

# **Mobile Application Development Lab**

Submitted by

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RMCA S3 A

Roll No:40

## 2. Design a simple Calculator using GridLayout and Cascaded LinearLayout

### XML code:

```
<?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="#323030"
    android:layout_gravity="bottom"
    android:gravity="bottom"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_gravity="end"
            android:orientation="vertical">

            <TextView
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginEnd="20dp"
                android:text="9+10"
                android:textAlignment="textEnd"
                android:textColor="@color/white"
                android:textSize="40dp" />

            <TextView
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginEnd="20dp"
                android:text="=19"
                android:textAlignment="textEnd"
                android:textColor="@color/white"
                android:textSize="40dp" />
        </LinearLayout>

        <GridLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:layout_weight="1"
```

```
android:columnCount="4"
android:gravity="bottom"
android:rowCount="4">

<Button
    android:id="@+id/b9"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="9"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/b8"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="8"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/b7"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="7"
    android:textColor="@color/white"
    android:textSize="25dp" />

<Button
    android:id="@+id/bmult"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="#F86605"
    android:text="x"
    android:textColor="@color/white"
    android:textSize="18dp" />

<Button
    android:id="@+id/b6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="6"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="5"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="4"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/bdiv"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="#F86605"
    android:text="/"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="3"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="2"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
```

```
        android:background="@drawable/bg_button"
        android:text="1"
        android:textColor="@color/white"
        android:textSize="25dp" />
```

```
<Button
    android:id="@+id/bminus"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="#F86605"
    android:text="-"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b0"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="0"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/b."
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="."
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/bequal"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="@drawable/bg_button"
    android:text="="
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
<Button
    android:id="@+id/bplus"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="#F86605"
    android:text="+"
    android:textColor="@color/white"
    android:textSize="25dp" />
```

```
</GridLayout>
</LinearLayout>
```

```
</LinearLayout>
```

## Java code:

```
package com.example.grid_layout;

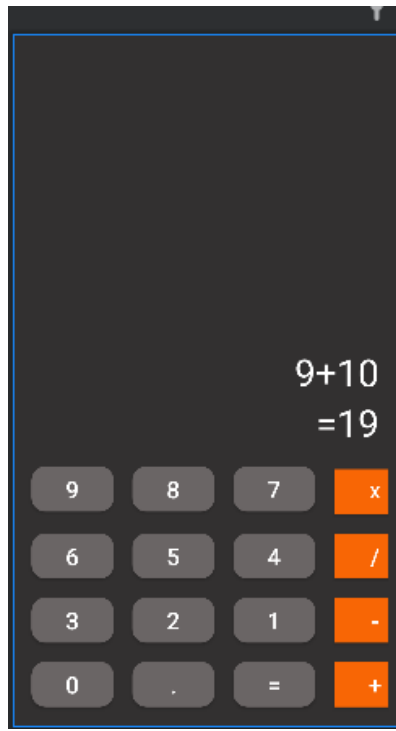
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

## Output:





```

        android:layout_marginBottom="30dp"
        android:background="@drawable/bg_box"
        android:hint="password"
        android:textColorHint="#594F4F"/>

        <Button
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Log In"
            android:background="@color/design_default_color_primary"
            android:textAllCaps="false"/>

    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_marginTop="180dp"
        android:layout_gravity="bottom"
        android:gravity="center">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:gravity="end"
            android:textStyle="bold"
            android:textColor="@color/white"
            android:layout_marginRight="75dp"
            android:layout_weight="50"
            android:text="SignUp for Facebook"/>

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:gravity="end"
                android:textColor="@color/white"
                android:layout_marginEnd="50dp"
                android:layout_weight="1"
                android:textStyle="bold"
                android:text="?" />
    </LinearLayout>
</LinearLayout>
</LinearLayout>

```

## Java code:

```

package com.example.facebook;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

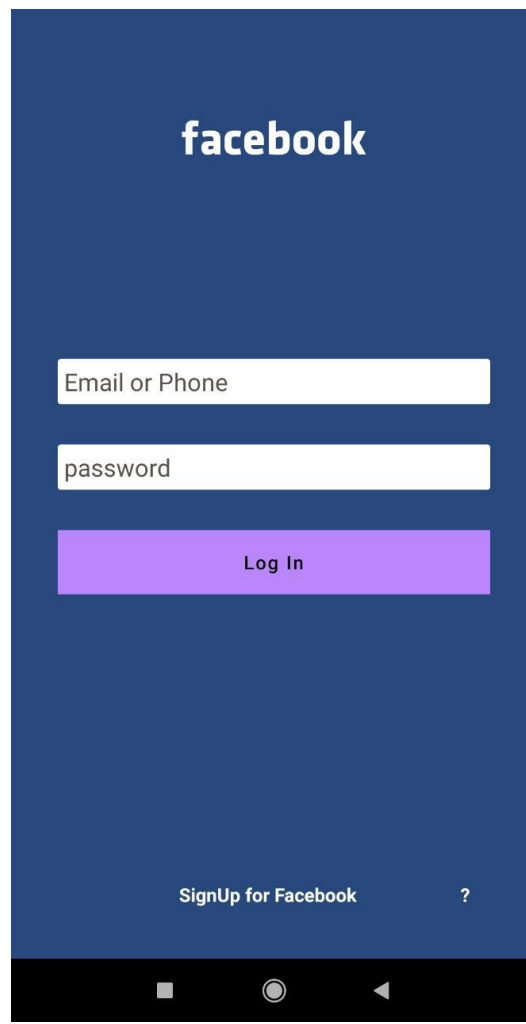
public class MainActivity extends AppCompatActivity {

```



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

## Output



4. Develop an application that toggles image using FrameLayout

XML code:

```

<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_gravity="center"
    android:background="@color/teal_700"
    tools:context=".MainActivity">
    <ImageView
        android:id="@+id/image2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:src="@drawable/image2"
        android:visibility="gone"/>
    <ImageView
        android:id="@+id/image1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:src="@drawable/image1"/>
</FrameLayout>

```

## Java code:

```

package com.example.frame_layout;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener {
    ImageView img1,img2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        img1 =findViewById(R.id.image1);
        img2 =findViewById(R.id.image2);
        img1.setOnClickListener(this);
        img2.setOnClickListener(this);
    }

    public void onClick(View v)
    {
        int id=v.getId();
        switch (id){
            case R.id.image1:
                img1.setVisibility(View.GONE);
                img2.setVisibility(View.VISIBLE);
                break;
            case R.id.image2:

```

```
        img1.setVisibility(View.VISIBLE);  
        img2.setVisibility(View.GONE);  
        break;  
    }  
}
```

## Output:



