Experiment 4

Title: Building "Hello World" application with customized theme and material design.

Aim: Simple application using Material design with customized theme.

MainActivity.java

```java
package com.example.practical4;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import com.google.android.material.button.MaterialButton;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);


        MaterialButton button = findViewById(R.id.materialButton);
        button.setOnClickListener(v -> {
        });
    }
}
```

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
```

```xml
<com.google.android.material.textview.MaterialTextView
    android:id="@+id/helloWorldText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello, World!"
    android:textSize="24sp"
    android:textColor="@color/purple_500"
    android:gravity="center"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent" />

<com.google.android.material.button.MaterialButton
    android:id="@+id/materialButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Click Me"
    android:textColor="@android:color/white"
    android:backgroundTint="@color/teal_700"
    app:cornerRadius="12dp"
    app:layout_constraintTop_toBottomOf="@id/helloWorldText"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    android:layout_marginTop="16dp"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

AndroidManifest.xml

```xml
<manifest xmlns:android="http://schemas.android.com/apk/res/android">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
```

```xml
                android:roundIcon="@mipmap/ic_launcher_round"
                android:supportsRtl="true"
                android:theme="@style/Theme.Practical4">
                <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>
            </application>
        </manifest>
```

res/values/themes.xml

```xml
<resources xmlns:tools="http://schemas.android.com/tools">
    <style name="Theme.Practical4"
parent="Theme.MaterialComponents.DayNight.DarkActionBar">
        <item name="colorPrimary">@color/purple_500</item>
        <item name="colorPrimaryVariant">@color/purple_700</item>
        <item name="colorOnPrimary">@android:color/white</item>
        <item name="colorSecondary">@color/teal_200</item>
        <item name="colorSecondaryVariant">@color/teal_700</item>
        <item name="colorOnSecondary">@android:color/white</item>
        <item name="android:statusBarColor"
tools:targetApi="l">@color/purple_700</item>
        <item name="android:navigationBarColor">@color/teal_200</item>
    </style>
</resources>
```

res/values/colors.xml

```xml
<resources>
    <color name="purple_200">#BB86FC</color>
    <color name="purple_500">#6200EE</color>
```

```xml
    <color name="purple_700">#3700B3</color>
    <color name="teal_200">#03DAC5</color>
    <color name="teal_700">#018786</color>
    <color name="black">#000000</color>
    <color name="white">#FFFFFF</color>
</resources>
```

Output: