
COURSE OUTCOME-4

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20MCA311**

PROGRAM 1

AIM: Develop an application that use GridView with images and display Alert box on selection

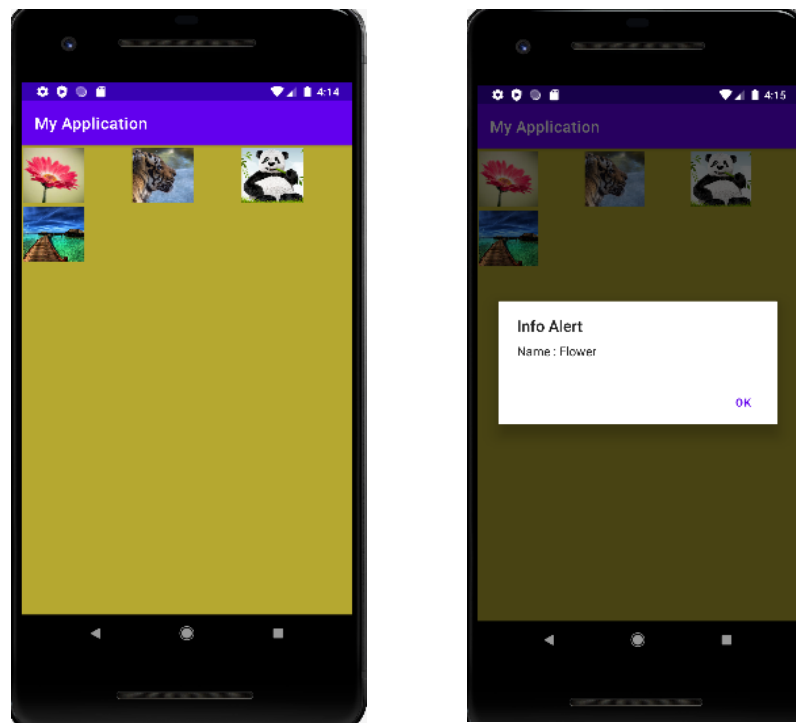
PROGRAM CODE

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| ImageAdapter .java | <pre>package com.example.myapplication; import android.content.Context; import android.view.View; import android.view.ViewGroup; import android.widget.BaseAdapter; import android.widget.GridView; import android.widget.ImageView; public class ImageAdapter extends BaseAdapter { private Context mContext; public ImageAdapter(Context c) { mContext = c;} public int getCount() { return thumbImages.length;} public Object getItem(int position) { return null;} public long getItemId(int position) { return 0;} public View getView(int position, View convertView, ViewGroup parent) { ImageView imageView = new ImageView(mContext); imageView.setLayoutParams(new GridView.LayoutParams(200, 200)); imageView.setScaleType(ImageView.ScaleType.CENTER_CROP); imageView.setPadding(8, 8, 8, 8); imageView.setImageResource(thumbImages[position]); return imageView;} public Integer[] thumbImages = { R.drawable.cl1, R.drawable.cl2, R.drawable.cl3, R.drawable.cl4,};}</pre> |
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| MainActivity. java | <pre> package com.example.myapplication; import androidx.appcompat.app.AlertDialog; import androidx.appcompat.app.AppCompatActivity; import android.content.Context; import android.content.DialogInterface; import android.os.Bundle; import android.view.View; import android.widget.AdapterView; import android.widget.GridView; public class MainActivity extends AppCompatActivity { GridView gd; int logos[] = {R.drawable.cl1, R.drawable.cl2, R.drawable.cl3, R.drawable.cl4}; String[] names = {"Flower", "Tiger", "Panda", "Wallpaper"}; final Context context = this; AlertDialog.Builder builder; @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); GridView gv = (GridView) findViewById(R.id.gridView); gv.setAdapter(new ImageAdapter(this)); builder = new AlertDialog.Builder(this); gv.setOnItemClickListener(new AdapterView.OnItemClickListener(){ public void onItemClick(AdapterView<?> parent, View v, int position, long id) { builder.setMessage("Name : "+String.valueOf(names[position])) .setCancelable(false) .setPositiveButton("Ok", new DialogInterface.OnClickListener() { public void onClick(DialogInterface dialog, int id) {} }); AlertDialog alert = builder.create(); alert.setTitle("Info Alert"); alert.show(); } }); } } </pre> |
| activity_main. xml | <pre> <?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:background="#B5A830" tools:context=".MainActivity"> <GridView android:id="@+id/gridView" </pre> |

