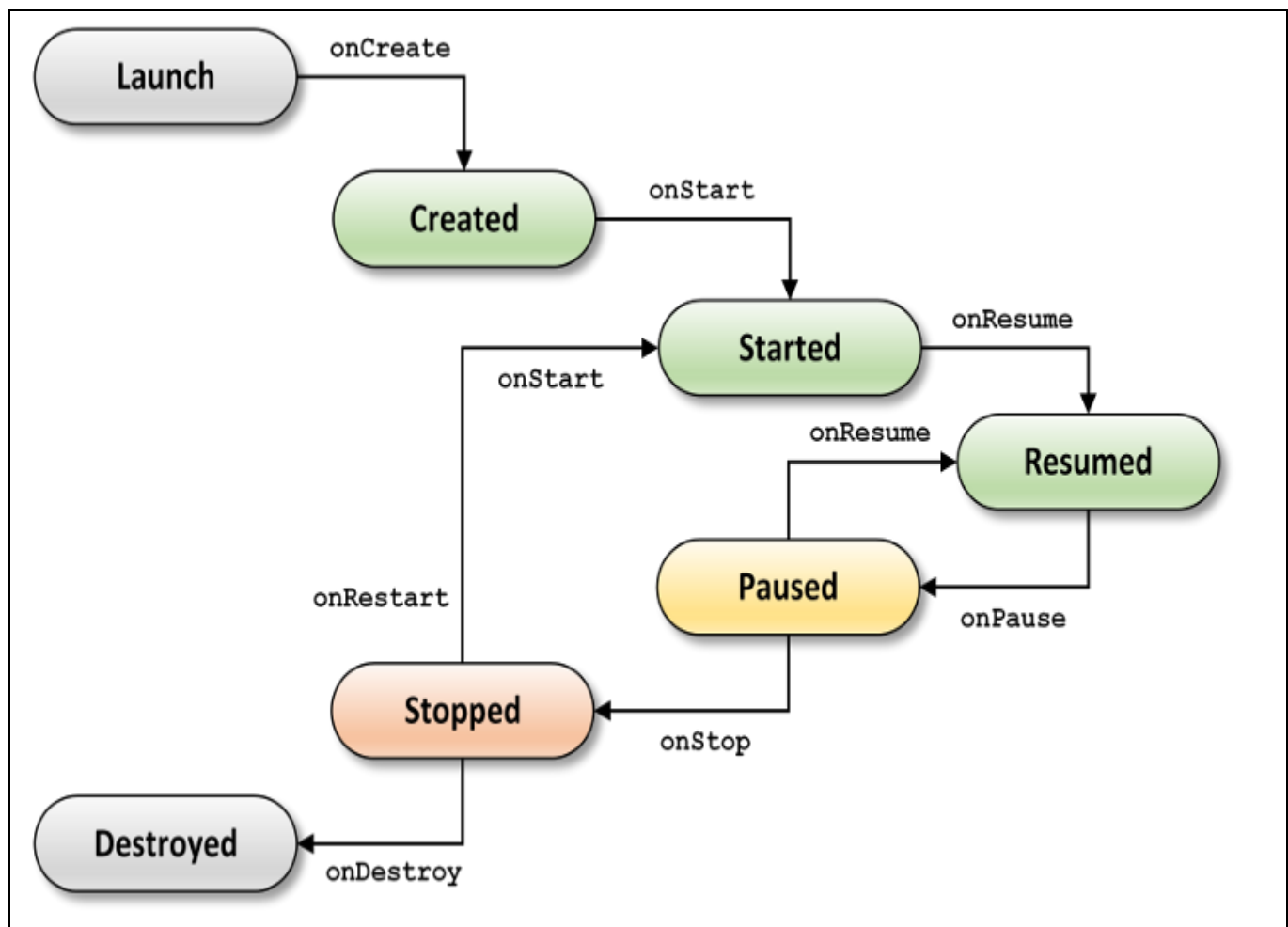


Practical 3**Programming Activities and fragments**

Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments.

a) Activity Life Cycle

The various methods to be created are `onStart()`, `onRestart()`, `onStop()`, `onResume()`, `onDestroy()` and `onPause()` as shown in the figure.



