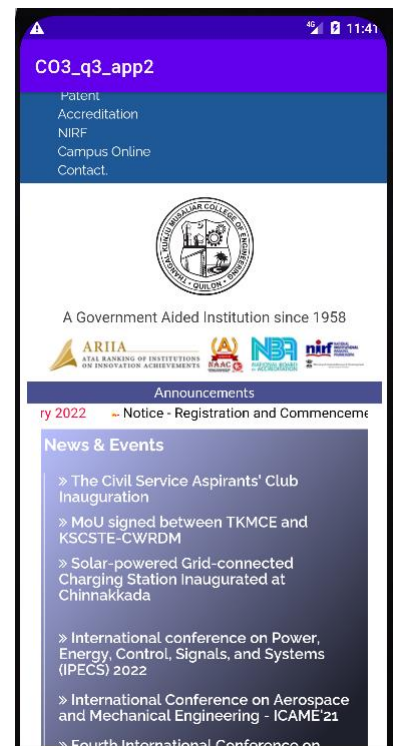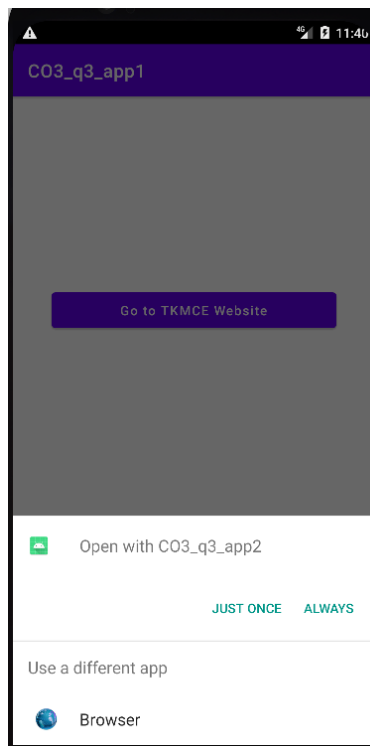
	app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.317" /> </androidx.constraintlayout.widget.ConstraintLayout>
APP2	

MainActivity.java	package com.example.explicitintent2;
	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_LO
	NG).show();}}
	    WebView wb =(WebView) findViewById(R.id.webvi);
	    wb.setWebViewClient(new WebViewClient());
	    wb.loadUrl(String.valueOf(pageurl));}}

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"
	  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>

RESULT:

The above program is successfully executed and obtained the output.

OUTPUT

PROGRAM 4

AIM:

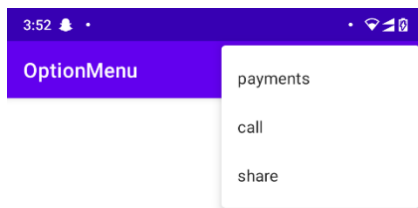Implement Options Menu to navigate to activities

PROGRAM CODE

| MainActivity.java | ```java
package com.example.optionmenu;
import androidx.annotation.NonNull;
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 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.menu_option,menu);
        return true;}
    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        int id=item.getItemId();
        if(id==R.id.action_settings){
            Intent i=new Intent(MainActivity.this,settings.class);
            startActivity(i);}
        if(id==R.id.action_call){
            Intent i=new Intent(MainActivity.this,call.class);
            startActivity(i);}
        return super.onOptionsItemSelected(item);}}
``` |
|---|---|
| Settings.java | ```java
package com.example.optionmenu;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class settings extends AppCompatActivity {
    @Override
``` |

	protected void onCreate(Bundle savedInstanceState) {
	    super.onCreate(savedInstanceState);
	    setContentView(R.layout.activity_settings);}}

Call.java	package com.example.optionmenu;
	import androidx.appcompat.app.AppCompatActivity;
	import android.os.Bundle;
	public class call extends AppCompatActivity {
	    @Override
	    protected void onCreate(Bundle savedInstanceState) {
	        super.onCreate(savedInstanceState);
	        setContentView(R.layout.activity_call);}}

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"
	    tools:context=".MainActivity"/>

Activity_settings.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=".call">
	    <TextView
	        android:id="@+id/textView2"
	        android:layout_width="184dp"
	        android:layout_height="62dp"
	        android:text="You just clicked call menu"
	        app:layout_constraintBottom_toBottomOf="parent"
	        app:layout_constraintEnd_toEndOf="parent"
	        app:layout_constraintStart_toStartOf="parent"
	        app:layout_constraintTop_toTopOf="parent" />
	</androidx.constraintlayout.widget.ConstraintLayout>

Activity_call.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"

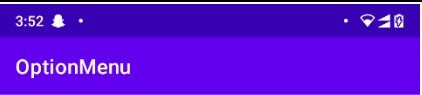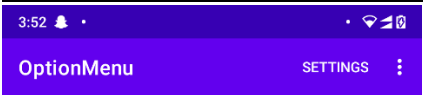|	

	android:layout_height="match_parent"
	tools:context=".settings">
	<TextView
	   android:id="@+id/textView"
	   android:layout_width="226dp"
	   android:layout_height="72dp"
	   android:text="Settings"
	   app:layout_constraintBottom_toBottomOf="parent"
	   app:layout_constraintEnd_toEndOf="parent"
	   app:layout_constraintStart_toStartOf="parent"
	   app:layout_constraintTop_toTopOf="parent" />
	</androidx.constraintlayout.widget.ConstraintLayout>

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

OUTPUT

OptionMenu   SETTINGS ⋮

OptionMenu

Settings

PROGRAM 5

AIM: Develop an application that uses ArrayAdapter with ListView.

PROGRAM CODE

MainActivity.java	package com.example.arrayadapter;
	
	import androidx.appcompat.app.AppCompatActivity;
	
	import android.os.Bundle;
	import android.view.View;
	import android.widget.Adapter;
	import android.widget.AdapterView;
	import android.widget.ArrayAdapter;
	import android.widget.ListView;
	import android.widget.Toast;
	public class MainActivity extends AppCompatActivity {
	  @Override
	  protected void onCreate(Bundle savedInstanceState) {
	    super.onCreate(savedInstanceState);
	    setContentView(R.layout.activity_main);
	    ListView list=findViewById(R.id.listview);
	    String[] item=new String[]{"Home","Address","Email","Phone"};
	    ArrayAdapter <String> adapter=new
	ArrayAdapter<String>(MainActivity.this,
	      android.R.layout.simple_list_item_1,item);
	    list.setAdapter(adapter);
	    list.setOnItemClickListener(new
	AdapterView.OnItemClickListener() {
	      @Override
	      public void onItemClick(AdapterView<?> adapterView, View
	view, int position, long id) {
	        String item_name=item[position];
	
	Toast.makeText(MainActivity.this,item_name,Toast.LENGTH_LONG
	).show();}});}}

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"
tools:context=".MainActivity">
<ListView
   android:id="@+id/listview"
   android:layout_width="403dp"
   android:layout_height="770dp"
   tools:layout_editor_absoluteX="1dp"
   tools:layout_editor_absoluteY="1dp" />
</androidx.constraintlayout.widget.ConstraintLayout> |

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

OUTPUT