Android Class

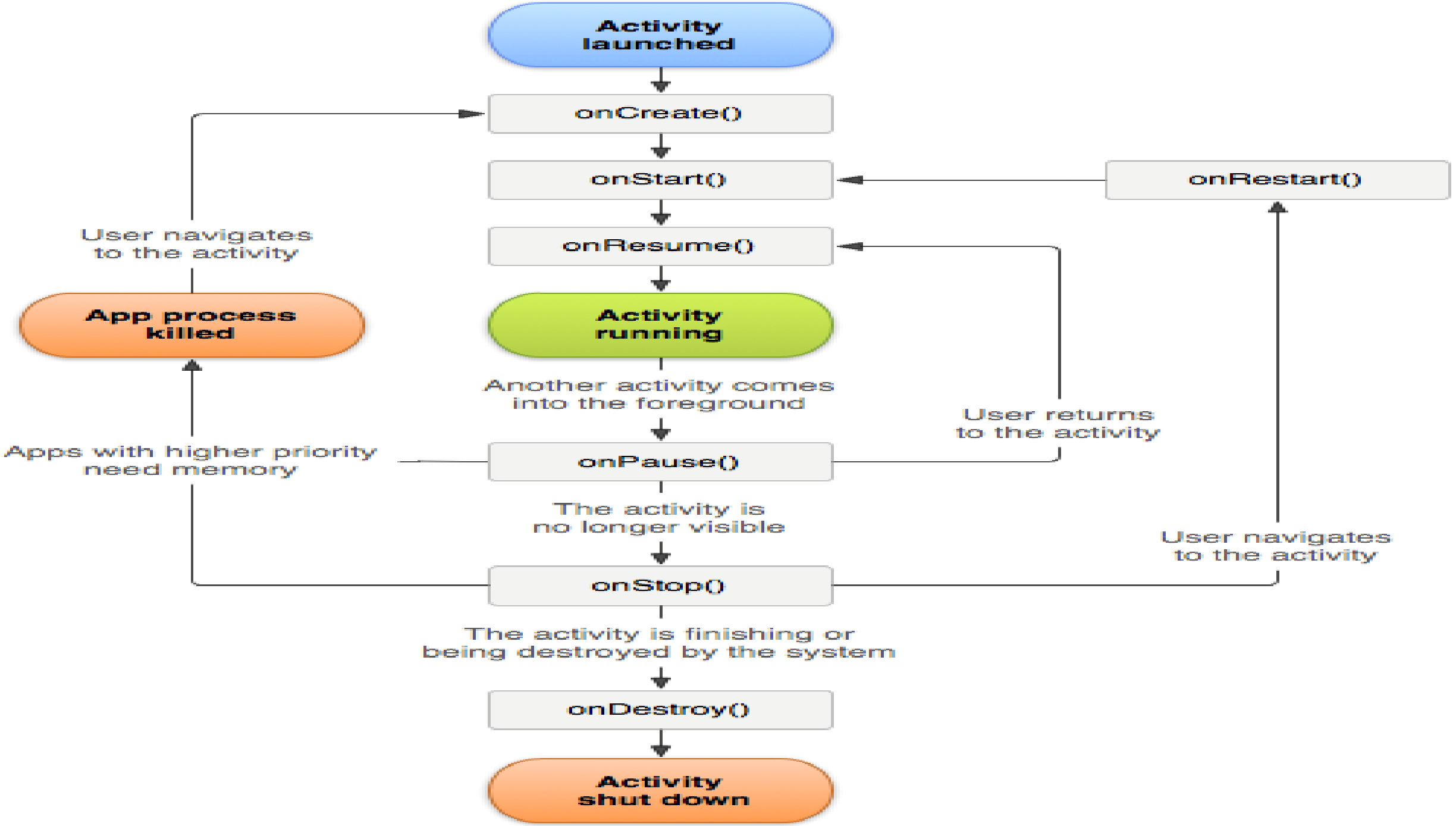
#Android Notes

Activity Life Cycle

Activity Life Cycle

- Android system initiates its program with in an **Activity** starting with a call on **onCreate()** callback method.

- There is a sequence of callback methods that start up an activity and a sequence of callback methods that tear down an activity as shown in the below Activity life cycle diagram:


Activity launched
onCreate()
onStart()
onRestart()
onResume()
Activity running
App process killed
User navigates to the activity
Another activity comes into the foreground
User returns to the activity
Apps with higher priority need memory
onPause()
The activity is no longer visible
User navigates to the activity
onStop()
The activity is finishing or being destroyed by the system
onDestroy()
Activity shut down

Activity Life Cycle Methods

1. onCreate()
   - This is the first callback and called when the activity is first created.

2. onStart()
   - This callback is called when the activity becomes visible to the user.

3. onResume()
   - This is called when the user starts interacting with the application.

Cont...

4. onPause()
   - The paused activity does not receive user input and cannot execute any code and called when the current activity is being paused and the previous activity is being resumed.

5. onStop()
   - This callback is called when the activity is no longer visible.

6. onDestroy()
   - This callback is called before the activity is destroyed by the system.

Cont...

7. onRestart()
   - This callback is called when the activity restarts after stopping it.

Example

- **Following content you need to write in activity_main.xml file –**

```
<LinearLayout 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"
    android:orientation="vertical"
    tools:context=".LifeCycleActivity">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="Activity Lifecycle"
        android:textStyle="bold"
        android:textColor="#000"
        android:textSize="30dp"
        android:gravity="center"/>
</LinearLayout>
```

Cont...

- **Following content you need to write in MainActivity.java file –**

```
public class MainActivity extends AppCompatActivity
{
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("TAG","onCreate called");
    }
```

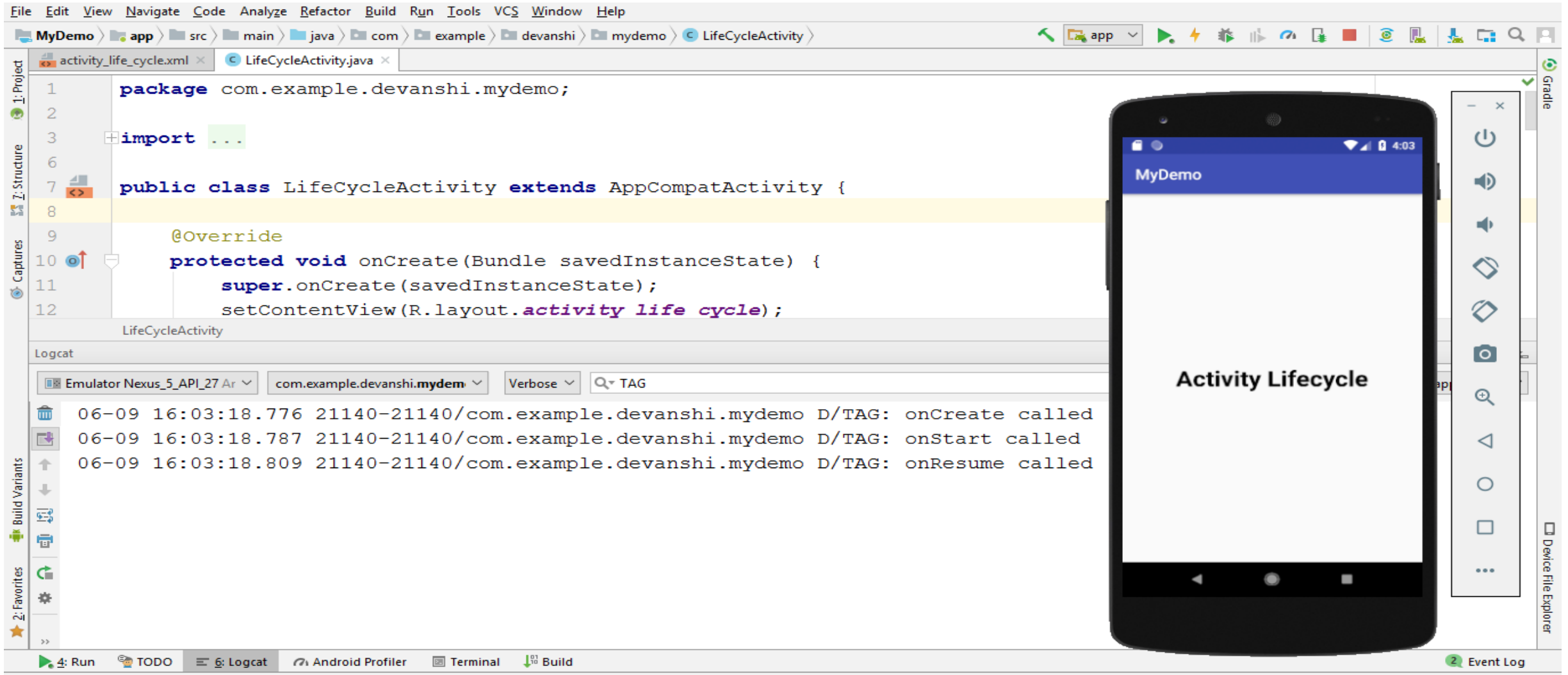
Cont...

```
@Override
    protected void onStart() {
        super.onStart();
        Log.d("TAG","onStart called");
    }
    @Override
    protected void onResume() {
        super.onResume();
        Log.d("TAG","onResume called");
    }
    @Override
    protected void onPause() {
        super.onPause();
        Log.d("TAG","onPause called");    }
```

Cont...

```
@Override
    protected void onStop() {
        super.onStop();
        Log.d("TAG","onStop called");
    }
    @Override
    protected void onRestart() {
        super.onRestart();
        Log.d("TAG","onRestart called");
    }
    @Override
    protected void onDestroy() {
        super.onDestroy();
        Log.d("TAG","onDestroy called");    }      }
```

Output


File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MyDemo app src main java com example devanshi mydemo LifeCycleActivity
activity_life_cycle.xml
LifeCycleActivity.java
1 package com.example.devanshi.mydemo;
3 import ...
7 public class LifeCycleActivity extends AppCompatActivity {
9 @Override
10 protected void onCreate(Bundle savedInstanceState) {
11 super.onCreate(savedInstanceState);
12 setContentView(R.layout.activity_life_cycle);
LifeCycleActivity
Logcat
Emulator Nexus_5_API_27
com.example.devanshi.mydem
Verbose
TAG
06-09 16:03:18.776 21140-21140/com.example.devanshi.mydemo D/TAG: onCreate called
06-09 16:03:18.787 21140-21140/com.example.devanshi.mydemo D/TAG: onStart called
06-09 16:03:18.809 21140-21140/com.example.devanshi.mydemo D/TAG: onResume called
MyDemo
Activity Lifecycle
4: Run
TODO
6: Logcat
Android Profiler
Terminal
Build
Event Log

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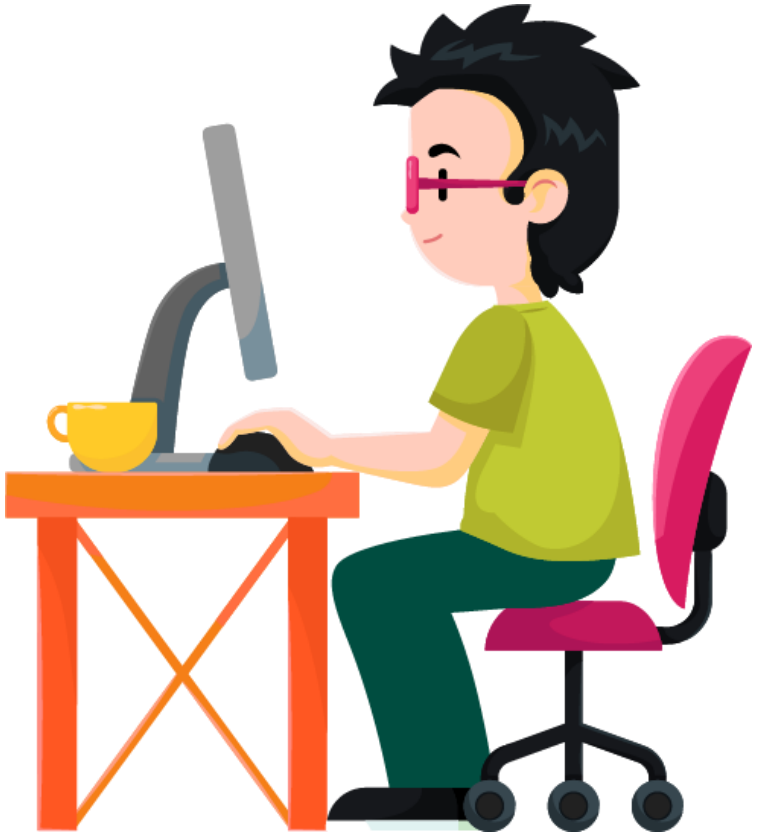

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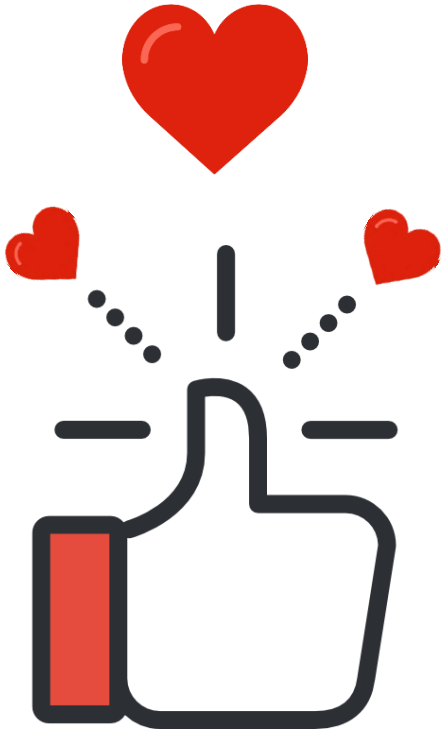

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