Create a new project and go to, **MainActivity.java**

```
package MaharashtraCollege.example.profshahidansari;

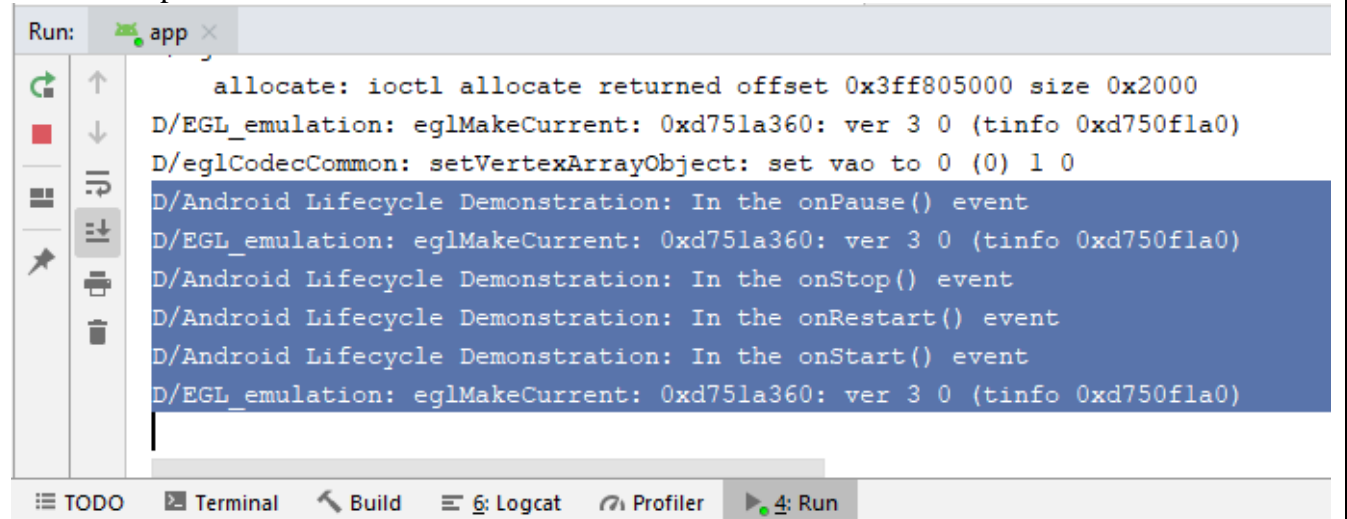
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;
public class MainActivity extends AppCompatActivity {

    String tag= "Android Lifecycle Demonstration";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d(tag,"In the onCreate() event");
    }
    public void onStart()
    {
        super.onStart();
        Log.d(tag,"In the onStart() event");
    }
    public void onRestart()
    { super.onRestart();
        Log.d(tag,"In the onRestart() event");
    }
    public void onPause()
    {
        super.onPause();
        Log.d(tag,"In the onPause() event");
    }
    public void onStop()
    {
        super.onStop();
        Log.d(tag,"In the onStop() event");
    }
    public void onDestroy()
    {
        super.onDestroy();
        Log.d(tag,"In the onDestroy() event");
    }
}
```

Output

See the Output in Run tab



```
Run: app x
allocate: ioctl allocate returned offset 0x3ff805000 size 0x2000
D/EGL_emulation: eglMakeCurrent: 0xd751a360: ver 3 0 (tinfo 0xd750fla0)
D/eglCodecCommon: setVertexArrayObject: set vao to 0 (0) 1 0
D/Android Lifecycle Demonstration: In the onPause() event
D/EGL_emulation: eglMakeCurrent: 0xd751a360: ver 3 0 (tinfo 0xd750fla0)
D/Android Lifecycle Demonstration: In the onStop() event
D/Android Lifecycle Demonstration: In the onRestart() event
D/Android Lifecycle Demonstration: In the onStart() event
D/EGL_emulation: eglMakeCurrent: 0xd751a360: ver 3 0 (tinfo 0xd750fla0)
```

b) Life Cycle of fragments

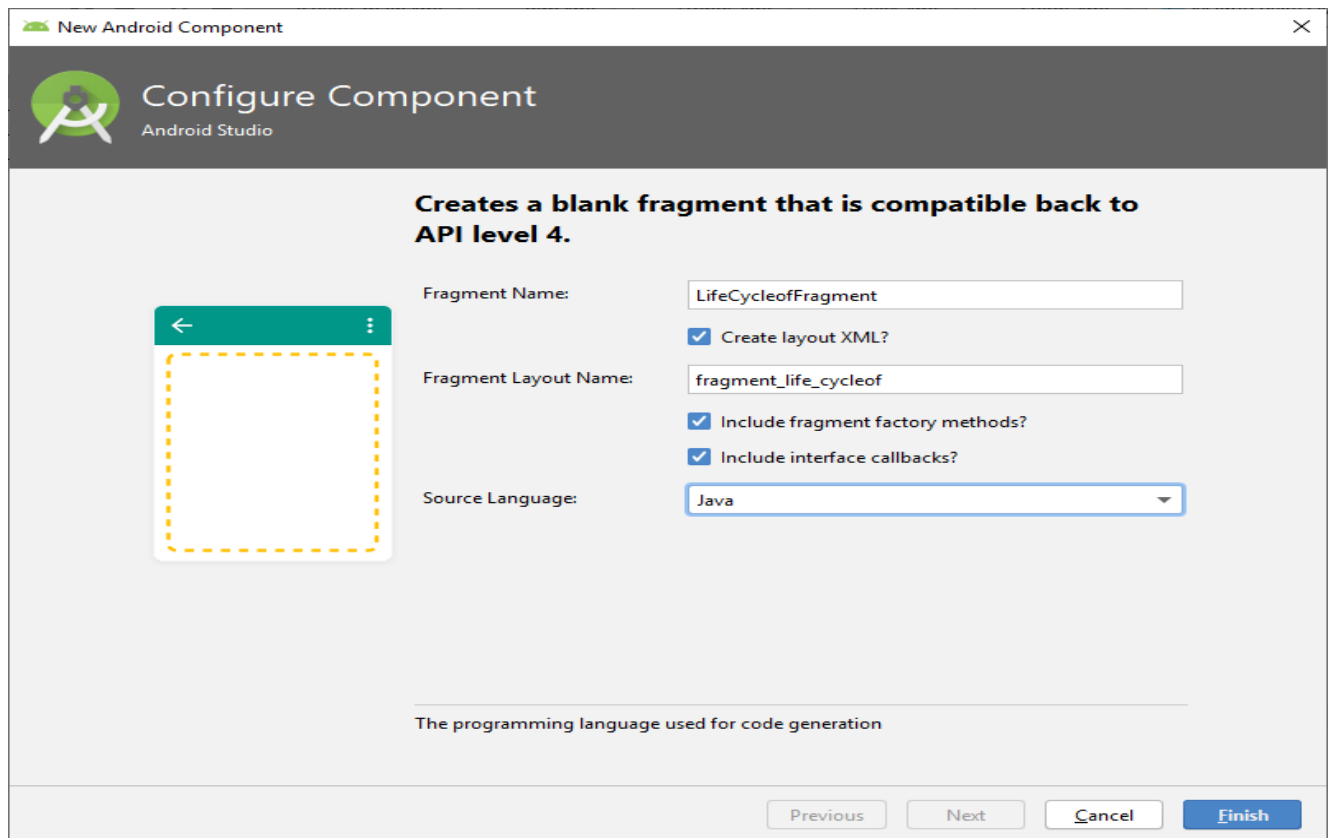
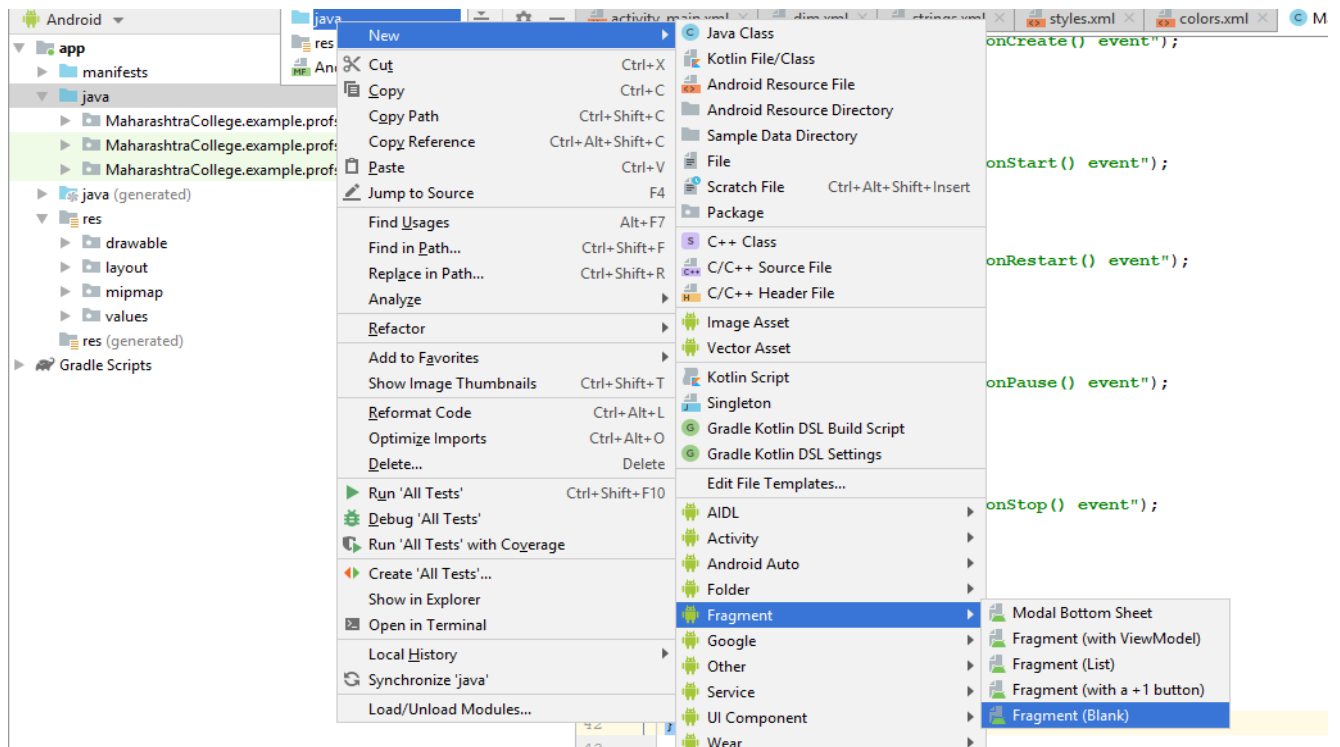
Create a new project

