

```

1 class BellmanFordAlog
2 {
3     public int isNegativeWeightCycle(int v, int[][] edges)
4     {
5         //code here
6
7         int inf = Integer.MAX_VALUE ;
8         long [] distance = new long[v]; // to keep track of distance from the origin
9         int[] path = new int path[];
10        Array.fill(path, -1);
11        Arrays.fill(distance, inf);
12        distance[0]=0; // try checking for every edge from src + weight <
directDitanceformOrigin[dst]
13        for(int i=0; i<v-1; i++){ //you need to repeat above step for V-1 steps to make sure
changes propagate to all edges;
14            for(int[] edge : edges){
15                if(distance[edge[0]]+edge[2]<distance[edge[1]]){
16                    distance[edge[1]]=distance[edge[0]] + edge[2];
17                    path[edge[1]]=edge[0]; // later to backtrace to find the path
18                }
19            }
20        }
21
22        // if the distance array changes in the below iteration then there is negative weight
loop
23        for(int i=0; i<v-1; i++){
24            for(int[] edge : edges){
25                if(distance[edge[0]]+edge[2]<distance[edge[1]]){
26                    distance[edge[1]]=Integer.MIN_VALUE;
27                    path[edge[1]]=-2; // indicating parth of negative weight loop.// dont know
how to diffrentiate
28                } // between actual part of loop and affected by negative
loops
29            }
30
31
32
33
34        return 0;
35    }
36
37 }

```