Question 1

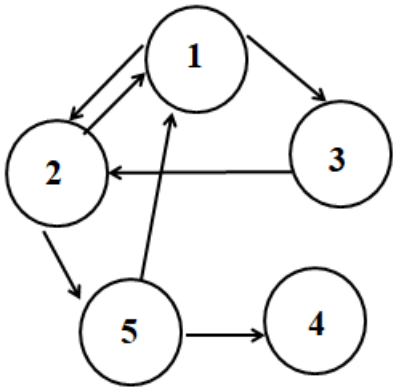
a) Design a class that will store a **weighted directed** graph using adjacency Matrix with following functions.
   1- Count the out-degree of all nodes.
   2- Count the in-degree of all nodes.
   3- Print all neighboring vertices of a particular vertex.
   4- Check if two vertices are directly connected if their indices are provided.

b) Using the provided grapha.txt file, test your functions and Q2.

   In grapha.txt file, the first line tells you're the number of nodes in graph. Rest of the lines tell what vertices are connected and with what weight.

grapha.txt file will be as follows:

```
5
1 2 1
1 3 5
2 1 2
2 5 1
3 2 4
5 4 3
5 1 2
```



Question 2

a) Design a class that will store an **unweighted directed** graph using adjacency List with following functions.
   1- Count the out-degree of all nodes.
   2- Count the in-degree of all nodes.
   3- Print all neighboring vertices of a particular vertex.
   4- Check if two vertices are directly connected if their indices are provided.

b) Using the provided graphb.txt file, test your functions and Q2.
   In graphb.txt file, the first line tells you're the number of nodes in graph. Rest of the lines tell what vertices are connected

graphb.txt file will be as follows:

5
1 2
1 3
2 1
2 5
3 2
5 4
5 1