3.Demonstrate the life cycle of an Activity.

**Activity.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">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**Activity.java**

package com.example.lifecycle;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.util.Log;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Log.*d*("lifecycle","onCreate Invoked");  
 }  
  
 @Override  
 protected void onStart() {  
 super.onStart();  
 Log.*d*("lifecycle","onStart Invoked");  
 }  
  
 @Override  
 protected void onResume() {  
 super.onResume();  
 Log.*d*("lifecycle", "onResume Invoked");  
 }  
 @Override  
 protected void onPause() {  
 super.onPause();  
 Log.*d*("lifecycle", "onPause Invoked");  
 }  
  
 @Override  
 protected void onStop() {  
 super.onStop();  
 Log.*d*("lifecycle", "onStop Invoked");  
 }  
  
 @Override  
 protected void onDestroy() {  
 super.onDestroy();  
 Log.*d*("lifecycle", "onDestroy Invoked");  
 }  
}

**output**

**2022-08-23 12:09:25.763 1589-1589/com.example.lifecycle D/lifecycle: onCreate Invoked**

**2022-08-23 12:09:25.764 1589-1589/com.example.lifecycle D/lifecycle: onStart Invoked**

**2022-08-23 12:09:25.766 1589-1589/com.example.lifecycle D/lifecycle: onResume Invoked**

**2022-08-23 12:11:16.619 1589-1589/com.example.lifecycle D/lifecycle: onPause Invoked**

**2022-08-23 12:11:17.259 1589-1589/com.example.lifecycle D/lifecycle: onStop Invoked**

**2022-08-23 12:11:17.259 1589-1589/com.example.lifecycle D/lifecycle: onDestroy Invoked**

**2022-08-23 12:11:22.058 1589-1589/com.example.lifecycle D/lifecycle: onCreate Invoked**

**2022-08-23 12:11:22.059 1589-1589/com.example.lifecycle D/lifecycle: onStart Invoked**

**2022-08-23 12:11:22.061 1589-1589/com.example.lifecycle D/lifecycle: onResume Invoked**