![A picture containing text, blackboard, clipart

Description automatically generated]()

Here we will create a graph and then print it.

Here 6 node(vertex) and 5 edges. How are each node connected to each other?

![A picture containing text, blackboard

Description automatically generated]()

There are 2 ways to input the list: adjacency list and matrix.

![Text

Description automatically generated]()

Left is adjacency matrix and right is list.

adjacency matrix:

O(v\*v) for both space and time complexity.

Adjacency list:

Here v+e is space and time complexity. This is for average case.

For worst case is. every vertex to another vertex the v^2 is worst case.

Now code for both.

List:

![Text

Description automatically generated]()

6 and 5 in input.txt is vertex and edge.

![A picture containing text, blackboard, night sky

Description automatically generated]()

This is how we enter in vector.

Output of the code

![Text

Description automatically generated]()

Matrix:

![Text

Description automatically generated]()