

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 30 AUGUST 2022

PROBLEM STATEMENT: Create an Android Application to print a Simple Text on Screen.

OBJECTIVE: To print a Simple Text On Screen.

(activity_main.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"
    tools:context=".MainActivity"
    android:padding="50dp"
    android:background="@color/purple_700"
    >
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        android:textSize="50dp"
        android:layout_gravity="center_vertical"
        android:background="@color/purple_200"
        android:textStyle="bold"
        android:textColor="@color/white"
        />
</LinearLayout>
```

Name: Himani Taneja
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Course: BSC (IT)
Section: B
Subject Code: PBI 501

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Simple_Text" tools:targetApi="31">
        <activity android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
            <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <meta-data
            android:name="android.app.lib_name"
            android:value="" />
    </application>
</manifest>
```

Name: Himani Taneja
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Course: BSC (IT)
Section: B
Subject Code: PBI 501

(MainActivity.java)

CODE:

```
package com.example.simple_text;
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);
    }
}
```

(Strings.xml)

CODE:

```
<resources>
    <string name="app_name">Simple_Text</string>
</resources>
```

(Colors.xml)

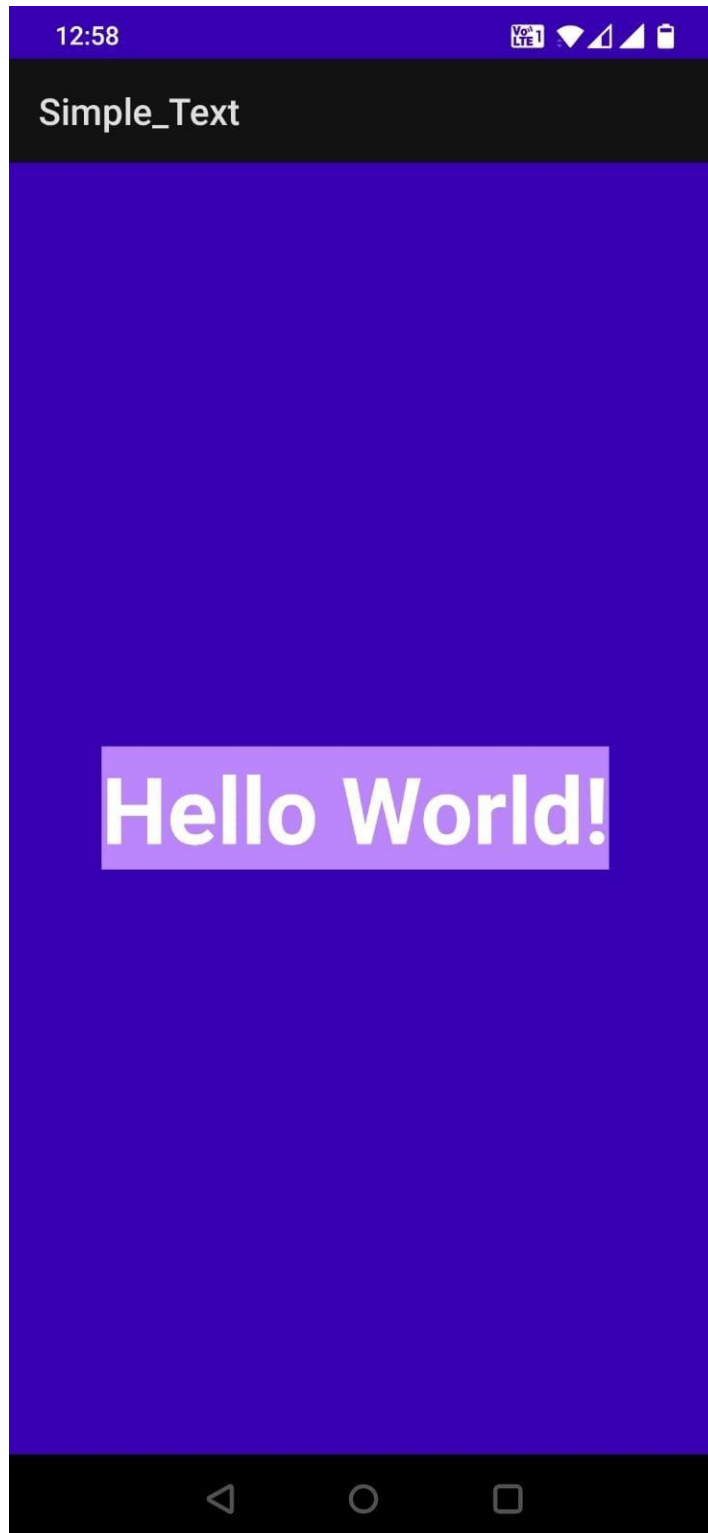
CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="purple_700">#FF3700B3</color>
    <color name="white">#FFFFFFFF</color>
</resources>
```

Name: Himani Taneja
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Subject Name: Mobile Application Development Lab

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Section: B
Subject Code: PBI 501

OUTPUT



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Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 30 AUGUST 2022

PROBLEM STATEMENT: Create an Android Application to change the Background Color on Button Click.

OBJECTIVE- To Make a Button clickable to change Background Color of Layout.

(activity_main.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"
    tools:context=".MainActivity"
    android:padding="50dp"
    android:id="@+id/l1"
    >

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="click"
        android:textStyle="bold"
        android:textSize="40dp"
        android:layout_gravity="center_vertical"
        android:layout_margin="55dp"
        android:id="@+id/b1"/>

</LinearLayout>
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Background_Color_Change"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
            </activity>
        </application>
    </manifest>
```

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Course: BSC (IT)
Section: B
Subject Code: PBI 501

(MainActivity.java)

CODE:

```
package com.example.background_color_change;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.LinearLayout;

public class MainActivity extends AppCompatActivity
{
    Button bt1;
    LinearLayout lt1;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        bt1=findViewById(R.id.b1);
        lt1=findViewById(R.id.l1);

        bt1.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View view)
            {
                lt1.setBackgroundColor(Color.GREEN);
            }
        });
    }
}
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(Strings.xml)

CODE:

```
<resources>  
    <string name="app_name">Background_Color_Change</string>  
</resources>
```

(Colors.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
    <color name="green">#00FF00</color>  
</resources>
```