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| | <pre>android:layout_width="fill_parent" android:layout_height="wrap_content" android:footerDividersEnabled="false" android:numColumns="3" android:padding="1dp" /> </LinearLayout></pre> |
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OUTPUT



RESULT:

The above program is successfully executed and obtained the output.

PROGRAM 2

AIM:

Develop an application that implements Spinner component and perform event handling

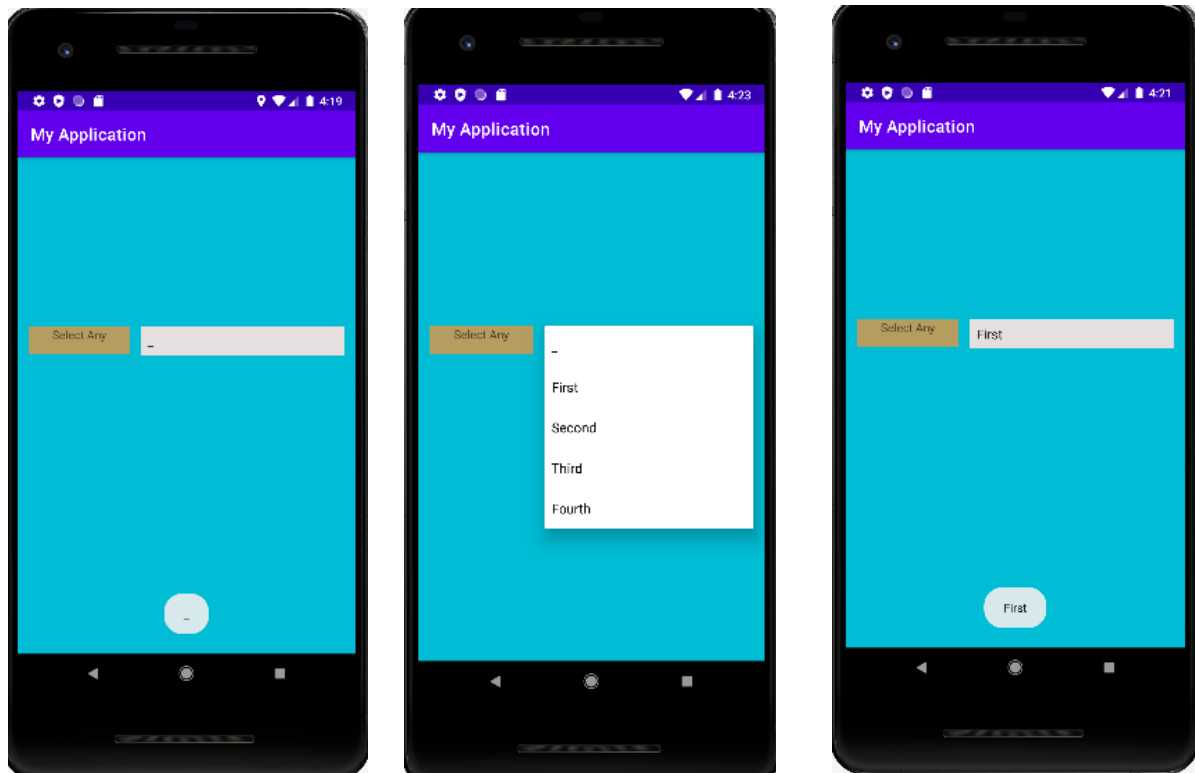
PROGRAM CODE

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| MainActivity.java | <pre>package com.example.co4_q2; 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.Spinner; import android.widget.Toast; public class MainActivity extends AppCompatActivity implements OnItemSelectedListener { String[] names = {"_", "First", "Second", "Third", "Fourth"}; @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); Spinner sp = (Spinner) findViewById(R.id.spinner); sp.setOnItemSelectedListener(this); ArrayAdapter ar = new ArrayAdapter(this, android.R.layout.simple_spinner_item, names); ar.setDropDownViewResource(android.R.layout.simple_spinner_dropd own_item); sp.setAdapter(ar); } @Override public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) { Toast.makeText(this, names[i], Toast.LENGTH_SHORT).show(); } @Override public void onNothingSelected(AdapterView<?> adapterView) { }} </pre> |
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| 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" android:background="#00BCD4" tools:context=".MainActivity"> <Spinner android:id="@+id/spinner" android:layout_width="248dp" android:layout_height="35dp" android:background="#D7E268" android:backgroundTint="#E6DFDF" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.5" app:layout_constraintStart_toEndOf="@+id/textView" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.363" /> <TextView android:id="@+id/textView" android:layout_width="124dp" android:layout_height="34dp" android:background="#B59D60" android:text="Select Any" android:textAlignment="center" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toStartOf="@+id/spinner" app:layout_constraintHorizontal_bias="0.5" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.362" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre> |
