MADK RECORD

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Branch: AIML

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| SRKR ENGINEERING COLLGE(A) ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING  II/IV-B.Tech-II Semester(2022-2023) MADK Lab(B20AM2205) | | | |
| **Day to Day Work Evaluation in Lab** | | | |
| **S.No** | **Date** | **Description** | **Sign** |
| 1 | **07-02-2023** | Introduction to mobile technologies and devices, Android platform and applications overview . |  |
| 2 | **14-02-2023** | Setting Android development environments |  |
| 3 | **21-02-2023** | Writing Android applications, Understanding anatomy of an Android application. |  |
| 4 | **28-02-2023** | Develop an application that uses GUI components, Font and Colours. |  |
| 5 | **07-03-2023** | Develop an application that uses Layout Managers and event listeners. |  |
| 6 | **14-03-2023** | Write an application that draws basic graphical primitives on the screen. |  |
| 7 | **21-03-2023** | Create a quadrant in app and insert different objects. |  |
| 8 | **04-04-2023** | Create an app that displays multiple images in a page in vertical order. |  |
| 9 | **11-04-2023** | Create an app that has multiple surfaces. |  |
| 10 | **18-04-2023** | Implement login activity page. |  |
| 11 | **25-04-2023** | Implement an application that creates an alert upon receiving a message. |  |
| 12 | **02-05-2023** | Create an app to calculate simple math operations (Hint: Use Kotlin functions to check if a given number is prime or not). |  |
| 13 | **09-05-2023** | Develop a Mobile application for simple needs (Mini Project). |  |
| Reference Books: | | | |
| * Neil Smyth, “Kotlin / Android Studio 3.0 Development Essentials”, Android 8 Edition, 2017 * Antonio Leiva, “Kotlin for Android Developers Learn Kotlin the easy way while developing an   Android App”2016 | | | |

# Signature of the Faculty

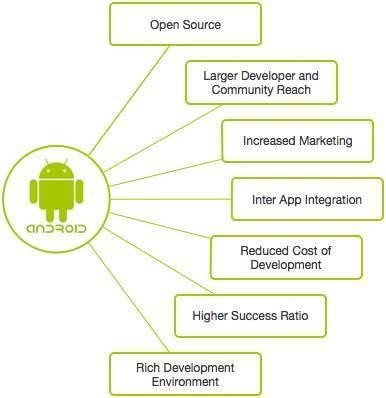
MADK LAB EXPERIMENTS

1. Introduction to Mobile Technologies and devices, android platform and applications overview.

Android is an open source and Linux-based Operating System for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies.

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

Why Android?



Features of Android

Android is a powerful operating system competing with Apple 4GS and supports great features. Few of them are listed below −

|  |  |
| --- | --- |
| Sr.No. | Feature & Description |
| 1 | Beautiful UI |

|  |  |
| --- | --- |
|  | Android OS basic screen provides a beautiful and intuitive user interface. |
| 2 | Connectivity  GSM/EDGE, IDEN, CDMA, EV-DO, UMTS, Bluetooth, Wi-Fi, LTE, NFC and WiMAX. |
| 3 | Storage  SQLite, a lightweight relational database, is used for data storage purposes. |
| 4 | Media support  H.263, H.264, MPEG-4 SP, AMR, AMR-WB, AAC, HE-AAC, AAC 5.1, MP3, MIDI, Ogg Vorbis, WAV, JPEG, PNG, GIF, and BMP. |
| 5 | Messaging SMS and MMS |
| 6 | Web browser  Based on the open-source WebKit layout engine, coupled with Chrome's V8 JavaScript engine supporting HTML5 and CSS3. |
| 7 | Multi-touch  Android has native support for multi-touch which was initially made available in handsets such as the HTC Hero. |
| 8 | Multi-tasking  User can jump from one task to another, and same time various application can run simultaneously. |
| 9 | Resizable widgets  Widgets are resizable, so users can expand them to show more content or shrink them to save space. |
| 10 | Multi-Language  Supports single direction and bi-directional text. |
| 11 | GCM (Google Cloud Messaging) |

|  |  |
| --- | --- |
|  | Google Cloud Messaging (GCM) is a service that lets developers send short message data to their users on Android devices, without needing a proprietary sync solution. |
| 12 | Wi-Fi Direct  A technology that lets apps discover and pair directly, over a high-bandwidth peer-to-peer connection. |
| 13 | Android Beam  A popular NFC-based technology that lets users instantly share, just by touching two NFC-enabled phones together. |

History of Android

The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 whereas the first commercial version, Android 1.0, was released in September 2008. The code names of android ranges from A to N currently, such as Aestro, Blender, Cupcake, Donut, Eclair, Froyo, Gingerbread, Honeycomb, Ice Cream Sandwitch, Jellybean, KitKat, Lollipop and Marshmallow.

What is API level?

API Level is an integer value that uniquely identifies the framework API revision offered by a version of the Android platform.

|  |  |  |  |
| --- | --- | --- | --- |
| Platform Version | API  Level | VERSION\_CODE |  |
| Android 6.0 | 23 | MARSHMALLOW |  |
| Android 5.1 | 22 | LOLLIPOP\_MR1 |  |
| Android 5.0 | 21 | LOLLIPOP |  |
| Android 4.4W | 20 | KITKAT\_WATCH | KitKat for Wearables Only |
| Android 4.4 | 19 | KITKAT |  |
| Android 4.3 | 18 | JELLY\_BEAN\_MR2 |  |
| Android 4.2, 4.2.2 | 17 | JELLY\_BEAN\_MR1 |  |
| Android 4.1, 4.1.1 | 16 | JELLY\_BEAN |  |
| Android 4.0.3, 4.0.4 | 15 | ICE\_CREAM\_SANDWICH\_MR1 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Android 4.0, 4.0.1,  4.0.2 | 14 | ICE\_CREAM\_SANDWICH |  |
| Android 3.2 | 13 | HONEYCOMB\_MR2 |  |
| Android 3.1.x | 12 | HONEYCOMB\_MR1 |  |
| Android 3.0.x | 11 | HONEYCOMB |  |
| Android 2.3.4  Android 2.3.3 | 10 | GINGERBREAD\_MR1 |  |
| Android 2.3.2  Android 2.3.1  Android 2.3 | 9 | GINGERBREAD |  |
| Android 2.2.x | 8 | FROYO |  |
| Android 2.1.x | 7 | ECLAIR\_MR1 |  |
| Android 2.0.1 | 6 | ECLAIR\_0\_1 |  |
| Android 2.0 | 5 | ECLAIR |  |
| Android 1.6 | 4 | DONUT |  |
| Android 1.5 | 3 | CUPCAKE |  |
| Android 1.1 | 2 | BASE\_1\_1 |  |
| Android 1.0 | 1 | BASE |  |

Programming Languages used in Developing Android Applications

* Java
* Kotlin

Developing the Android Application using Kotlin is preferred by Google, as Kotlin is made an official language for Android Development, which is developed and maintained by JetBrains. Previously before Java is considered the official language for Android Development. Kotlin is made official for Android Development in Google I/O 2017.

1. Setting Android development Environment.

Android Studio is one of the best programs for Android app development. It offers a plethora of features and integrated tools for creating professional Android apps.

How to Download and Install the Java JDK (Java Development Kit)

Before installing Android Studio, you first need to install the Java JDK and set up the Java environment to start working on it.

The Java Development Kit (JDK) is a required development package for creating Java- based applications. Additionally, it also includes tools for developers for testing Java- coded applications.

Follow these steps to get the latest version of Java JDK for Windows and set it up:

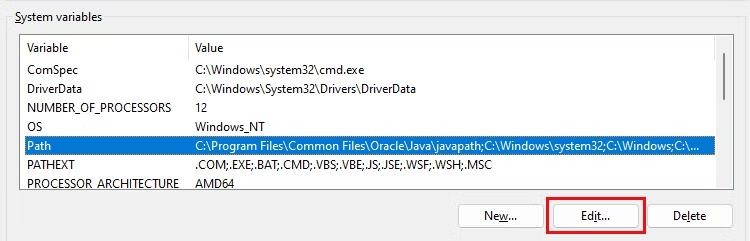
* 1. Go to the official Oracle Java Downloads page.
  2. Choose the most recent version of Java JDK and download the x64 MSI Installer under the Windows tab.
  3. Open the file you've just downloaded from the Downloads folder.
  4. Follow the on-screen instructions to install the latest Java JDK.

Now that you've successfully installed JDK, you need to set up a Java environment so that Android Studio can easily find the location of Java on your desktop.

Setting Up the Java Environment

Here are the steps you've to perform for setting up the Java environment:

* + 1. Open Windows search and type "Edit environment variables."
    2. Hit the Enter key to open the Environment Variables window.
    3. Now, under the System variables section, click Path > Edit > New



* + 1. Copy the path of the folder where the JDK binaries are installed. For example, in our case, the path is C:\Program Files\Java\jdk-18.0.1.1\bin
    2. Switch to the Environment variables window and paste the path you've copied and save the changes.
    3. Next, under the User Variables section, click New.
    4. Add PATH\_HOME in the variable name box and C:\Program Files\Java\jdk-18.0.1.1 in the variable value box.

Finally, save the changes by clicking OK.

How to Install Android Studio on Windows

Follow these steps to download and install Android Studio for Windows:

1. Visit the Android Developers website and click on Download Android Studio.
2. Now, open the downloaded file to install Android Studio.
3. Click Next to continue installing Android Studio.
4. Further, click Install and wait while Android Studio is being installed on your PC.
5. Once done, click Finish to close the installer and start Android Studio.
6. Android Studio will now ask you to import settings. Click OK to continue to set up Android Studio.

The System Requirements for Android Studio on Windows

Your PC must meet the following requirements to run Android Studio efficiently:

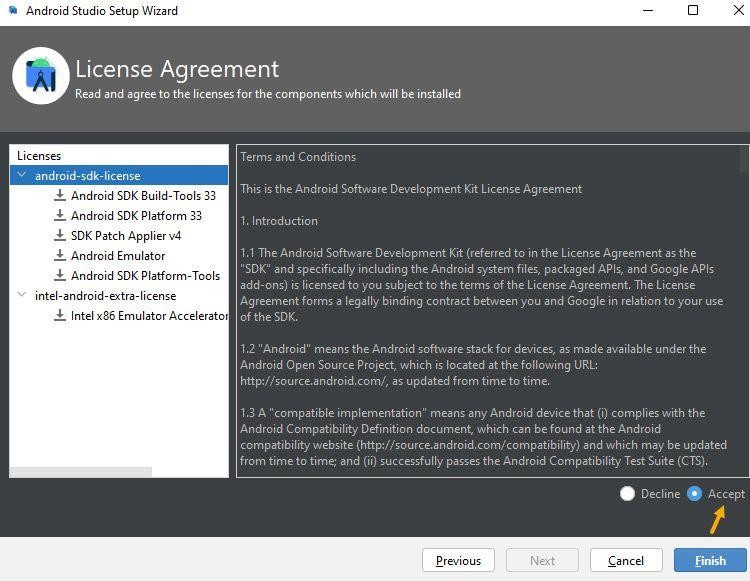
1. 64-bit Microsoft Windows OS 8/10/11.
2. 1280 x 800 minimum screen resolution.
3. x86\_64 CPU architecture; 2nd generation Intel Core or newer; or AMD CPU with Hypervisor support.
4. 8GB of RAM or more.
5. 12GB of available disc space is required (IDE + Android SDK + Android Emulator).

How to Set Up Android Studio on Windows

While you've installed Android Studio on your Windows PC, to create a new project you'll have to configure the Setup Wizard. The Setup Wizard will help you create a development environment for your future projects.

Follow these steps to set up Android Studio:

* 1. In the Setup Wizard window, select the Standard option to apply the recommended settings and click Next.
  2. Next, select a theme you want and click Next again to verify the settings you've configured.
  3. On the following screen, select Accept and click Finish to apply the changes.



* 1. Wait till the Setup Wizard downloads some required files. It may take somewhere around 15 to 30 minutes, depending on your network speed.
  2. Once the download is completed, click Finish to complete the setup process.

1. Writing Android applications, Understanding anatomy of an Android applications.

There are four building blocks to an Android application:

|  |  |
| --- | --- |
| r.No | Components & Description |
| 1 | Activities  They dictate the UI and handle the user interaction to the smart phone screen. |
| 2 | Services  They handle background processing associated with an application. |
| 3 | Broadcast Receivers  They handle communication between Android OS and applications. |
| 4 | Content Providers  They handle data and database management issues. |

Not every application needs to have all four, but your application will be written with some combination of these.

Once you have decided what components you need for your application, you should list them in a file called AndroidManifest.xml. This is an XML file where you declare the components of your application and what their capabilities and requirements are.

Activities

An activity represents a single screen with a user interface,in-short Activity performs actions on the screen. For example, an email application might have one activity that shows a list of new emails, another activity to compose an email, and another activity for reading emails. If an application has more than one activity, then one of them should be marked as the activity that is presented when the application is launched.

An activity is implemented as a subclass of Activity class as follows −

public class MainActivity extends Activity {

}

Services

A service is a component that runs in the background to perform long-running operations. For example, a service might play music in the background while the user is in a different application, or it might fetch data over the network without blocking user interaction with an activity.

A service is implemented as a subclass of Service class as follows −

public class MyService extends Service {

}

Broadcast Receivers

Broadcast Receivers simply respond to broadcast messages from other applications or from the system. For example, applications can also initiate broadcasts to let other applications know that some data has been downloaded to the device and is available for them to use, so this is broadcast receiver who will intercept this communication and will initiate appropriate action.

A broadcast receiver is implemented as a subclass of BroadcastReceiver class, and each message is broadcaster as an Intent object.

public class MyReceiver extends BroadcastReceiver { public void onReceive(context,intent){}

}

Content Providers

A content provider component supplies data from one application to others on request. Such requests are handled by the methods of the ContentResolver class. The data may be stored in the file system, the database or somewhere else entirely.

A content provider is implemented as a subclass of ContentProvider class and must implement a standard set of APIs that enable other applications to perform transactions.

public class MyContentProvider extends ContentProvider { public void onCreate(){}

}

We will go through these tags in detail while covering application components in individual chapters.

Additional Components

There are additional components which will be used in the construction of above mentioned entities, their logic, and wiring between them. These components are −

|  |  |
| --- | --- |
| S.No | Components & Description |
| 1 | Fragments  Represents a portion of user interface in an Activity. |
| 2 | Views  UI elements that are drawn on-screen including buttons, lists forms etc. |
| 3 | Layouts  View hierarchies that control screen format and appearance of the views. |
| 4 | Intents  Messages wiring components together. |
| 5 | Resources  External elements, such as strings, constants and drawable pictures. |
| 6 | Manifest  Configuration file for the application. |

1. Develop an application that uses GUI components, Font and Colours.

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout

xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity"

android:background="#F9EEF5">

<TextView

android:id="@+id/textView"

android:layout\_width="390dp"

android:layout\_height="80dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="41dp"

android:layout\_marginTop="399dp"

android:layout\_marginEnd="42dp"

android:layout\_marginBottom="319dp"

android:text="BRANCH : 2/4 AIML"

android:textColor="#8E0361"

android:textSize="10pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView2"

android:layout\_width="wrap\_content"

android:layout\_height="53dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="41dp"

android:layout\_marginTop="301dp"

android:layout\_marginEnd="42dp"

android:layout\_marginBottom="444dp"

android:text=" NAME : SREE SOWMYA MADISI"

android:textColor="#8E0361"

android:textSize="10pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="373dp"

android:layout\_height="74dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="41dp"

android:layout\_marginTop="505dp"

android:layout\_marginEnd="63dp"

android:layout\_marginBottom="219dp"

android:text="REGDNO : 21B91A6154"

android:textColor="#8E0361"

android:textSize="10pt"

android:textStyle="bold" />

<ImageView

android:id="@+id/imageView"

android:layout\_width="281dp"

android:layout\_height="143dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="97dp"

android:layout\_marginTop="127dp"

android:layout\_marginEnd="94dp"

android:layout\_marginBottom="528dp"

app:srcCompat="@drawable/i1" />

<TextView

android:id="@+id/textView4"

android:layout\_width="403dp"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="41dp"

android:layout\_marginTop="608dp"

android:layout\_marginEnd="29dp"

android:layout\_marginBottom="99dp"

android:te[xt="Ema](mailto:sreesowmya@gmail.com)il : [sre](mailto:sreesowmya@gmail.com)e[sowmya@gmail.com"](mailto:sreesowmya@gmail.com)

android:textColor="#8E0361"

android:textSize="10pt"

android:textStyle="bold" />

<ImageView

android:id="@+id/imageView2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="58dp" android:layout\_marginTop="21dp" android:layout\_marginEnd="54dp"

android:layout\_marginBottom="689dp"

app:srcCompat="@drawable/logo" /> OUTPUT:-



1. Develop an application that uses Layout Managers and event listeners.

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout

xmlns:android=["http://schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:layout\_width="172dp"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="117dp"

android:layout\_marginTop="65dp"

android:layout\_marginEnd="122dp"

android:layout\_marginBottom="601dp"

android:text="Login Page"

android:textAlignment="center"

android:textSize="10pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<EditText

android:id="@+id/editTextText"

android:layout\_width="220dp"

android:layout\_height="79dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="113dp"

android:layout\_marginTop="177dp"

android:layout\_marginEnd="78dp"

android:layout\_marginBottom="475dp"

android:ems="10"

android:inputType="text"

android:text=" Enter Name" />

<EditText

android:id="@+id/editTextText2"

android:layout\_width="wrap\_content"

android:layout\_height="71dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="114dp"

android:layout\_marginTop="298dp"

android:layout\_marginEnd="86dp"

android:layout\_marginBottom="362dp"

android:ems="10"

android:inputType="text"

android:text="Enter password" />

<Button

android:id="@+id/button"

android:layout\_width="151dp"

android:layout\_height="wrap\_content"

android:layout\_alignBottom="@+id/editTextText"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_marginStart="139dp"

android:layout\_marginTop="412dp" android:layout\_marginEnd="120dp"

android:layout\_marginBottom="-255dp"

android:text="Button" />

</RelativeLayout>

# MainActivity.kt

package com.example.madkex11

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button import android.widget.EditText import android.widget.Toast

class MainActivity : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

var editTextText = findViewById(R.id.editTextText) as EditText var editTextText2 = findViewById(R.id.editTextText2) as EditText var Button = findViewById(R.id.button) as Button

Button.setOnClickListener{

val name = editTextText.text;

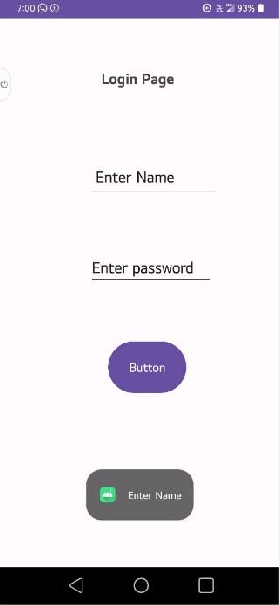
val password = editTextText2.text; Toast.makeText(this@MainActivity,name,Toast.LENGTH\_LONG).show()

}

}

}

OUTPUT: -



1. Write an application that draws basic graphical primitives on the screen.

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<SurfaceView

android:id="@+id/surfaceView"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:layout\_weight="1" />

</LinearLayout>

**Main Activity.kt**

package com.example.graphicalprimitives

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.graphics.Color import android.graphics.Paint import android.graphics.RectF

import android.view.SurfaceHolder import android.view.SurfaceView

class MainActivity : AppCompatActivity() { private lateinit var surfaceView: SurfaceView private lateinit var surfaceHolder: SurfaceHolder private lateinit var paint: Paint

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main) surfaceView = findViewById(R.id.surfaceView) surfaceHolder = surfaceView.holder

paint = Paint() paint.color = Color.RED surfaceView.post{

draw()

}

}

private fun draw() {

val canvas = surfaceHolder.lockCanvas() if (canvas != null) {

val paint = Paint()

paint.color = Color.YELLOW paint.style = Paint.Style.FILL

canvas.drawRect(100f, 100f, 300f, 200f, paint)

// Draw an oval

val oval = RectF(400f, 100f, 600f, 200f) canvas.drawOval(oval, paint)

// Draw a circle

canvas.drawCircle(200f, 400f, 100f, paint)

// Draw a line

paint.color = Color.YELLOW paint.strokeWidth = 10f canvas.drawLine(400f, 400f, 600f, 600f, paint) surfaceHolder.unlockCanvasAndPost(canvas)

}

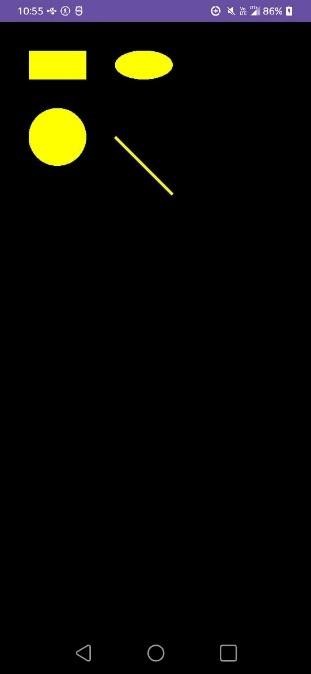
surfaceView.postDelayed({ draw()

},16)

}

}

OUTPUT: -



1. Create a quadrant in app and insert different objects.

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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">

<ImageView android:id="@+id/imageView" android:layout\_width="157dp" android:layout\_height="154dp" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="29dp" android:layout\_marginTop="140dp" android:layout\_marginEnd="225dp" android:layout\_marginBottom="436dp" app:srcCompat="@drawable/square" />

<ImageView

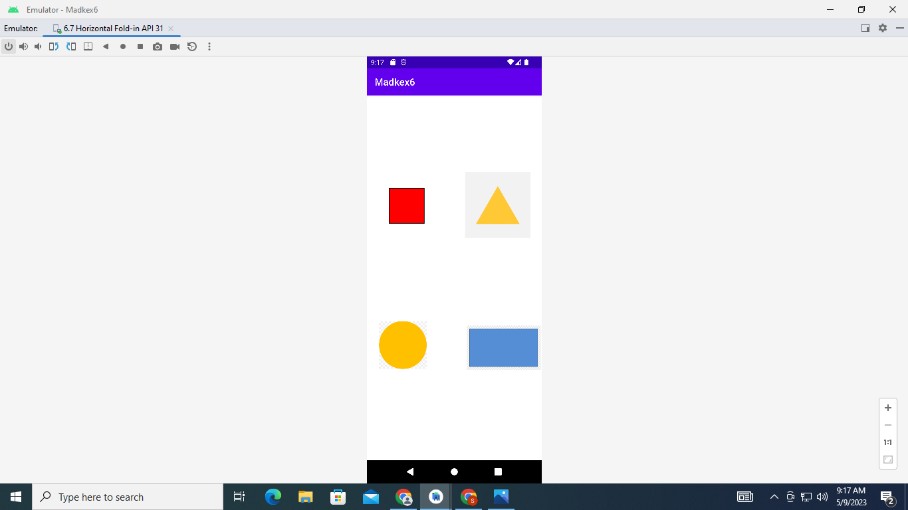
android:id="@+id/imageView3" android:layout\_width="185dp" android:layout\_height="161dp" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="202dp" android:layout\_marginTop="135dp" android:layout\_marginEnd="23dp" android:layout\_marginBottom="434dp" app:srcCompat="@drawable/triangle" />

<ImageView android:id="@+id/imageView4" android:layout\_width="204dp" android:layout\_height="89dp" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="205dp" android:layout\_marginTop="465dp" android:layout\_marginEnd="2dp" android:layout\_marginBottom="177dp" app:srcCompat="@drawable/rectangle" />

<ImageView android:id="@+id/imageView5" android:layout\_width="148dp" android:layout\_height="143dp" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="25dp" android:layout\_marginTop="432dp" android:layout\_marginEnd="237dp" android:layout\_marginBottom="155dp" app:srcCompat="@drawable/circle1" />

</RelativeLayout>

OUTPUT: -



1. Create an app that displays multiple images in a page in vertical order

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout

xmlns:android=["http://schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:id="@+id/textView2"

android:layout\_width="107dp"

android:layout\_height="35dp"

android:text="Sky"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.288"

android:textAlignment="center"/>

<ImageView

android:id="@+id/imageView"

android:layout\_width="202dp"

android:layout\_height="130dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

|  |  |  |  |
| --- | --- | --- | --- |
| app:layout\_constraintHorizontal\_bias="0.483" | | | |
| app:layout\_constraintStart\_toStartOf="parent" | | | |
| app:layout\_constraintTop\_toTopOf="parent" | | |  |
| app:layout\_constraintVertical\_bias="0.078" | |  | |
| app:srcCompat="@drawable/sky" /> |  | | |

<ImageView

android:id="@+id/imageView2"

android:layout\_width="205dp"

android:layout\_height="129dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.491"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.428"

app:srcCompat="@drawable/mountian" />

<ImageView

android:id="@+id/imageView3"

android:layout\_width="211dp"

android:layout\_height="122dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.505"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.788"

app:srcCompat="@drawable/grass" />

<TextView

android:id="@+id/textView3"

android:layout\_width="137dp"

android:layout\_height="41dp"

android:text="Mountain"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.61"

android:textAlignment="center"/>

<TextView

android:id="@+id/textView4"

android:layout\_width="81dp"

android:layout\_height="50dp"

android:text="Grass"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.933"

android:textAlignment="center"/>

</androidx.constraintlayout.widget.ConstraintLayout>

OUTPUT:-



1. Create an app that has multiple surfaces

# activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout

xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:layout\_width="257dp"

android:layout\_height="56dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="74dp"

android:layout\_marginTop="101dp"

android:layout\_marginEnd="79dp"

android:layout\_marginBottom="574dp"

android:text="Home Page"

android:textAlignment="center"

android:textSize="12pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<Button

android:id="@+id/button"

android:layout\_width="255dp"

android:layout\_height="93dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="84dp"

android:layout\_marginTop="314dp"

android:layout\_marginEnd="71dp"

android:layout\_marginBottom="324dp"

android:text="Click Here"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

</RelativeLayout>

# MainActivity.kt

package com.example.mulsur import android.content.Intent

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button

class MainActivity : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) {

super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

var button = findViewById(R.id.button) as Button button.setOnClickListener {

val intent = Intent(this, MainActivity2::class.java) startActivity(intent)

}

}

}

# activity\_main2.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p:/[/sc](http://schemas.android.com/apk/res/android)he[mas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/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="295dp"

android:layout\_height="77dp"

android:text="Second Screen"

android:textAlignment="center"

android:textSize="12pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.168" />

<Button

android:id="@+id/button2"

android:layout\_width="189dp"

android:layout\_height="72dp"

android:text="Back"

android:textStyle="bold"

android:textSize="9pt"

android:textAlignment="center"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

# MainActivity2.kt

package com.example.mulsur import android.content.Intent

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button

class MainActivity2 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main2)

var button2 = findViewById(R.id.button2) as Button button2.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

OUTPUT: -

|  |  |
| --- | --- |
| A purple button with white text  Description automatically generated with medium confidence | A purple rectangle with white text  Description automatically generated with medium confidence |

1. Implement login activity page

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout

xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity"

android:background="#CB4">

<TextView

android:layout\_width="249dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="80dp" android:layout\_marginTop="42dp" android:layout\_marginEnd="81dp"

android:layout\_marginBottom="636dp"

android:text="LOGIN PAGE "

android:textAlignment="center"

android:textSize="13pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<EditText

android:id="@+id/editTextText"

android:layout\_width="214dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="167dp"

android:layout\_marginTop="150dp"

android:layout\_marginEnd="30dp"

android:layout\_marginBottom="507dp"

android:ems="10"

android:inputType="text"

android:text="enter name"

android:textAlignment="center" />

<EditText

android:id="@+id/editTextText2"

android:layout\_width="228dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="171dp"

android:layout\_marginTop="244dp"

android:layout\_marginEnd="12dp"

android:layout\_marginBottom="402dp"

android:ems="10"

android:inputType="text"

android:text="enter phoneno"

android:textAlignment="center" />

<Button

android:id="@+id/button"

android:layout\_width="192dp"

android:layout\_height="75dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="118dp"

android:layout\_marginTop="404dp" android:layout\_marginEnd="122dp"

android:layout\_marginBottom="252dp"

android:text="Button" />

<TextView

android:id="@+id/textView"

android:layout\_width="116dp"

android:layout\_height="55dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="36dp"

android:layout\_marginTop="176dp" android:layout\_marginEnd="259dp"

android:layout\_marginBottom="500dp"

android:labelFor="@+id/editTextText"

android:text="Name:"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView2"

android:layout\_width="144dp"

android:layout\_height="75dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="24dp"

android:layout\_marginTop="271dp" android:layout\_marginEnd="243dp"

android:layout\_marginBottom="385dp"

android:text="Phone No:"

android:textSize="9pt"

android:textStyle="bold" />

</RelativeLayout>

# MainActivity.kt

package com.example.madkex5 import android.content.Intent

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle import android.widget.Button import android.widget.EditText

class MainActivity : AppCompatActivity() { lateinit var etname: EditText

lateinit var etphone: EditText lateinit var btn: Button

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

etname = findViewById(R.id.editTextText) etphone = findViewById(R.id.editTextText2) btn = findViewById(R.id.button)

btn.setOnClickListener { val bundle = Bundle()

bundle.putString("name", etname.text.toString()) bundle.putString("phone", etphone.text.toString()) val intent = Intent(this, MainActivity3::class.java) intent.putExtras(bundle)

startActivity(intent)

}

}

}

# activity\_main2.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout

xmlns:andr[oid="htt](http://schemas.android.com/apk/res/android)p://[schemas.android.com/apk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity3"

android:background="#DFD3">

<TextView

android:id="@+id/tvname"

android:layout\_width="274dp"

android:textSize="9pt" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="20dp"

android:layout\_marginTop="130dp"

android:layout\_marginEnd="20dp"

android:layout\_marginBottom="526dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.46"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.114"

android:textAlignment="center"/>

<TextView

android:id="@+id/tvphone"

android:layout\_width="wrap\_content"

android:textAlignment="center" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="20dp"

android:layout\_marginTop="264dp"

android:layout\_marginEnd="20dp"

android:layout\_marginBottom="392dp"

android:textSize="9pt"/>

<Button

android:id="@+id/btnback"

android:layout\_width="192dp"

android:layout\_height="75dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="120dp"

android:layout\_marginTop="448dp" android:layout\_marginEnd="120dp"

android:layout\_marginBottom="185dp"

android:text="Back" />

</RelativeLayout>

# MainActivity2.kt

package com.example.madkex5 import android.content.Intent

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle import android.widget.Button

import android.widget.TextView

class MainActivity3 : AppCompatActivity() { lateinit var tvname : TextView

lateinit var tvphone : TextView lateinit var btnback: Button

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main3)

tvname = findViewById(R.id.tvname) tvphone = findViewById(R.id.tvphone) btnback = findViewById(R.id.btnback)

val bundle = intent.extras if (bundle != null)

{

tvname.text = "Name = ${bundle.getString("name")}" tvphone.text = "Phone = ${bundle.getString("phone")}"

}

btnback.setOnClickListener{

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

OUTPUT: -

|  |  |
| --- | --- |
| A screenshot of a phone number  Description automatically generated with medium confidence | A screenshot of a yellow background  Description automatically generated with low confidence |

1. Implement an application that creates an alert upon receiving a message

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<EditText

android:id="@+id/nameid"

android:layout\_width="wrap\_content"

android:layout\_height="56dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="78dp"

android:layout\_marginTop="138dp" android:layout\_marginEnd="124dp"

android:layout\_marginBottom="537dp"

android:ems="10"

android:hint="Name"

android:inputType="text"

tools:layout\_editor\_absoluteX="101dp"

tools:layout\_editor\_absoluteY="211dp" />

<EditText

android:id="@+id/phoneid"

android:layout\_width="wrap\_content"

android:layout\_height="67dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="80dp"

android:layout\_marginTop="253dp" android:layout\_marginEnd="121dp"

android:layout\_marginBottom="411dp"

android:ems="10"

android:hint="phone"

android:inputType="text"

tools:layout\_editor\_absoluteX="103dp"

tools:layout\_editor\_absoluteY="313dp" />

<Button

android:id="@+id/btn"

android:layout\_width="166dp"

android:layout\_height="65dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="105dp"

android:layout\_marginTop="455dp" android:layout\_marginEnd="140dp"

android:layout\_marginBottom="210dp"

android:text="submit"

tools:layout\_editor\_absoluteX="122dp"

tools:layout\_editor\_absoluteY="445dp" />

</RelativeLayout>

# MainActivity.kt

package com.example.alertmessg

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle

import android.annotation.SuppressLint import android.widget.Button

import android.widget.EditText import android.widget.Toast

import androidx.appcompat.app.AlertDialog

class MainActivity : AppCompatActivity() { lateinit var name:EditText

lateinit var phone:EditText lateinit var sub:Button

@SuppressLint("MissingInflatedId")

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main) name=findViewById(R.id.nameid) phone=findViewById(R.id.phoneid) sub=findViewById(R.id.btn) sub.setOnClickListener{

val username=name.text.toString().trim() val pno=phone.text.toString().trim() if(username.isEmpty()||pno.isEmpty()){

val builder = AlertDialog.Builder(this) builder.setMessage("please fill details") builder.setTitle("Alert !") builder.setCancelable(false) builder.setNegativeButton("back") {

// If user click no then dialog box is canceled. dialog, which -> dialog.cancel()

}

val alertDialog = builder.create() alertDialog.show()

}

else{

val message="$username is logged in with $pno" Toast.makeText(this@MainActivity,message,Toast.LENGTH\_LONG).show()

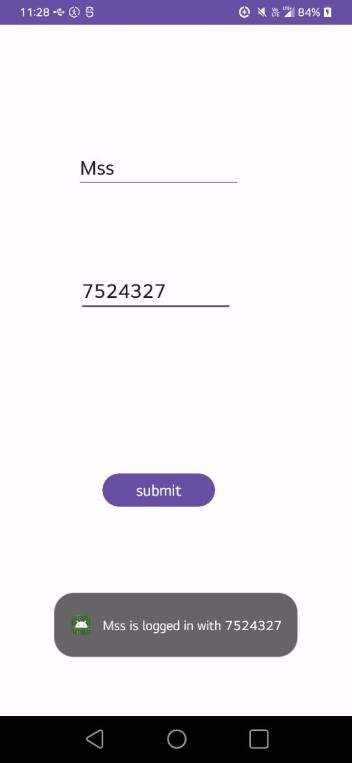
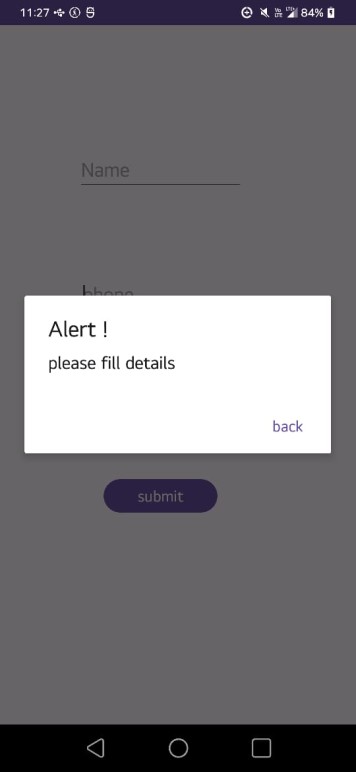
}

}

}

}

OUTPUT: -



1. Create an app to calculate simple math operations (Hint: Use Kotlin functions to check if a given number is prime or not).

# Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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" android:background="#E0F1F1">

<TextView android:id="@+id/textView" android:layout\_width="match\_parent"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true"

android:layout\_marginStart="0dp" android:layout\_marginTop="53dp" android:layout\_marginEnd="0dp" android:layout\_marginBottom="595dp" android:background="#096160 " android:text="Checking Given Number" android:textAlignment="center" android:textColor="#ECF5F5" android:textSize="34sp" app:layout\_constraintBottom\_toBottomOf="parent" app:layout\_constraintEnd\_toEndOf="parent" app:layout\_constraintHorizontal\_bias="0.882" app:layout\_constraintStart\_toStartOf="parent" app:layout\_constraintTop\_toTopOf="parent" app:layout\_constraintVertical\_bias="0.112" android:textStyle="bold"/>

<TextView android:id="@+id/textView3" android:layout\_width="319dp" android:layout\_height="110dp" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true" android:layout\_marginTop="218dp" android:layout\_marginEnd="49dp" android:layout\_marginBottom="403dp" android:text="Enter a valid number" android:textAlignment="center" android:textSize="38sp" android:textStyle="bold"/>

<EditText android:id="@+id/gtnum" android:layout\_width="385dp"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="18dp" android:layout\_marginTop="359dp" android:layout\_marginEnd="8dp" android:layout\_marginBottom="300dp" android:hint="Enter a number" android:textAlignment="center" android:textSize="35sp" android:textStyle="bold"/>

<Button

android:id="@+id/chbtn" android:layout\_width="wrap\_content" android:layout\_height="77dp" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true" android:layout\_alignParentBottom="true" android:layout\_marginStart="92dp" android:layout\_marginTop="542dp" android:layout\_marginEnd="66dp" android:layout\_marginBottom="112dp" android:backgroundTint="#ED9C46 " android:text="SUBMIT" android:textColor="@color/black" android:textSize="29sp" />

</RelativeLayout>

# MainActivity.kt

package com.example.checkinggivennumber import android.annotation.SuppressLint

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button import android.widget.EditText import android.widget.Toast

import androidx.core.text.isDigitsOnly

import [com.example.checkinggivennumber.R.id](http://com.example.checkinggivennumber.r.id/).gtnum import kotlin.math.sqrt

class MainActivity : AppCompatActivity() { lateinit var snum:EditText

lateinit var sbtn:Button @SuppressLint("MissingInflatedId")

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main) snum=findViewById(R.id.gtnum) sbtn=findViewById(R.id.chbtn) sbtn.setOnClickListener{

if(snum.text.isNotEmpty()){ if(snum.text.isDigitsOnly()){

val num=snum.text.toString().toInt() if(CheckEvOd(num))

{

Toast.makeText(this,"Entered number is even.",Toast.LENGTH\_LONG).show()

}

else{

Toast.makeText(this,"Entered number is odd.",Toast.LENGTH\_LONG).show()

}

}

else{

Toast.makeText(this,"Pleasse enter a valid number.",Toast.LENGTH\_SHORT).show()

}

}

else {

Toast.makeText(this, "Please enter a number.", Toast.LENGTH\_SHORT).show()

}

}

}

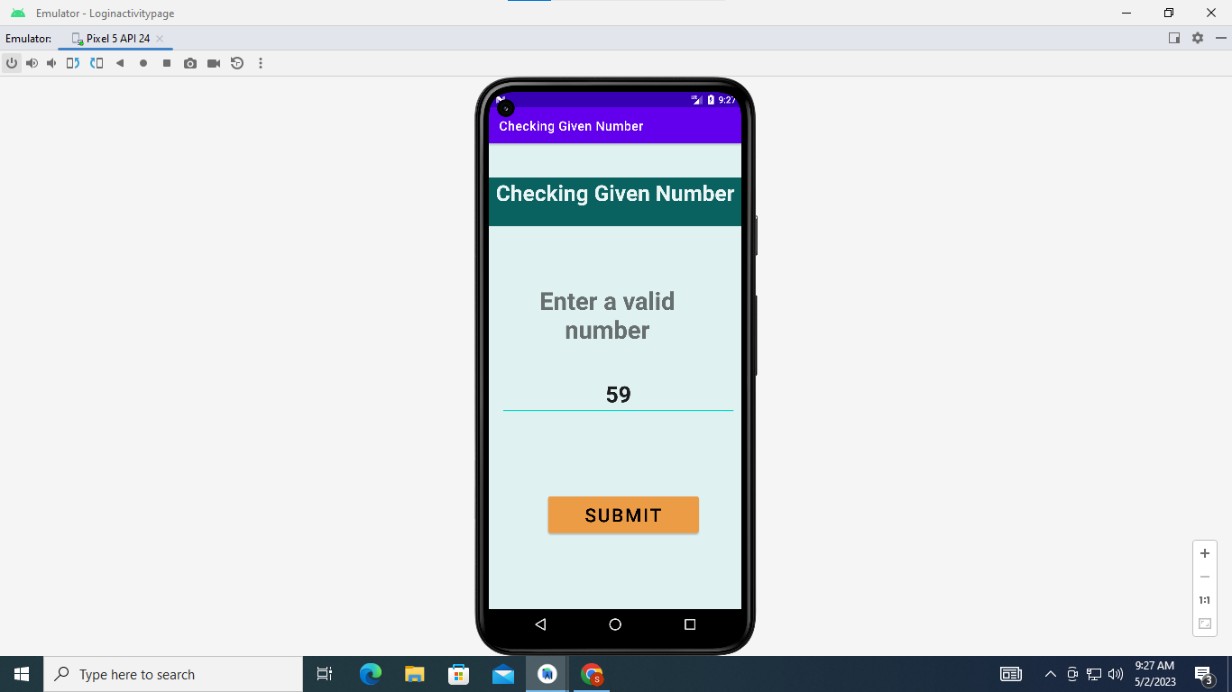
private fun CheckEvOd(num:Int):Boolean{ if(num<=1) return false