OUTPUT

Name: Himani Taneja

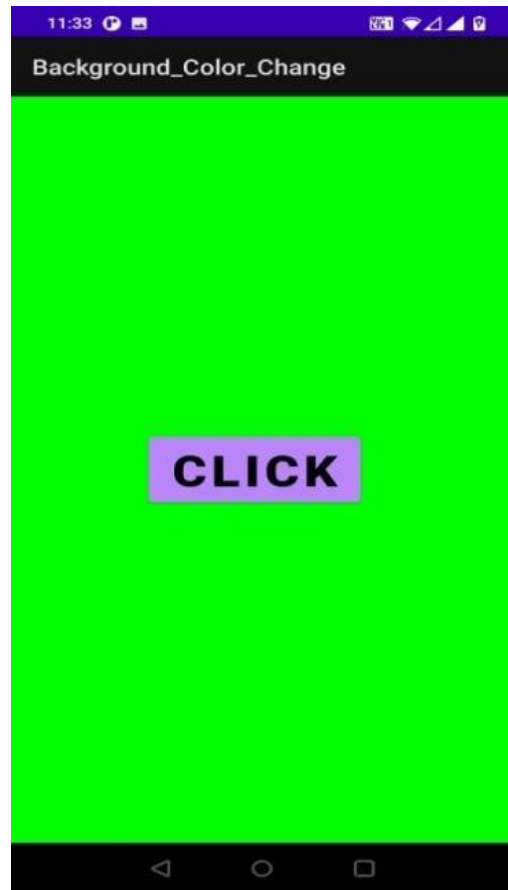
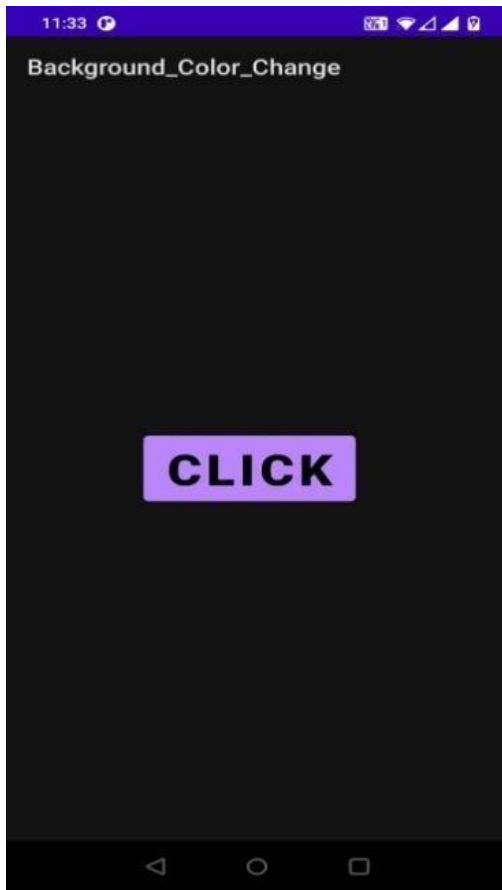
Roll Number: 2023058/22

Subject Name: Mobile Application Development Lab

Course: BSC (IT)

Section: B

Subject Code: PBI 501



Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 06 SEPTEMBER 2022

PROBLEM STATEMENT: Create a Simple Application in Android to change the Colors of the Background of a Text Box with the Click of a Button.

OBJECTIVE: To Make Buttons clickable to change Background Colors of Text Box.

(activity_main.xml)

CODE:

```
<?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="wrap_content"
    tools:context=".MainActivity"
    android:padding="50dp"
    >
    <EditText
        android:id="@+id/et"
        android:layout_marginTop="80dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="50dp"
        />

    <Button
        android:id="@+id/b1"
        android:layout_width="137dp"
        android:layout_height="74dp"
        android:layout_below="@+id/et"
        android:layout_marginTop="180dp"
        android:backgroundTint="@color/red"
        android:text="Red" />
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
<Button
    android:id="@+id/b2"
    android:layout_width="137dp"
    android:layout_height="74dp"
    android:layout_below="@+id/et"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="180dp"
    android:layout_toRightOf="@+id/b1"
    android:backgroundTint="@color/purple_500"
    android:text="Purple" />
```

```
<Button
    android:id="@+id/b3"
    android:layout_width="137dp"
    android:layout_height="74dp"
    android:layout_below="@+id/b1"
    android:layout_marginTop="67dp"
    android:backgroundTint="@color/teal_700"
    android:text="Teal" />
```

```
<Button
    android:id="@+id/b4"
    android:layout_width="137dp"
    android:layout_height="74dp"
    android:layout_below="@+id/b2"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="67dp"
    android:layout_toRightOf="@+id/b3"
    android:backgroundTint="@color/orange"
    android:text="Orange" />
```

```
</RelativeLayout>
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Background_Color_Change"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
            </activity>
        </application>

    </manifest>
```

Name: Himani Taneja
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Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(MainActivity.java)

CODE:

```
package com.example.background_color_change;
import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity
{
    EditText et;
    Button b1,b2,b3,b4;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        et=findViewById(R.id.et);
        b1=findViewById(R.id.b1);
        b2=findViewById(R.id.b2);
        b3=findViewById(R.id.b3);
        b4=findViewById(R.id.b4);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view)
            {
                et.setBackgroundColor(getResources().getColor(R.color.red));
            }
        });
        b2.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View view)
            {
                et.setBackgroundColor(getResources().getColor(R.color.purple_500));
            }
        });
    }
}
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
b3.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View view)
        {
            et.setBackgroundColor(getResources().getColor(R.color.teal_700));
        }
    });
b4.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View view)
        {
            et.setBackgroundColor(getResources().getColor(R.color.orange));
        }
    });
}
```

(Strings.xml)

CODE:

```
<resources>
    <string name="app_name">Background_Color_Change</string>
</resources>
```

(Colors.xml)

