

# Hybrid Application Development Lab Assignment - 1

Name : Ankit Hegde

USN : 1NT19IS029

Subject : Hybrid Application Development Lab

## 1. Showing all 6 activity cycles in the application.

Code:

**MainActivity.java :**

```
package com.example.my_application;

import static android.widget.Toast.makeText;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    Button bt_p, bt_n;
    ImageView iv;
    boolean flag;
    int images[] = {R.drawable._1, R.drawable._2, R.drawable._3, R.drawable._4};
    int i=0;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Context context = getApplicationContext();
        CharSequence text = "App just created ";
        int duration = Toast.LENGTH_SHORT;
        Toast toast = makeText(context, text, duration);
        toast.show();

        iv = (ImageView) findViewById(R.id.img);
        bt_p = (Button) findViewById(R.id.button_previous);
        bt_n = (Button) findViewById(R.id.button_next);
        flag = true;
```

```

    bt_p.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            i = (i-1) % images.length;
            if(i<0)
                i += images.length;
            iv.setImageResource(images[i]);
        }
    });

    bt_n.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            i = (i+1) % images.length;
            iv.setImageResource(images[i]);
        }
    });

    WebView myWebView = (WebView) findViewById(R.id.webview);

    myWebView.loadUrl("https://amazon.com");
    myWebView.getSettings().setJavaScriptEnabled(true);
    myWebView.setWebViewClient(new WebViewClient());
}

@Override
protected void onStart() {
    super.onStart();

    Context context = getApplicationContext();
    CharSequence text = "App just started !";
    int duration = Toast.LENGTH_SHORT;
    Toast toast = makeText(context, text, duration);
    toast.show();
}

@Override
protected void onResume() {
    super.onResume();
    Context context = getApplicationContext();
    CharSequence text = "App just Resumed";
    int duration = Toast.LENGTH_SHORT;
    Toast toast = makeText(context, text, duration);
    toast.show();
}

@Override
protected void onPause() {
    super.onPause();

    Context context = getApplicationContext();
    CharSequence text = "App just Paused";
    int duration = Toast.LENGTH_SHORT;
    Toast toast = makeText(context, text, duration);

```

```

        toast.show();
    }

    @Override
    protected void onRestart() {
        super.onRestart();

        Context context = getApplicationContext();
        CharSequence text = "App just Restarted";
        int duration = Toast.LENGTH_SHORT;
        Toast toast = makeText(context, text, duration);
        toast.show();
    }

    @Override
    protected void onStop() {
        super.onStop();
        Context context = getApplicationContext();
        CharSequence text = "App just Stopped";
        int duration = Toast.LENGTH_SHORT;
        Toast toast = makeText(context, text, duration);
        toast.show();
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();

        Context context = getApplicationContext();
        CharSequence text = "App just Destroyed";
        int duration = Toast.LENGTH_SHORT;
        Toast toast = makeText(context, text, duration);
        toast.show();
    }
}

```

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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    tools:layout_editor_absoluteX="0dp"
    tools:layout_editor_absoluteY="-97dp">

```

<TextView

```
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

    android:text="Hello, welcome to my Application"
    app:layout_constraintBottom_toTopOf="@+id/img"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.47" />
```

<ImageView

```
    android:id="@+id/img"
    android:layout_width="189dp"
    android:layout_height="124dp"
    android:layout_marginTop="48dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@drawable/_1" />
```

<Button

```
    android:id="@+id/button_previous"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="60dp"
    android:layout_marginTop="24dp"
    android:text="Previous"
    app:layout_constraintEnd_toStartOf="@+id/button_next"
    app:layout_constraintHorizontal_bias="0.507"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/img" /> -
```

<Button

```
    android:id="@+id/button_next"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="24dp"
    android:layout_marginEnd="100dp"
    android:text="Next"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/img" />
```

<WebView

```
    android:id="@+id/webview"
    android:layout_width="430dp"
    android:layout_height="324dp"
```

```

        android:layout_marginStart="1dp"
        android:layout_marginTop="19dp"
        android:layout_marginEnd="1dp"
        android:layout_marginBottom="168dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.523"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/button_previous"
        app:layout_constraintVertical_bias="0.0" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