Add a new Fragment

ProjectName>App>src>main>Java

3. Right click on Java and select **'Add Fragment'>Add
Fragment(Blank)**

Give a name to the fragment and click Finish



```
package MaharashtraCollege.example.profshahidansari;

import android.content.Context;
import android.net.Uri;
import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.util.Log;

public class LifecycleofFragment extends Fragment {
    String tag = "Life Cycle of Fragment";
    // TODO: Rename parameter arguments, choose names that match
    // the fragment initialization parameters, e.g. ARG_ITEM_NUMBER
    private static final String ARG_PARAM1 = "param1";
    private static final String ARG_PARAM2 = "param2";

    // TODO: Rename and change types of parameters
    private String mParam1;
    private String mParam2;

    private OnFragmentInteractionListener mListener;

    public LifecycleofFragment() {

        // TODO: Rename and change types and number of parameters
        public static LifecycleofFragment newInstance(String param1, String
param2) {
            LifecycleofFragment fragment = new LifecycleofFragment();
            Bundle args = new Bundle();
            args.putString(ARG_PARAM1, param1);
            args.putString(ARG_PARAM2, param2);
            fragment.setArguments(args);
            return fragment;
        }

        @Override
        public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            if (getArguments() != null) {
                mParam1 = getArguments().getString(ARG_PARAM1);
                mParam2 = getArguments().getString(ARG_PARAM2);
            }
        }

        @Override
        public View onCreateView(LayoutInflater inflater, ViewGroup container,
                                Bundle savedInstanceState) {
```

```
// Inflate the layout for this fragment
return inflater.inflate(R.layout.fragment_life_cycleof, container,
false);
}

// TODO: Rename method, update argument and hook method into UI event
public void onPressed(Uri uri) {
    if (mListener != null) {
        mListener.onFragmentInteraction(uri);
    }
}

@Override
public void onAttach(Context context) {
    super.onAttach(context);
    if (context instanceof OnFragmentInteractionListener) {
        mListener = (OnFragmentInteractionListener) context;
    } else {
        throw new RuntimeException(context.toString()
            + " must implement OnFragmentInteractionListener");
    }
}

@Override
public void onDetach() {
    super.onDetach();
    mListener = null;
}

public interface OnFragmentInteractionListener {
    // TODO: Update argument type and name
    void onFragmentInteraction(Uri uri);
}

public void onStart()
{
    super.onStart();
    Log.d(tag, "In the onStart() event");
}

public void onRestart()
{
    Log.d(tag, "In the onRestart() event");
}

public void onPause()
{
    super.onPause();
    Log.d(tag, "In the onPause() event");
}

public void onStop()
{
    super.onStop();
    Log.d(tag, "In the onStop() event");
}
```

```

public void onDestroy()
{
    super.onDestroy();
    Log.d(tag, "In the onDestroy() event");
}
}

```

Output