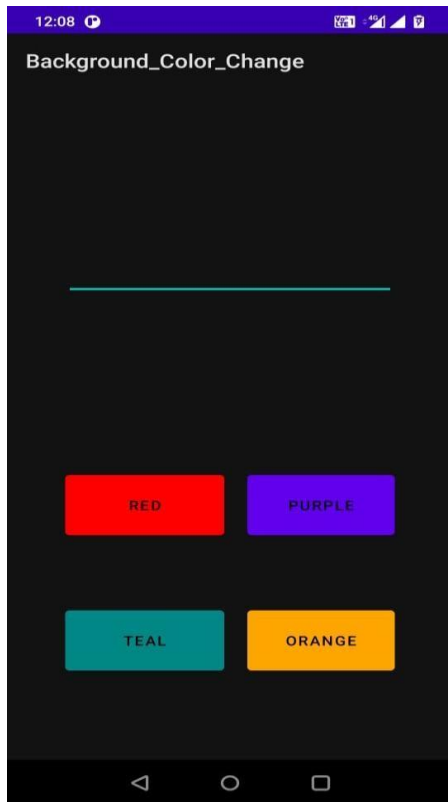
CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_500">#FF6200EE</color>
    <color name="teal_700">#FF018786</color>
    <color name="red">#FF0000</color>
    <color name="orange">#FFA500</color>
</resources>
```

Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

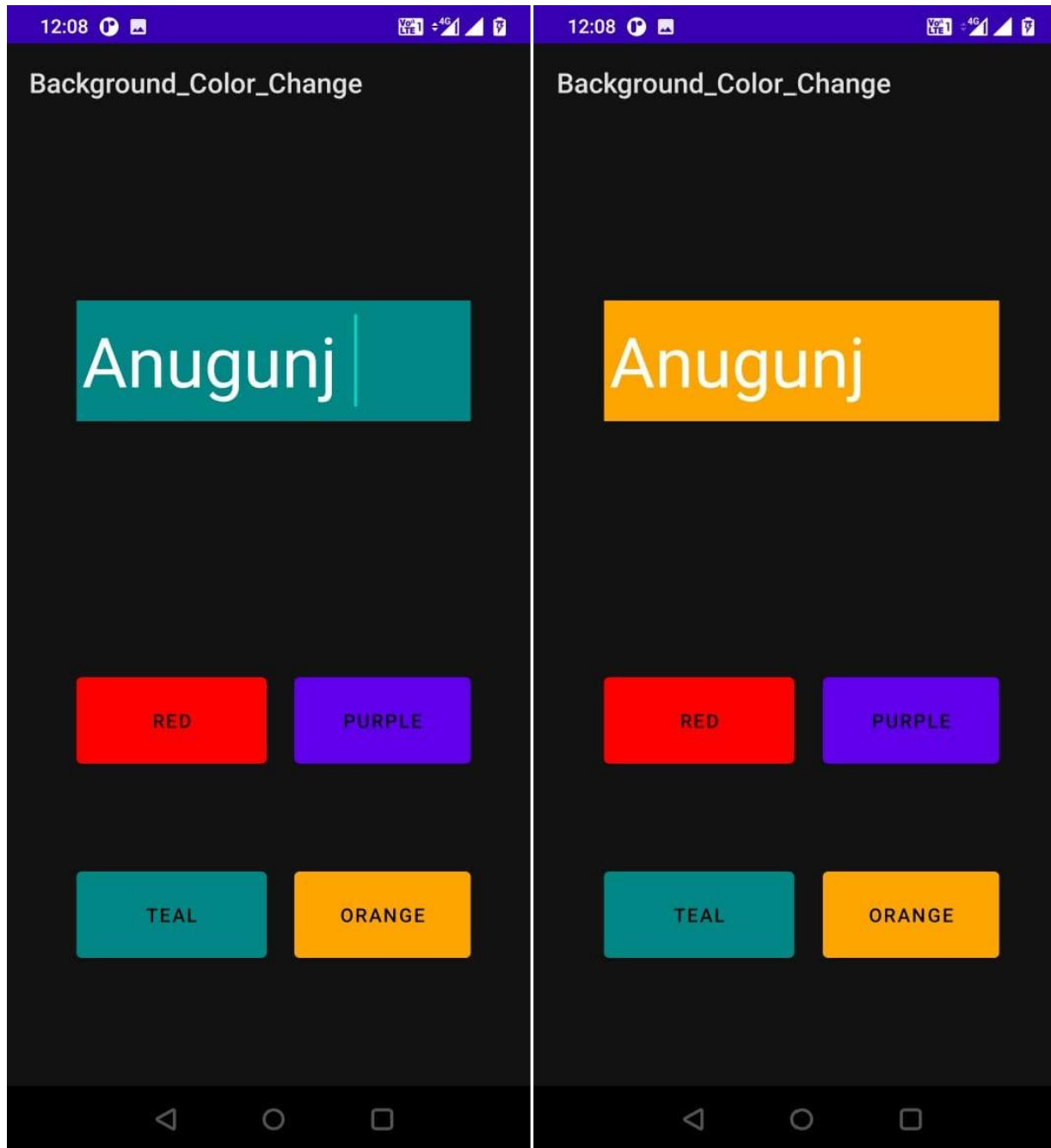
Course: BSC (IT)
Section: B
Subject Code: PBI 501

OUTPUT



Name: Himani Taneja
Roll Number: 2023058/22
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501



Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 06 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Show the Significance of Activity LifeCycle.

OBJECTIVE: To See The Use Of Different Instances Of Android Life Cycle.

(activity_main.xml)

CODE:

```
<?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"
    android:background="@color/teal_200"
    tools:context=".MainActivity" android:padding="50dp">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="Activity LifeCycle"
        android:textStyle="bold"
        android:textSize="30dp"
        android:textColor="@color/white"
        android:gravity="center"
    />

</RelativeLayout>
```

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
<application

    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/Theme.LifeCycle"
    tools:targetApi="31">
    <activity
        android:name=".MainActivity"
        android:exported="true">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>

        <meta-data
            android:name="android.app.lib_name"
            android:value="" />
        </activity>
    </application>

</manifest>
```

(MainActivity.java)

CODE:

```
package com.example.lifecycle;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity
    {@Override
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    Toast.makeText(MainActivity.this,"onCreate invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onStart()
{
    super.onStart();
    Toast.makeText(MainActivity.this,"onStart invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onResume()
{
    super.onResume();
    Toast.makeText(MainActivity.this,"onResume
invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onPause()
{
    super.onPause();
    Toast.makeText(MainActivity.this,"onPause invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onStop()
{
    super.onStop();
    Toast.makeText(MainActivity.this,"onStop invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onRestart()
{
    super.onRestart();
    Toast.makeText(MainActivity.this,"onRestart
invoked",Toast.LENGTH_LONG).show();
}

@Override
protected void onDestroy() {
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
super.onDestroy();  
Toast.makeText(MainActivity.this,"onDestroy
```

```
invoked",Toast.LENGTH_LONG).show();  
}  
}
```

(Strings.xml)

CODE:

```
<resources>  
    <string name="app_name">LifeCycle</string>  
</resources>
```

