

```

class Graph{
    ArrayList<Integer> [] adjList;
    int size;
    int [] startTime;
    int [] finishTime;

    public DFS(int root,Timer timer){
        timer.incClock();
        startTime[root] = timer.getTime();

        for(int neighbour:adjList[root]){
            if(startTime[root] == 0){
                DFS(neighbour,timer);
            }
        }

        timer.incClock();
        finishTime[root] = timer.getTime();
    }
}

```

```

class Timer {
    private volatile long time=0;

    synchronized void incClock(){
        time++;
    }

    long getTime(){
        return time;
    }
}

```