## Android\_manifest.xml :

```

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

    <uses-permission android:name="android.permission.INTERNET"/>
    <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.My_Application"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true"
            android:windowSoftInputMode="adjustPan">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

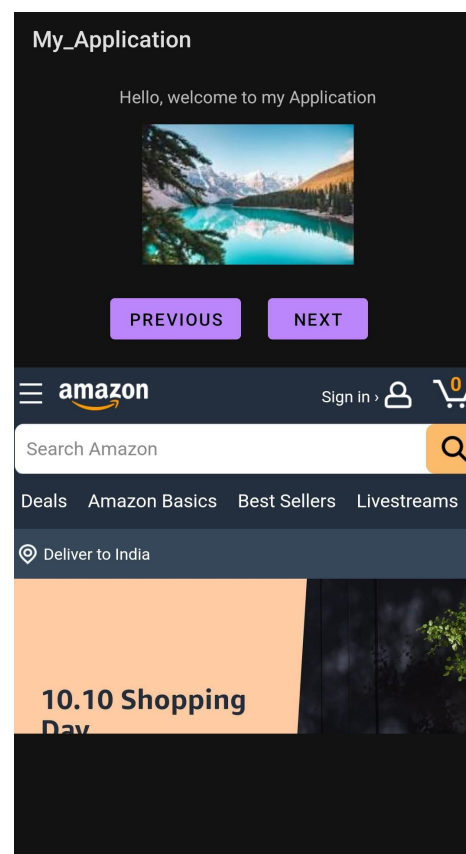
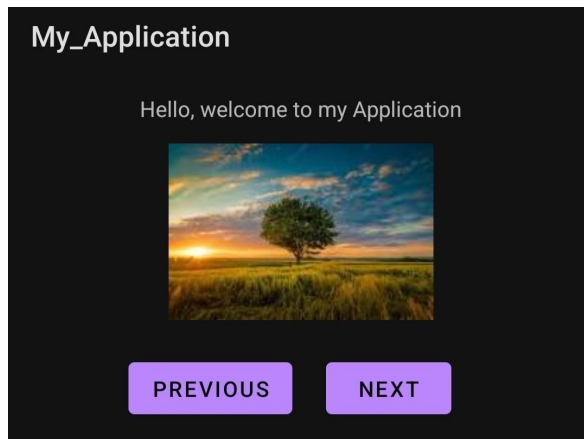
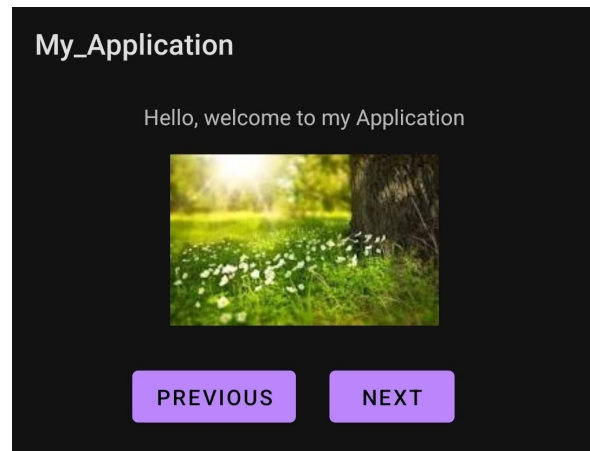
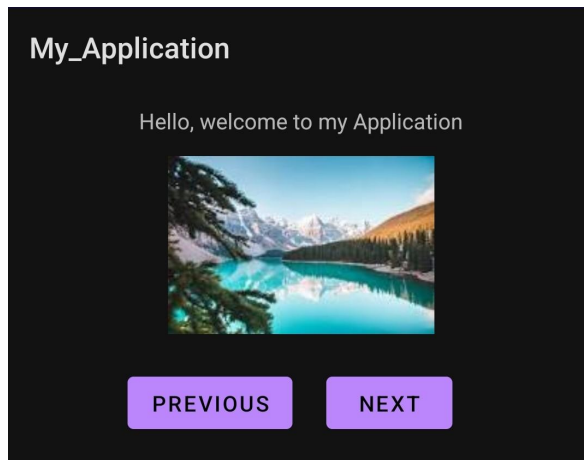
            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
        </activity>
    </application>

</manifest>

```

Output :

Image switching using Next and previous buttons :



(Web view included in the app)

Demonstration of activity lifecycle :