(Colors.xml)

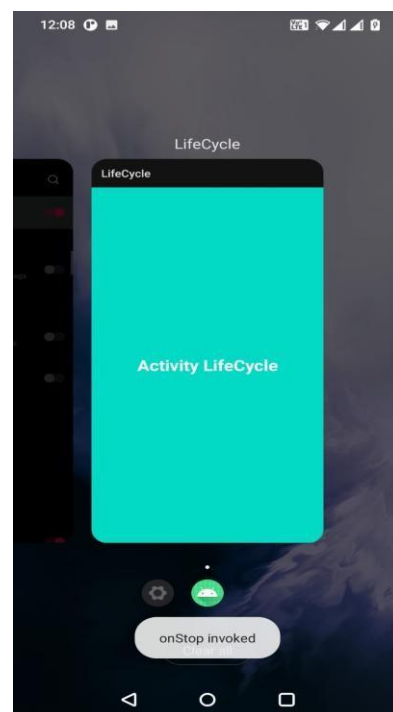
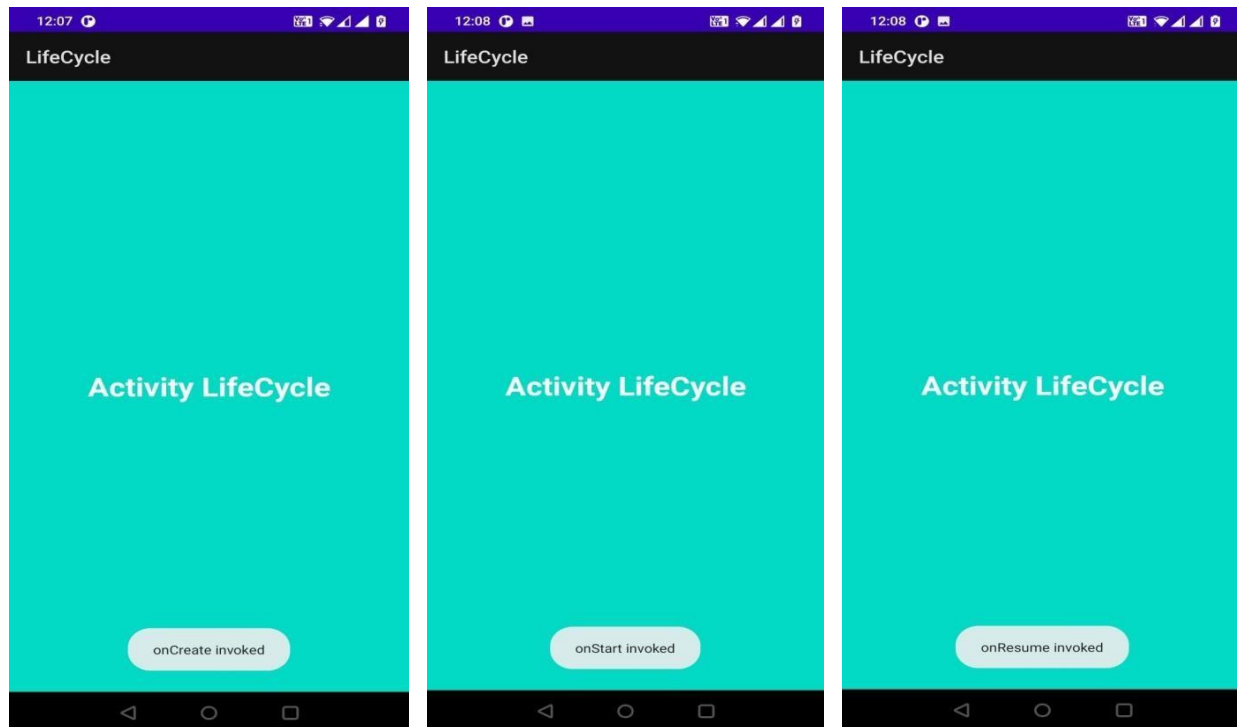
CODE:

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
    <color name="teal_200">#FF018786</color>  
    <color name="white">#FFFFFFFF</color>  
</resources>
```

Name: Anugunj Goel
Roll Number: 2023034/11
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Course: BSC (IT)
Section: B
Subject Code: PBI 501

OUTPUT



Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501



Name: Anugunj Goel
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Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 13 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Depict Basic Calculator.

OBJECTIVE: To Create A calculator for Basic Calculation like Addition Subtraction Multiplication and Division.

(activity_main.xml)

CODE:

```
<?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"
    android:background="@color/black"
    tools:context=".MainActivity" android:padding="50dp">
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/et1"
        android:layout_margin="20dp"
    />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/et1"
        android:id="@+id/et2"
        android:layout_margin="20dp"
    />
    <Button
        android:layout_width="130dp"
        android:layout_height="130dp"
        android:layout_below="@+id/tv1"
        android:layout_margin="10dp"
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        android:text="+"
        android:textSize="70dp"
        android:id="@+id/bt1"

/>
<Button
    android:layout_width="130dp"
    android:layout_height="130dp"
    android:layout_toRightOf="@+id/bt1"
    android:layout_below="@+id/tv1"
    android:layout_margin="10dp"
    android:text="-"
    android:textSize="70dp"
    android:id="@+id/bt2"
/>
<Button
    android:layout_width="130dp"
    android:layout_height="130dp"
    android:layout_below="@+id/bt1"
    android:layout_margin="10dp"
    android:text="*"
    android:textSize="70dp"
    android:id="@+id/bt3"
/>
<Button
    android:layout_width="130dp"
    android:layout_height="130dp"
    android:layout_below="@+id/bt2"
    android:layout_toRightOf="@+id/bt3"
    android:layout_margin="10dp"
    android:text="/"
    android:textSize="70dp"
    android:id="@+id/bt4"
/>
<TextView
    android:layout_width="match_parent"
```


Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        android:layout_height="wrap_content"
        android:layout_below="@+id/et2"
        android:layout_margin="30dp"
        android:text="0"

        android:textSize="50dp"
        android:id="@+id/tv1"
    />
</RelativeLayout>
```

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Calculator"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        android:value="" />
    </activity>
</application>
</manifest>
```

(MainActivity.java)

CODE:

```
package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity
{
    Button bt1, bt2, bt3, bt4;
    EditText et1, et2;
    TextView tv1;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        bt1 = findViewById(R.id.bt1);
        bt2 = findViewById(R.id.bt2);
        bt3 = findViewById(R.id.bt3);
        bt4 = findViewById(R.id.bt4);
        et1 = findViewById(R.id.et1);
        et2 = findViewById(R.id.et2);
        tv1 = findViewById(R.id.tv1);
        bt1.setOnClickListener(new View.OnClickListener()
        {
            @Override
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
public void onClick(View view) {
    if (et1.getText().toString().length() == 0)
        {et1.setText("0");
    }
    if (et2.getText().toString().length() == 0)
        {et2.setText("0");

}
int num1, num2, sum;
num1 = Integer.parseInt(et1.getText().toString());
num2 = Integer.parseInt(et2.getText().toString());
sum = num1 + num2;
tv1.setText(String.valueOf(sum));
bt2.setOnClickListener(new View.OnClickListener()
    {@Override
    public void onClick(View view) {
        if (et1.getText().toString().length() == 0)
            {et1.setText("0");
        }
        if (et2.getText().toString().length() == 0)
            {et2.setText("0");
        }
        int num1, num2, difference;
        num1 = Integer.parseInt(et1.getText().toString());
        num2 = Integer.parseInt(et2.getText().toString());
        difference = num1 - num2;
        tv1.setText(String.valueOf(difference));
    }
});
bt3.setOnClickListener(new View.OnClickListener()
    {@Override
    public void onClick(View view) {
        if (et1.getText().toString().length() == 0)
            {et1.setText("0");
        }
        if (et2.getText().toString().length() == 0) {
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        et2.setText("0");
    }
    int num1, num2, product;
    num1 = Integer.parseInt(et1.getText().toString());
    num2 = Integer.parseInt(et2.getText().toString());
    product = num1 * num2;
    tv1.setText(String.valueOf(product));

}
});
bt4.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View view) {
        if (et1.getText().toString().length() == 0)
            {et1.setText("0");
        }
        if (et2.getText().toString().length() == 0)
            {et2.setText("0");
        }
        int num1, num2, quotient;
        num1 = Integer.parseInt(et1.getText().toString());
        num2 = Integer.parseInt(et2.getText().toString());
        quotient = num1 / num2;
        tv1.setText(String.valueOf(quotient));
    }
});
}
});
}
}
```

(Strings.xml)

CODE:

```
<resources>
<string name="app_name">Calculator</string>
</resources>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

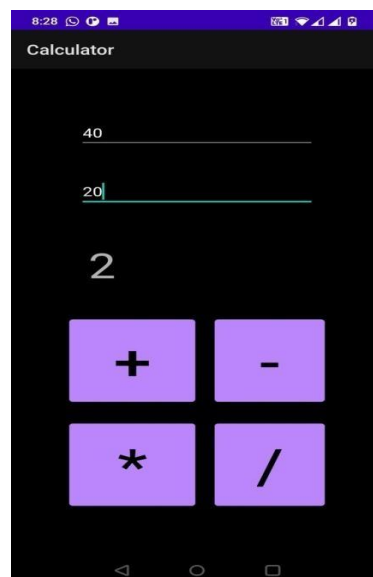
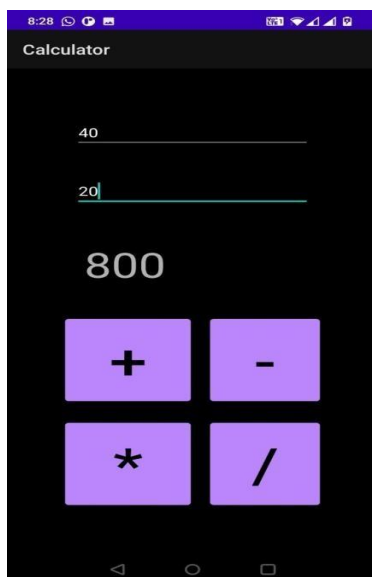
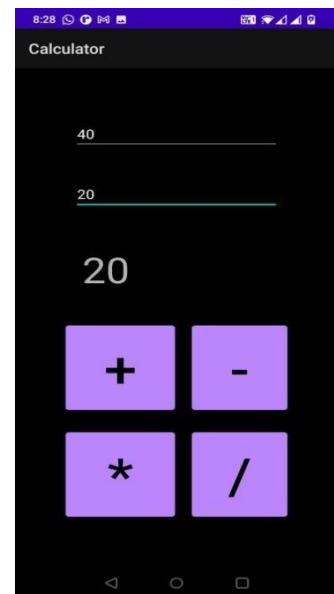
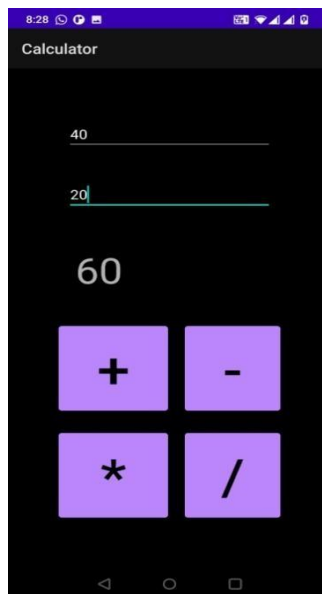
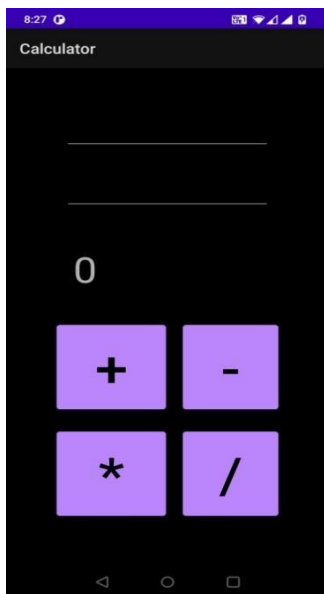
Course: BSC (IT)
Section: B
Subject Code: PBI 501

(Colors.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
    <color name="black">#FF000000</color>  
</resources>
```

OUTPUT



Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 13 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Design the following xml Activity.

Name: _____
Age: _____
Address: _____
Phno: _____

Submit

Generate a Toast Message when submit message (button) is pressed.

OBJECTIVE: To Collect Basic Data (Name, Age, Address, Phno) from User and then Print a Toast Message **“Information Successfully Submitted”**.

(activity_main.xml)

CODE:

```
<?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:padding="50dp">

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="textPersonName"
        android:text="Name:"
        android:id="@+id/e1"
        android:layout_margin="20dp"
    />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="number"
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        android:text="Age:"
        android:layout_below="@+id/e1"
        android:id="@+id/e2"
        android:layout_margin="20dp"
    />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="text"
        android:text="Address:"
        android:layout_below="@+id/e2"
        android:id="@+id/e3"
        android:layout_margin="20dp"
    />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="number"
        android:text="Phone-no:"
        android:layout_below="@+id/e3"
        android:id="@+id/e4"
        android:layout_margin="20dp"
    />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:backgroundTint="@color/Red"
        android:layout_below="@+id/e4"
        android:text="Submit"
        android:textSize="40dp"
        android:textStyle="bold"
        android:layout_margin="30dp"
        android:id="@+id/b1"
    />
</RelativeLayout>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.ToastProject"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
            </activity>
        </application>

    </manifest>
```


Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(MainActivity.java)

CODE:

```
package com.example.toastproject;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity
{Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    { super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      b1=findViewById(R.id.b1);
      b1.setOnClickListener(new View.OnClickListener() {
          @Override
          public void onClick(View view)
          { Toast.makeText(getApplicationContext(),"Information Successfully
            Submitted",
              Toast.LENGTH_LONG).show();
          }
      });
    }
}
```

(Strings.xml)

CODE:

```
<resources>

    <string name="app_name">ToastProject</string>
```

Name: Anugunj Goel

Roll Number: 2023034/11

Subject Name: Mobile Application Development Lab
</resources>

Course: BSC (IT)

Section: B

Subject Code: PBI 501

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

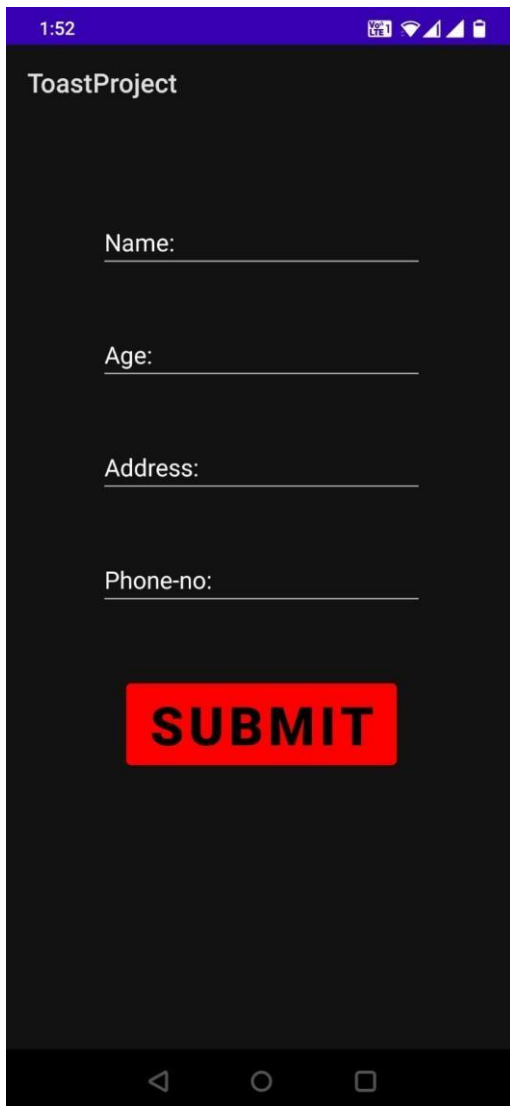
Course: BSC (IT)
Section: B
Subject Code: PBI 501

(Colors.xml)

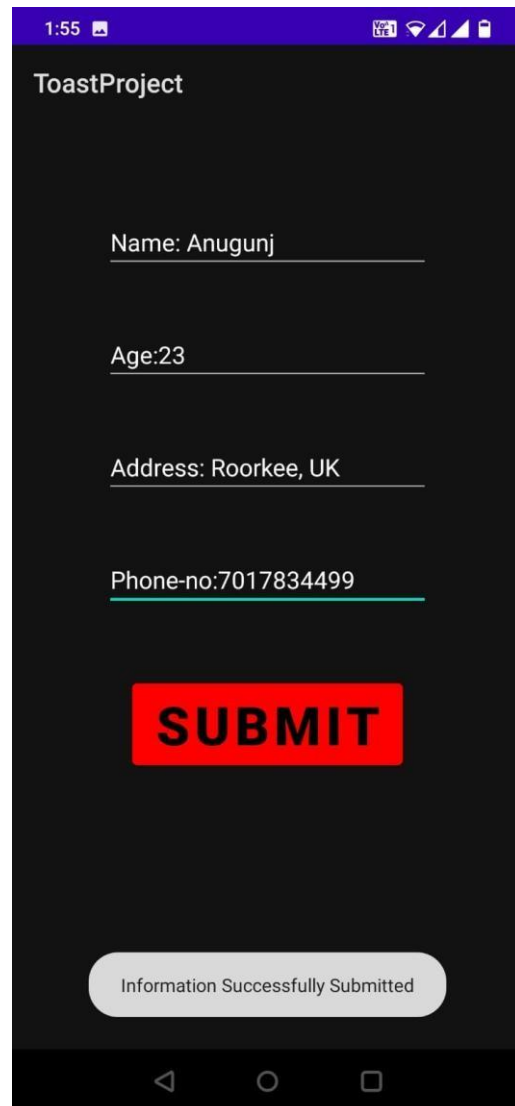
CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="Red">#ff0000</color>
</resources>
```

OUTPUT



The screenshot shows the ToastProject app interface. At the top, the title bar is purple with the time 1:52 and status icons. Below the title bar, the app title "ToastProject" is displayed. The main content area has a black background with four white input fields labeled "Name:", "Age:", "Address:", and "Phone-no:". At the bottom, there is a prominent red button with the word "SUBMIT" in white capital letters.



The screenshot shows the ToastProject app interface after data entry. The title bar is purple with the time 1:55 and status icons. The app title "ToastProject" is displayed. The input fields are now filled with the following text: "Name: Anugunj", "Age: 23", "Address: Roorkee, UK", and "Phone-no: 7017834499". The red "SUBMIT" button is still present. At the bottom, a white rounded rectangle contains the text "Information Successfully Submitted".

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 20 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Change the Image on an Activity on Button Click.

OBJECTIVE: To Change The Images On The Activity after Clicking On Buttons.

(activity_main.xml)

CODE:

```
<?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">

    <Button
        android:id="@+id/b1"
        android:layout_width="294dp"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:backgroundTint="@color/teal_200"
        android:textColor="@color/white"
        android:text="NEXT"
        android:textSize="50dp" />

    <ImageView
        android:id="@+id/iv"
        android:layout_width="364dp"
        android:layout_height="371dp"
        android:layout_below="@+id/b1"
        android:layout_marginStart="26dp"
        android:layout_marginTop="60dp"
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
android:layout_marginBottom="60dp"  
android:layout_marginEnd="26dp" />
```

```
<Button  
    android:id="@+id/b2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/iv"  
    android:layout_centerHorizontal="true"  
    android:backgroundTint="@color/purple_200"  
    android:textColor="@color/white"  
    android:text="Previous"  
    android:textSize="50dp" />
```

```
</RelativeLayout>
```

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:tools="http://schemas.android.com/tools">  
  
    <application  
        android:allowBackup="true"  
        android:dataExtractionRules="@xml/data_extraction_rules"  
        android:fullBackupContent="@xml/backup_rules"  
        android:icon="@mipmap/ic_launcher"  
        android:label="@string/app_name"  
        android:roundIcon="@mipmap/ic_launcher_round"  
        android:supportRtl="true"  
        android:theme="@style/Theme.Image_Changer"  
        tools:targetApi="31">  
        <activity  
            android:name=".MainActivity"  
            android:exported="true">  
            <intent-filter>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

<meta-data
    android:name="android.app.lib_name"
    android:value="" />
</activity>
</application>

</manifest>
```

(MainActivity.java)

CODE:

```
package com.example.image_changer;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity
{
    Button b1, b2;
    ImageView iv1;
    int a = 0;

    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1 = findViewById(R.id.b1);
        b2 = findViewById(R.id.b2);
        iv1 = findViewById(R.id.iv);
        b1.setOnClickListener(new View.OnClickListener()
        {
            @Override
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        public void onClick(View view)
        { iv1.setImageResource(R.drawable.maldives);
        }
    });
```

```
        b2.setOnClickListener(new View.OnClickListener()
        { @Override
        public void onClick(View view)
        { iv1.setImageResource(R.drawable.lake);
        }
        });
    }
}
```

(Strings.xml)

CODE:

```
<resources>
<string name="app_name">Image_Changer</string>
</resources>
```

(Colors.xml)

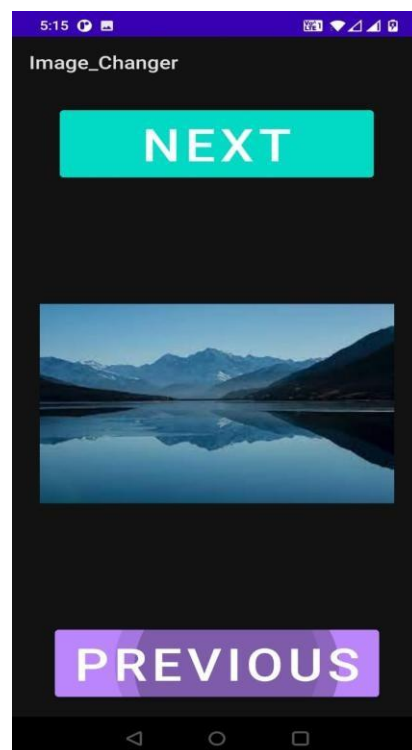
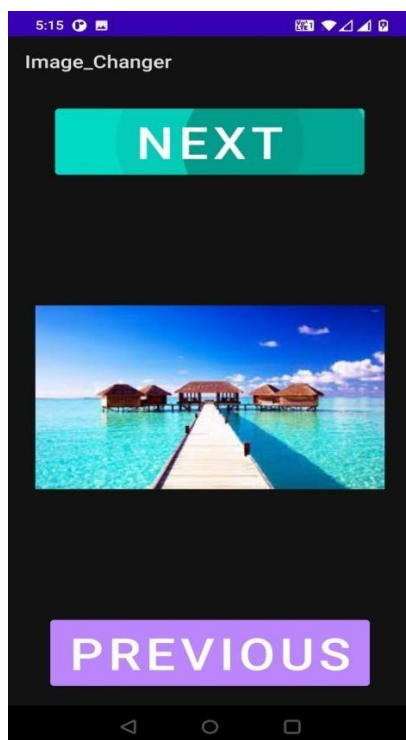
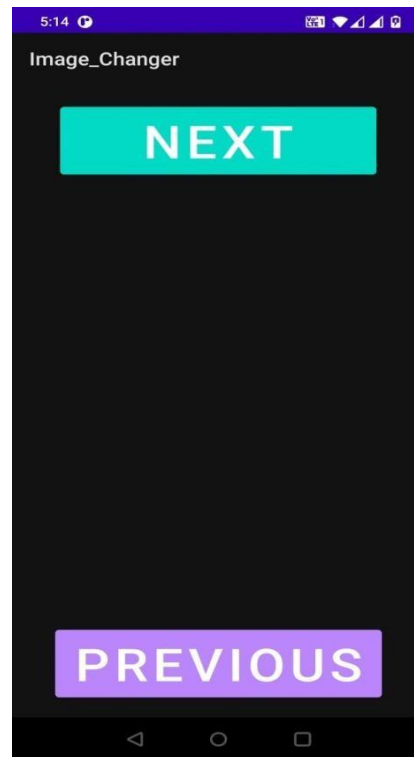
CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="purple_200">#FFBB86FC</color>
    <color name="teal_200">#FF03DAC5</color>
    <color name="white">#FFFFFFFF</color>
</resources>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

OUTPUT



Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 20 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Design the following xml File and Show the Concept of Array Adapter.

Name: RollNo:

OBJECTIVE: To Create Two Lists – ‘Name’ and ‘RollNo’ and then Adding Data into them Using Array Adapter.

(activity_main.xml)

CODE:

```
<?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"
    android:background="@color/purple"
    tools:context=".MainActivity">
    <ListView
        android:layout_width="195dp"
        android:layout_height="wrap_content"
        android:id="@+id/11"
        android:background="@color/purple_700"
    />
    <ListView
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:id="@+id/12"
        android:layout_toRightOf="@+id/11"
        android:background="@color/purple_500"
    />
</RelativeLayout>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.ArrayAdapter"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
            </activity>
        </application>

    </manifest>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

(MainActivity.java)