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RESULT: The above program is successfully executed and obtained the output.

OUTPUT



PROGRAM 3

AIM:

Apply themes via code and manifest file

PROGRAM CODE

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| MainActivity.java | <pre>package com.example.theme; import androidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.os.Bundle; import android.view.View; public class MainActivity extends AppCompatActivity { @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); } public void click(View view){ Intent i=new Intent(getApplicationContext(),MainActivity2.class); startActivity(i); } }</pre> |
| MainActivity2.java | <pre>package com.example.theme; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; public class MainActivity2 extends AppCompatActivity { @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main2); } }</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"</pre> |

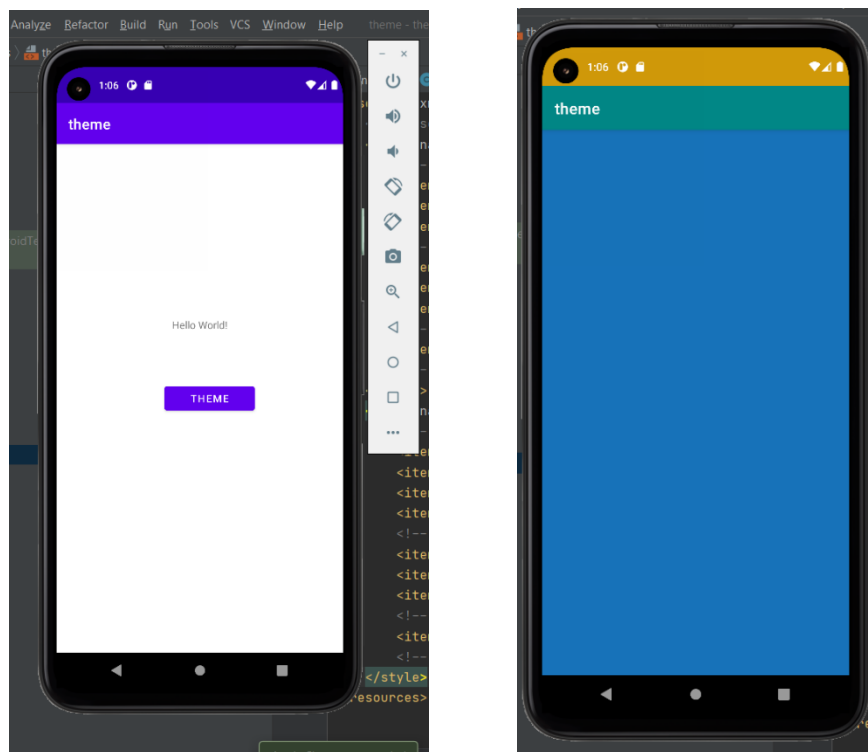
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| | <pre> android:layout_height="wrap_content" android:text="Hello World!" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintLeft_toLeftOf="parent" app:layout_constraintRight_toRightOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.351" /> <Button android:id="@+id/button" android:layout_width="124dp" android:layout_height="45dp" android:onClick="click" android:text="theme" app:layout_constraintBottom_toBottomOf="parent" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.55" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" /> </androidx.constraintlayout.widget.ConstraintLayout> </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"> </androidx.constraintlayout.widget.ConstraintLayout> </pre> |
| AndroidManifest.xml | <pre> <?xml version="1.0" encoding="utf-8"?> <manifest xmlns:android="http://schemas.android.com/apk/res/android" package="com.example.theme"> <application android:allowBackup="true" android:icon="@mipmap/ic_launcher" android:label="@string/app_name" android:roundIcon="@mipmap/ic_launcher_round" android:supportRtl="true" android:theme="@style/Theme.Theme"> <activity android:name=".MainActivity2" android:exported="false" android:theme="@style/Theme.Theme" /> <activity android:name=".MainActivity" </pre> |

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| | <pre> android:exported="true"> <intent-filter> <action android:name="android.intent.action.MAIN" /> <category android:name="android.intent.category.LAUNCHER" /> </intent-filter> </activity> </application> </manifest> </pre> |
| Themes.xml | <pre> <resources xmlns:tools="http://schemas.android.com/tools"> <!-- Base application theme. --> <style name="Theme.Theme" parent="Theme.MaterialComponents.DayNight.DarkActionBar"> <!-- Primary brand color. --> <item name="colorPrimary">@color/purple_500</item> <item name="colorPrimaryVariant">@color/purple_700</item> <item name="colorOnPrimary">@color/white</item> <!-- Secondary brand color. --> <item name="colorSecondary">@color/teal_200</item> <item name="colorSecondaryVariant">@color/teal_700</item> <item name="colorOnSecondary">@color/black</item> <!-- Status bar color. --> <item name="android:statusBarColor" tools:targetApi="1">?attr/colorPrimaryVariant</item> <!-- Customize your theme here. --> </style> <style name="Theme.Thememanifest1" parent="Theme.MaterialComponents.DayNight.DarkActionBar"> <!-- Primary brand color. --> <item name="colorPrimary">@color/teal_700</item> <item name="android:windowBackground">#1772B9</item> <item name="colorPrimaryVariant">#D09909</item> <item name="colorOnPrimary">@color/white</item> <!-- Secondary brand color. --> <item name="colorSecondary">@color/teal_200</item> <item name="colorSecondaryVariant">@color/purple_200</item> <item name="colorOnSecondary">#D54444</item> <!-- Status bar color. --> <item name="android:statusBarColor" tools:targetApi="1">?attr/colorPrimaryVariant</item> <!-- Customize your theme here. --> </style> </resources> </pre> |

RESULT:

The above program is successfully executed and obtained the output.

OUTPUT



PROGRAM 4

AIM: Develop application using Fragments

PROGRAM CODE

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| MainActivity.java | <pre>//Develop application using Fragments package com.example.co4_q4; import androidx.appcompat.app.AppCompatActivity; import androidx.fragment.app.Fragment; import androidx.fragment.app.FragmentManager; import androidx.fragment.app.FragmentTransaction; 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 fragement1Start(View view){ replaceFragement(new Fragment1());} public void fragement2Start(View view){ replaceFragement(new Fragment2());} public void replaceFragement(Fragment pragment){ FragmentManager fm = getSupportFragmentManager(); FragmentTransaction ft = fm.beginTransaction(); ft.replace(R.id.fra,pragment); ft.commit();}}</pre> |
| Fragment1.java | <pre>package com.example.co4_q4; import android.os.Bundle; import androidx.fragment.app.Fragment; import android.view.LayoutInflater; import android.view.View; import android.view.ViewGroup; public class Fragment1 extends Fragment { @Override public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) { // Inflate the layout for this fragment return inflater.inflate(R.layout.fragment_1, container, false);}}</pre> |

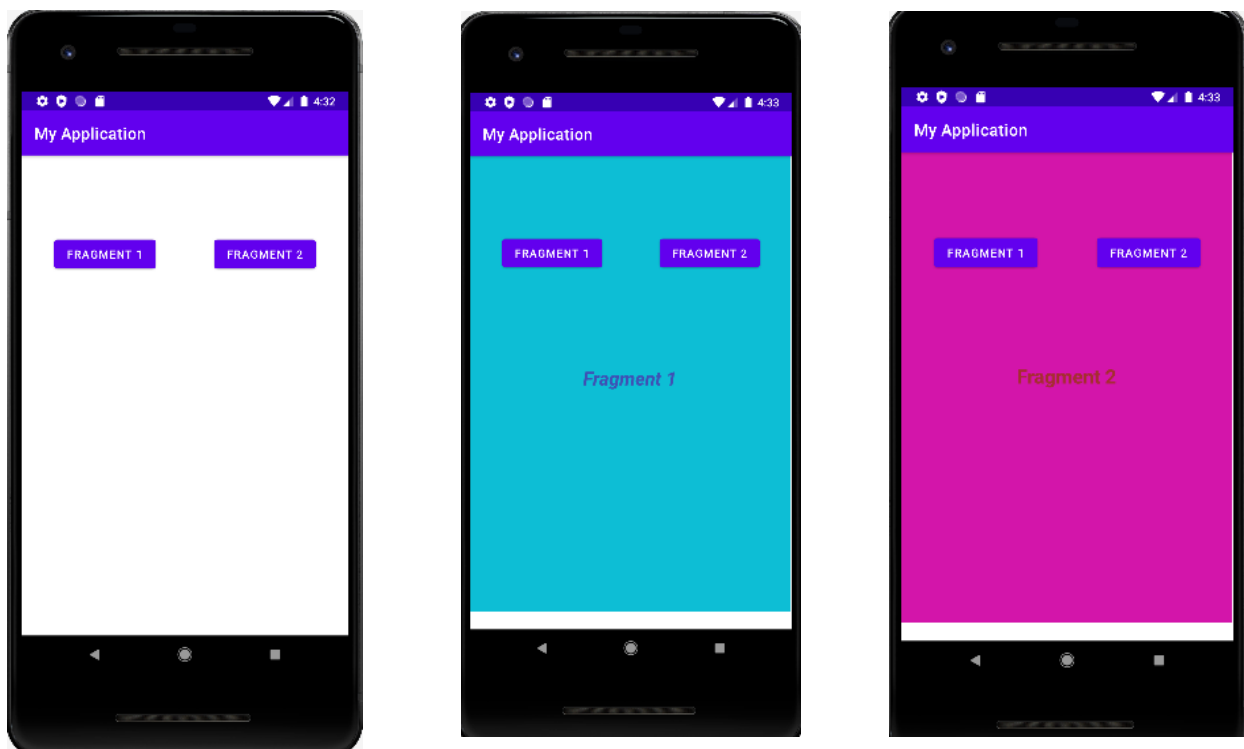
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| Fragment2.java | <pre> package com.example.co4_q4; import android.os.Bundle; import androidx.fragment.app.Fragment; import android.view.LayoutInflater; import android.view.View; import android.view.ViewGroup; public class Fragment2 extends Fragment { @Override public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) { // Inflate the layout for this fragment return inflater.inflate(R.layout.fragment_2, container, false);}} </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"> <Button android:id="@+id/f2" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginStart="32dp" android:layout_marginTop="100dp" android:onClick="fragment2Start" android:text="Fragment 2" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.5" app:layout_constraintStart_toEndOf="@+id/f1" app:layout_constraintTop_toTopOf="parent" /> <Button android:id="@+id/f1" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginTop="100dp" android:onClick="fragment1Start" android:text="Fragment 1" app:layout_constraintEnd_toStartOf="@+id/f2" app:layout_constraintHorizontal_bias="0.5" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" /> <FrameLayout android:id="@+id/fra" </pre> |

