

Program No:	8
Roll No :	1545
Title of Program :	Image View
Objective :	Design an application to change the image on click of the button in image view.

ImageView is a user interface component in Android used to display images in an app. You can use ImageView to show images from various sources, such as resources bundled in the app (like PNG, JPEG files in the drawable folder), assets, files from the device storage, or images from the internet.

Key uses:

- Display static images like icons, photos, artwork, or illustrations within a layout.
- Present images from a database or the internet using libraries such as Glide or Picasso.
- Support for basic image manipulations, such as scaling, cropping, and color filtering.

Source Code:

activity_main.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">

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="16dp"
        android:contentDescription="Image"
        app:layout_constraintBottom_toTopOf="@+id/button"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/img1" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Replace"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        />

</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```
package com.example.imageswitcher;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```
import android.widget.ImageView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

    ImageView imageView;
    Button button;
    boolean isOriginal = true;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });

        imageView = findViewById(R.id.imageView);
        button = findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                // Replace image with another one
                if (isOriginal) {
                    imageView.setImageResource(R.drawable.img1);
                    isOriginal = false;
                } else {
                    imageView.setImageResource(R.drawable.img2);
                    isOriginal = true;
                }
            }
        });
    }
}
```

Output:

