

Q.1) Construct image switcher using setFactory().

1. **Layout XML (activity\_main.xml):**

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

<RelativeLayout 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:padding="16dp"
    tools:context=".MainActivity">

    <ImageSwitcher
        android:id="@+id/imageSwitcher"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

    <Button
        android:id="@+id/prevButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentStart="true"
        android:onClick="prevImage"
        android:text="Previous" />

    <Button
```

```
    android:layout_alignParentBottom="true"

    android:layout_alignParentEnd="true"

    android:onClick="nextImage"

    android:text="Next" />
```

```
</RelativeLayout>
```

## 2. Java code (MainActivity.java):

```
import android.os.Bundle;
import android.view.View;
import android.widget.ImageSwitcher;
import android.widget.ImageView;
import android.widget.Button;
import android.widget.ViewSwitcher;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private ImageSwitcher imageSwitcher;
    private int[] images = {R.drawable.image1, R.drawable.image2, R.drawable.image3};
    private int currentIndex = 0;

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

        imageSwitcher = findViewById(R.id.imageSwitcher);
        imageSwitcher.setFactory(new ViewSwitcher.ViewFactory() {
```

```
@Override

public View makeView() {

    ImageView imageView = new ImageView(getApplicationContext());

    imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);

    return imageView;

}

});

// Display the first image initially
imageSwitcher.setImageResource(images[currentIndex]);
}

public void nextImage(View view) {
    if (currentIndex < images.length - 1) {
        currentIndex++;
    } else {
        currentIndex = 0;
    }
    imageSwitcher.setImageResource(images[currentIndex]);
}

public void prevImage(View view) {
    if (currentIndex > 0) {
        currentIndex--;
    } else {
        currentIndex = images.length - 1;
    }
    imageSwitcher.setImageResource(images[currentIndex]);
}
```

}