**Yıldız Technichal University**

**Discrete Mathemathics 2nd Homework**

**Check if a graph is Bipartite or not**

**Rayene BECH 18011115**

The code works with 2 different data structures: The adjacency matrix and the adjacency list.

**Example1:**

This graph(undirected and unweighted):

Will have this matrix: And this linked list:

1->3->4

2->3

3->1->2

4->1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 1 | 1 |
| 0 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0 |

**To enter the list the user shıuld type number of each node and then type -1 at the end to close the list**

**Example 2:**

This graph(directed and weighted)

4

2

8

Will have this matrix: And this linked list:

1->3->2

2->3

3->

4->

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 8 | 4 | 0 |
| 0 | 0 | 2 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**For an empty list (The case where there is an isolated node ) it is enough to enter -1**