else if (num%2==0) return true else return false

}

}

OUTPUT: -



1. Develop a Mobile application for simple needs (Mini Project)

# activity\_main.kt

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity"

android:background="@drawable/background">

<TextView

android:layout\_width="283dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="75dp" android:layout\_marginTop="93dp" android:layout\_marginEnd="53dp"

android:layout\_marginBottom="570dp" android:text="MINI PROJECT" android:textAlignment="center"

android:textSize="12pt"

android:textStyle="bold"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.269" app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="0.186" />

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="22dp"

android:layout\_marginTop="251dp" android:layout\_marginEnd="207dp"

android:layout\_marginBottom="398dp"

android:text="Student1"

android:textAlignment="center"

android:textStyle="bold" />

<Button

android:id="@+id/button2"

android:layout\_width="185dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="209dp"

android:layout\_marginTop="250dp"

android:layout\_marginEnd="16dp"

android:layout\_marginBottom="395dp"

android:text="Student2"

android:textAlignment="center"

android:textStyle="bold" />

<Button

android:id="@+id/button3"

android:layout\_width="177dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="29dp"

android:layout\_marginTop="362dp" android:layout\_marginEnd="205dp"

android:layout\_marginBottom="286dp"

android:text="Student3"

android:textAlignment="center"

android:textStyle="bold" />

<Button

android:id="@+id/button4"

android:layout\_width="178dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="215dp"

android:layout\_marginTop="364dp"

android:layout\_marginEnd="18dp"

android:layout\_marginBottom="287dp"

android:text="Student4"

android:textAlignment="center"

android:textStyle="bold" />

<Button

android:id="@+id/button5"

android:layout\_width="wrap\_content"

android:layout\_height="81dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="121dp"

android:layout\_marginTop="476dp" android:layout\_marginEnd="119dp"

android:textStyle="bold"

android:textAlignment="center"

android:layout\_marginBottom="173dp"

android:text="Student5" />

</RelativeLayout>

# Main Activity.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle import android.widget.Button

class MainActivity : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

var button = findViewById(R.id.button) as Button var button2 = findViewById(R.id.button2) as Button var button3 = findViewById(R.id.button3) as Button var button4 = findViewById(R.id.button4) as Button var button5 = findViewById(R.id.button5) as Button button.setOnClickListener {

val intent = Intent(this, MainActivity2::class.java) startActivity(intent)

}

button2.setOnClickListener {

val intent = Intent(this, MainActivity3::class.java) startActivity(intent)

}

button3.setOnClickListener {

val intent = Intent(this, MainActivity4::class.java) startActivity(intent)

}

button4.setOnClickListener {

val intent = Intent(this, MainActivity5::class.java) startActivity(intent)

}

button5.setOnClickListener {

val intent = Intent(this, MainActivity6::class.java) startActivity(intent)

}

}

}

# activity\_main2.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity2"

android:background="@drawable/background">

<TextView

android:id="@+id/textView"

android:layout\_width="322dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="43dp"

android:layout\_marginTop="298dp"

android:layout\_marginEnd="46dp"

android:layout\_marginBottom="388dp"

android:text="Name: Sree Sowmya Madisi"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintTop\_toTopOf="parent"

tools:layout\_editor\_absoluteX="153dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="260dp"

android:layout\_height="57dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="77dp"

android:layout\_marginTop="360dp"

android:layout\_marginEnd="73dp"

android:layout\_marginBottom="313dp"

android:text="Regd: 21B91A6154"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="198dp"

android:layout\_height="57dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="105dp"

android:layout\_marginTop="430dp" android:layout\_marginEnd="108dp"

android:layout\_marginBottom="243dp"

android:text="Year: 2/4AIML"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<Button

android:id="@+id/button6"

android:layout\_width="169dp"

android:layout\_height="70dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="114dp"

android:layout\_marginTop="513dp" android:layout\_marginEnd="127dp"

android:layout\_marginBottom="148dp"

android:textSize="9pt"

android:textAlignment="center"

android:textStyle="bold"

android:text="Back" />

<TextView

android:id="@+id/textView4"

android:layout\_width="174dp"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="39dp"

android:layout\_marginEnd="118dp"

android:layout\_marginBottom="648dp" android:text="Student-1" android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"/>

<ImageView

android:id="@+id/imageView"

android:layout\_width="240dp"

android:layout\_height="135dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="89dp"

android:layout\_marginTop="113dp"

android:layout\_marginEnd="82dp"

android:layout\_marginBottom="483dp"

app:srcCompat="@drawable/i1" />

</RelativeLayout>

# MainActivity2.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle import android.widget.Button

class MainActivity2 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main2)

var button6 = findViewById(R.id.button6) as Button button6.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

# activity\_main3.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity3"

android:background="@drawable/background">

<TextView

android:id="@+id/textView"

android:layout\_width="260dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="78dp"

android:layout\_marginTop="289dp"

android:layout\_marginEnd="73dp"

android:layout\_marginBottom="397dp"

android:text="Name: Nalla Charmika"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintTop\_toTopOf="parent"

tools:layout\_editor\_absoluteX="153dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="252dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="81dp"

android:layout\_marginTop="346dp"

android:layout\_marginEnd="77dp"

android:layout\_marginBottom="342dp"

android:text="Regd: 21B91A6141"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="177dp"

android:layout\_height="63dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="419dp" android:layout\_marginEnd="114dp"

android:layout\_marginBottom="249dp"

android:text="Year: 2/4AIML"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<Button

android:id="@+id/button6"

android:layout\_width="164dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="136dp"

android:layout\_marginTop="515dp" android:layout\_marginEnd="111dp"

android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"

android:layout\_marginBottom="133dp"

android:text="Back" />

<TextView

android:id="@+id/textView4"

android:layout\_width="174dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="39dp"

android:layout\_marginEnd="118dp"

android:layout\_marginBottom="648dp" android:text="Student-2" android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"/>

<ImageView

android:id="@+id/imageView3"

android:layout\_width="234dp"

android:layout\_height="153dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="88dp"

android:layout\_marginTop="115dp"

android:layout\_marginEnd="88dp"

android:layout\_marginBottom="463dp"

app:srcCompat="@drawable/charmika" />

</RelativeLayout>

# MainActivity3.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle import android.widget.Button

class MainActivity3 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main3)

var button6 = findViewById(R.id.button6) as Button button6.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

# activity\_main4.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity4"

android:background="@drawable/background">

<TextView

android:id="@+id/textView"

android:layout\_width="260dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="78dp"

android:layout\_marginTop="289dp"

android:layout\_marginEnd="73dp"

android:layout\_marginBottom="397dp"

android:text="Name: K Vishnu Priya"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintTop\_toTopOf="parent"

tools:layout\_editor\_absoluteX="153dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="233dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="88dp"

android:layout\_marginTop="350dp"

android:layout\_marginEnd="89dp"

android:layout\_marginBottom="338dp"

android:text="Regd: 21B91A6126"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="184dp"

android:layout\_height="59dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="111dp"

android:layout\_marginTop="417dp" android:layout\_marginEnd="116dp"

android:layout\_marginBottom="255dp"

android:text="Year: 2/4AIML"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<Button

android:id="@+id/button6"

android:layout\_width="168dp"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true"

android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="118dp"

android:layout\_marginTop="505dp" android:layout\_marginEnd="125dp"

android:layout\_marginBottom="151dp"

android:text="Back"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView4"

android:layout\_width="170dp"

android:layout\_height="85dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="39dp"

android:layout\_marginEnd="118dp"

android:layout\_marginBottom="648dp" android:text="Student-3" android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"/>

<ImageView

android:id="@+id/imageView4"

android:layout\_width="269dp"

android:layout\_height="166dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="74dp"

android:layout\_marginTop="110dp"

android:layout\_marginEnd="68dp"

android:layout\_marginBottom="455dp" app:srcCompat="@drawable/vishnu" />

</RelativeLayout>

# MainActivity4.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button

class MainActivity4 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main4)

var button6 = findViewById(R.id.button6) as Button button6.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

# activity\_main5.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity5"

android:background="@drawable/background">

<TextView

android:id="@+id/textView"

android:layout\_width="260dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="78dp"

android:layout\_marginTop="289dp"

android:layout\_marginEnd="73dp"

android:layout\_marginBottom="397dp"

android:text="Name: Vardhanapu Kalyani"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintTop\_toTopOf="parent"

tools:layout\_editor\_absoluteX="153dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="216dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="95dp"

android:layout\_marginTop="348dp" android:layout\_marginEnd="100dp"

android:layout\_marginBottom="340dp"

android:text="Regd: 21B91A6162"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="164dp"

android:layout\_height="59dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="110dp"

android:layout\_marginTop="418dp" android:layout\_marginEnd="137dp"

android:layout\_marginBottom="254dp"

android:text="Year: 2/4AIML"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<Button

android:id="@+id/button6"

android:layout\_width="150dp"

android:layout\_height="83dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="136dp"

android:layout\_marginTop="506dp" android:layout\_marginEnd="125dp"

android:layout\_marginBottom="142dp"

android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"

android:text="Back" />

<TextView

android:id="@+id/textView4"

android:layout\_width="174dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="39dp"

android:layout\_marginEnd="118dp"

android:layout\_marginBottom="648dp" android:text="Student-4" android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"/>

<ImageView

android:id="@+id/imageView5"

android:layout\_width="211dp"

android:layout\_height="156dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="95dp"

android:layout\_marginTop="112dp" android:layout\_marginEnd="105dp"

android:layout\_marginBottom="462dp"

app:srcCompat="@drawable/kalyani" />

</RelativeLayout>

# MainActivity5.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button

class MainActivity5 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main5)

var button6 = findViewById(R.id.button6) as Button

button6.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

# activity\_main6.xml

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android=["http://schemas.android.com/](http://schemas.android.com/apk/res/android)a[pk/res/android"](http://schemas.android.com/apk/res/android)

xmlns:app=["http://sc](http://schemas.android.com/apk/res-auto)h[emas.android.com/apk/res-auto"](http://schemas.android.com/apk/res-auto)

xmlns:t[ools="ht](http://schemas.android.com/tools)tp:/[/sc](http://schemas.android.com/tools)he[mas.android.com/tools"](http://schemas.android.com/tools)

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity6"

android:background="@drawable/background">

<TextView

android:id="@+id/textView"

android:layout\_width="260dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="78dp"

android:layout\_marginTop="289dp"

android:layout\_marginEnd="73dp"

android:layout\_marginBottom="397dp"

android:text="Name: Yalla Supriya"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold"

app:layout\_constraintTop\_toTopOf="parent"

tools:layout\_editor\_absoluteX="153dp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="233dp"

android:layout\_height="61dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="95dp"

android:layout\_marginTop="339dp"

android:layout\_marginEnd="81dp"

android:layout\_marginBottom="331dp"

android:text="Regd: 21B91A6165"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView3"

android:layout\_width="173dp"

android:layout\_height="74dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="129dp"

android:layout\_marginTop="396dp" android:layout\_marginEnd="109dp"

android:layout\_marginBottom="261dp"

android:text="Year: 2/4AIML"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<Button

android:id="@+id/button6"

android:layout\_width="181dp"

android:layout\_height="85dp"

android:layout\_alignParentStart="true"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="127dp"

android:layout\_marginTop="496dp" android:layout\_marginEnd="102dp"

android:layout\_marginBottom="150dp"

android:text="Back"

android:textAlignment="center"

android:textSize="9pt"

android:textStyle="bold" />

<TextView

android:id="@+id/textView4"

android:layout\_width="174dp"

android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_height="wrap\_content" android:layout\_alignParentStart="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="119dp"

android:layout\_marginTop="39dp"

android:layout\_marginEnd="118dp"

android:layout\_marginBottom="648dp" android:text="Student-5" android:textStyle="bold"

android:textAlignment="center"

android:textSize="9pt"/>

<ImageView

android:id="@+id/imageView2"

android:layout\_width="227dp" android:layout\_height="wrap\_content" android:layout\_alignParentStart="true" android:layout\_alignParentTop="true" android:layout\_alignParentEnd="true"

android:layout\_alignParentBottom="true"

android:layout\_marginStart="95dp"

android:layout\_marginTop="110dp"

android:layout\_marginEnd="89dp"

android:layout\_marginBottom="474dp"

app:srcCompat="@drawable/supriya" />

</RelativeLayout>

# MainActivity6.kt

package com.example.miniproject import android.content.Intent

import androidx.appcompat.app.AppCompatActivity import android.os.Bundle

import android.widget.Button

class MainActivity6 : AppCompatActivity() {

override fun onCreate(savedInstanceState: Bundle?) { super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main6)

var button6 = findViewById(R.id.button6) as Button button6.setOnClickListener {

val intent = Intent(this, MainActivity::class.java) startActivity(intent)

}

}

}

OUTPUT: -

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