CODE:

```
package com.example.arrayadapter;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity
{
    ListView lv1,lv2;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        lv1 = findViewById(R.id.l1);
        lv2 = findViewById(R.id.l2);
        String list1[] = {"Name:","Anugunj","Vivek","Mohan","Ajay","Saloni","Priyansh"};
        String list2[] = {"RollNo:","11","22","33","44","50","60"};
        ArrayAdapter<String> ad1= new
        ArrayAdapter<String>(MainActivity.this,android.R.layout.simple_list_item_1,list1);
        lv1.setAdapter(ad1);
        ArrayAdapter<String> ad2 = new ArrayAdapter<String>(MainActivity.this,
        android.R.layout.simple_list_item_1,list2);
        lv2.setAdapter(ad2);
    }
}
```

(Strings.xml)

CODE:

```
<resources>
<string name="app_name">Array Adapter</string>
</resources>
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

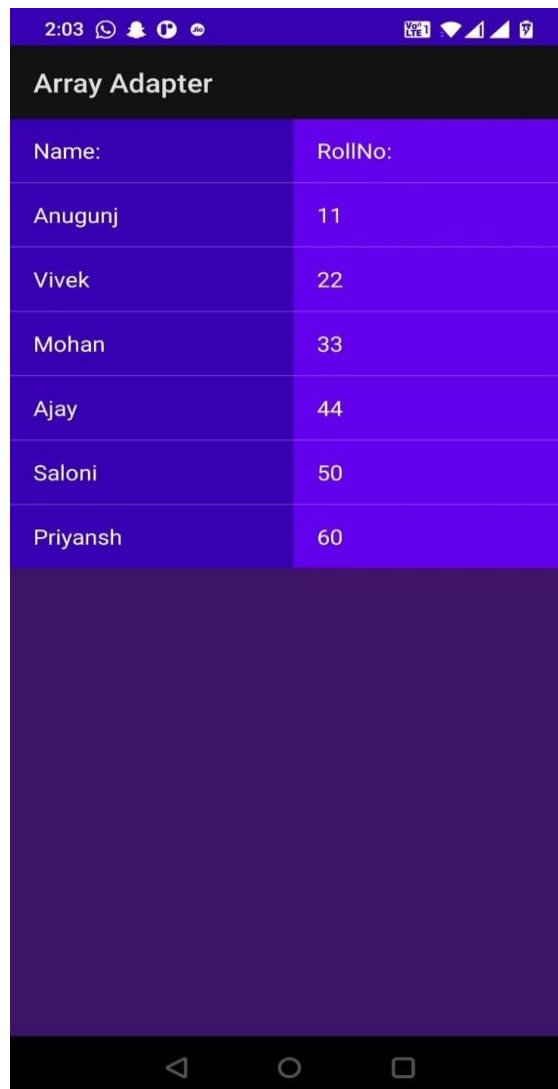
Course: BSC (IT)
Section: B
Subject Code: PBI 501

(Colors.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
<color name="purple_500">#FF6200EE</color>
<color name="purple_700">#FF3700B3</color>
<color name="purple">#3e1468</color>
</resources>
```

OUTPUT



Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

DATE OF PRACTICAL – 27 SEPTEMBER 2022

PROBLEM STATEMENT: Create an Android Application to Take Four Radio Buttons of Different Colors. When User Select any Radio Button, Background Color of Text View should be Changed.

OBJECTIVE: To Change the Text View Colors by Clicking on Radio Button Names Respectively.

(activity_main.xml)

CODE:

```
<?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"
    android:background="@color/purple_200"
    tools:context=".MainActivity">

    <RadioGroup
        android:layout_width="match_parent"
        android:layout_height="510dp"
        android:id="@+id/rg">
        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="RED"
            android:textSize="50dp"
            android:id="@+id/rb1"
        />
        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="BLUE"
            android:textSize="50dp"
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        android:id="@+id/rb2"
    />
<RadioButton

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="GREEN"
        android:textSize="50dp"
        android:id="@+id/rb3"
    />
<RadioButton

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="MAGENTA"
        android:textSize="50dp"
        android:id="@+id/rb4"
    />
</RadioGroup>
<TextView

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/tv"
        android:text="ANDROID"
        android:textStyle="bold"
        android:textSize="80dp"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="550dp"
    />
</RelativeLayout>
```

(AndroidManifest.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
<application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"

    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/Theme.RadioButtons"
    tools:targetApi="31">
    <activity
        android:name=".MainActivity"
        android:exported="true">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>

        <meta-data
            android:name="android.app.lib_name"
            android:value="" />
        </activity>
    </application>

</manifest>
```

(MainActivity.java)

CODE:

```
package com.example.radiobuttons;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
```

Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
import android.widget.RadioButton;  
import android.widget.RadioGroup;  
import android.widget.TextView;
```

```
public class MainActivity extends AppCompatActivity
```

```
{RadioGroup rg;  
RadioButton rb1,rb2,rb3,rb4;  
TextView tv;  
@Override  
protected void onCreate(Bundle savedInstanceState)  
{super.onCreate(savedInstanceState);  
setContentView(R.layout.activity_main);  
rg=findViewById(R.id.rg);  
tv=findViewById(R.id.tv);  
rb1=findViewById(R.id.rb1);  
rb2=findViewById(R.id.rb2);  
rb3=findViewById(R.id.rb3);  
rb4=findViewById(R.id.rb4);  
rg.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener()  
{@Override  
public void onCheckedChanged(RadioGroup radioGroup, int i)  
{switch (i){  
case R.id.rb1:  
tv.setBackgroundColor(Color.RED);  
break;  
}  
switch (i){  
case R.id.rb2:  
tv.setBackgroundColor(Color.BLUE);  
break;  
}  
switch (i){  
case R.id.rb3:  
tv.setBackgroundColor(getResources().getColor(R.color.green));  
break;
```


Name: Anugunj Goel
Roll Number: 2023034/11
Subject Name: Mobile Application Development Lab

Course: BSC (IT)
Section: B
Subject Code: PBI 501

```
        }  
        switch (i){  
            case R.id.rb4:  
                tv.setBackgroundColor(Color.MAGENTA);  
                break;  
            }  
        }  
    });  
}  
}
```

(Strings.xml)

CODE:

```
<resources>  
<string name="app_name">Radio Buttons</string>  
</resources>
```

(Colors.xml)

CODE:

```
<?xml version="1.0" encoding="utf-8"?>  
<resources>  
<color name="purple_200">#FFBB86FC</color>  
<color name="green">#057206</color>  
</resources>
```

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OUTPUT



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