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| | <pre> android:layout_width="409dp" android:layout_height="581dp" tools:layout_editor_absoluteX="2dp" tools:layout_editor_absoluteY="148dp"> </FrameLayout> </androidx.constraintlayout.widget.ConstraintLayout> </pre> |
| fragment_1.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:id="@+id/frameLayout2" android:layout_width="match_parent" android:layout_height="match_parent" android:background="#0DBED5" tools:context=".Fragment1"> <TextView android:id="@+id/textView2" android:layout_width="154dp" android:layout_height="46dp" android:text="Fragment 1" android:textAlignment="center" android:textColor="#3F51B5" android:textSize="24sp" android:textStyle="bold italic" 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="0.499" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre> |
| fragment_2.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:id="@+id/frameLayout" android:layout_width="match_parent" android:layout_height="match_parent" android:background="#D315AA" tools:context=".Fragment2"> <!-- TODO: Update blank fragment layout --> <TextView android:id="@+id/textView" </pre> |

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| | <pre>android:layout_width="131dp" android:layout_height="61dp" android:text="Fragment 2" android:textAlignment="center" android:textColor="#A52E2E" android:textSize="24sp" android:textStyle="bold" 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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RESULT: The above program is successfully executed and obtained the output.

OUTPUT



PROGRAM 5

AIM:

Implement Navigation drawer

PROGRAM CODE

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| MainActivity.java | <pre>package com.example.nav_drawer; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; import androidx.annotation.NonNull; import androidx.appcompat.app.ActionBarDrawerToggle; import androidx.drawerlayout.widget.DrawerLayout; import android.view.MenuItem; public class MainActivity extends AppCompatActivity { public DrawerLayout drawerLayout; public ActionBarDrawerToggle actionBarDrawerToggle; @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity_main); drawerLayout = findViewById(R.id.my_drawer_layout); actionBarDrawerToggle = new ActionBarDrawerToggle(this, drawerLayout, R.string.nav_open, R.string.nav_close); drawerLayout.addDrawerListener(actionBarDrawerToggle); actionBarDrawerToggle.syncState(); getSupportActionBar().setDisplayHomeAsUpEnabled(true);} @Override public boolean onOptionsItemSelected(@NonNull MenuItem item) { if (actionBarDrawerToggle.onOptionsItemSelected(item)) { return true;} return super.onOptionsItemSelected(item);} }</pre> |
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| Activity_main.xml | <pre> <?xml version="1.0" encoding="utf-8"?> <androidx.drawerlayout.widget.DrawerLayout 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/my_drawer_layout" android:layout_width="match_parent" android:layout_height="match_parent" tools:context=".MainActivity" tools:ignore="HardcodedText"> <LinearLayout android:layout_width="match_parent" android:layout_height="match_parent"> <TextView android:layout_width="match_parent" android:layout_height="wrap_content" android:layout_marginTop="128dp" android:gravity="center" android:text="Home Window" android:textSize="18sp" /> </LinearLayout> <com.google.android.material.navigation.NavigationView android:layout_width="wrap_content" android:layout_height="match_parent" android:layout_gravity="start" app:menu="@menu/navigation_menu" /> </androidx.drawerlayout.widget.DrawerLayout> </pre> |
| navigation_menu.xml | <pre> <?xml version="1.0" encoding="utf-8"?> <menu xmlns:android="http://schemas.android.com/apk/res/android"> xmlns:tools="http://schemas.android.com/tools" tools:ignore="HardcodedText"> <item android:id="@+id/nav_account" android:title="Home" /> <item android:id="@+id/nav_settings" android:title="Gallery" /> <item android:id="@+id/nav_logout" android:title="Info" /></menu> </pre> |

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| Strings.xml | <pre><resources> <string name="app_name">Navigation Drawer</string> <string name="nav_open">Open</string> <string name="nav_close">Close</string> </resources></pre> |
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RESULT:

The above program is successfully executed and obtained the output.

OUTPUT

