***Question02:***

The current insertion works in the following order:

* Initialize a counter variable and iterate till the desired number of edges, and for each random edge, generate the weight using the weight function, and add that edge to the graph matric m\_edge.

We can alter this method to cater negative weight cycle by using the arbitrary function provided “isNegativeWeightCycle” after generating an edge and weight using the weight function and pass the generated edge to the function before adding it to the graph, if the edge created a negative weight cycle, increment the loop counter only otherwise increment the counter and add the edge to the graph m\_edge.

***Question03:***

Since bellman ford algorithm relaxes each edge in the edge set, therefore the relaxing algorithm will be executed for N number of vertices, and since the data structure used is adjacency matrix therefore each pass would take N2 iteration to complete and relax, therefore in the time taken would be O(N\*N2) => O(N3)