DOCUMENTATION

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2017/CS/092

Content

Introduction

My main goal is develop the user friendly graph implementation system. According to this goal, I started to implement the graph. I used to implement this graph netbeans ide and jdk 10.

Overview

I used netbeans ide , then I created a project. Then I created some packages in the project. I created some classes inside the packages. Then I used object oriented programming concept to implement this graph project. So, any user can easily to understand my program and I can search any errors easily. This graph system I am not use to any jframe form because I thought It is not very useful this system. Then I got all the inputs Using scanner class.

Assumptions

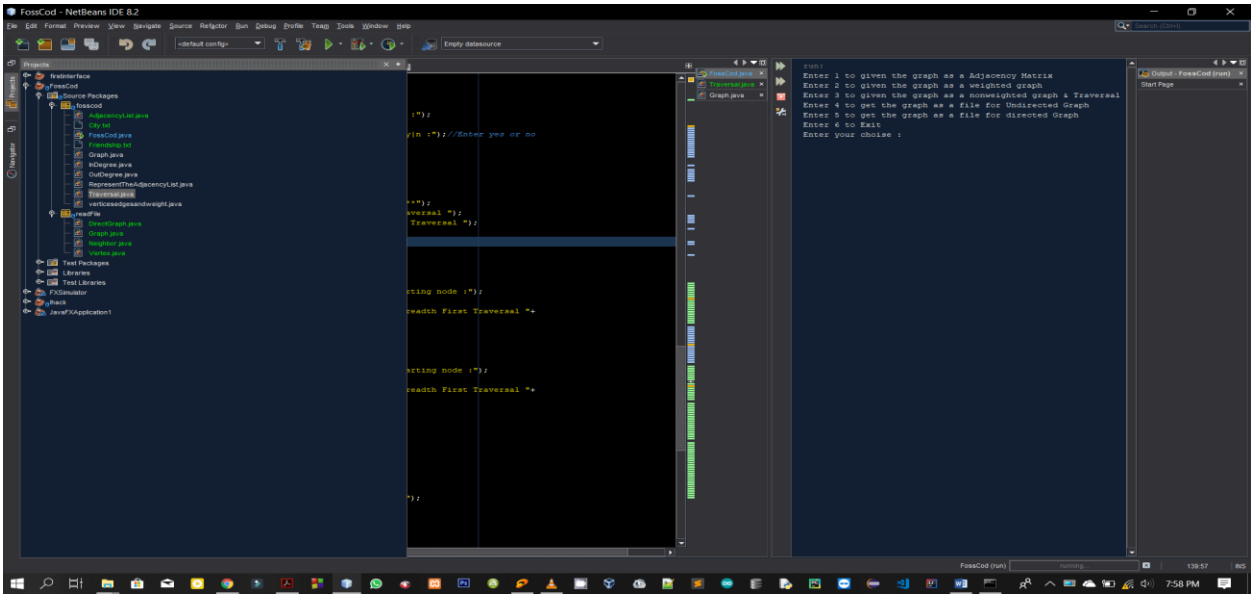
My main Assumption is only user can give the inputs using keyboard.

Setup System

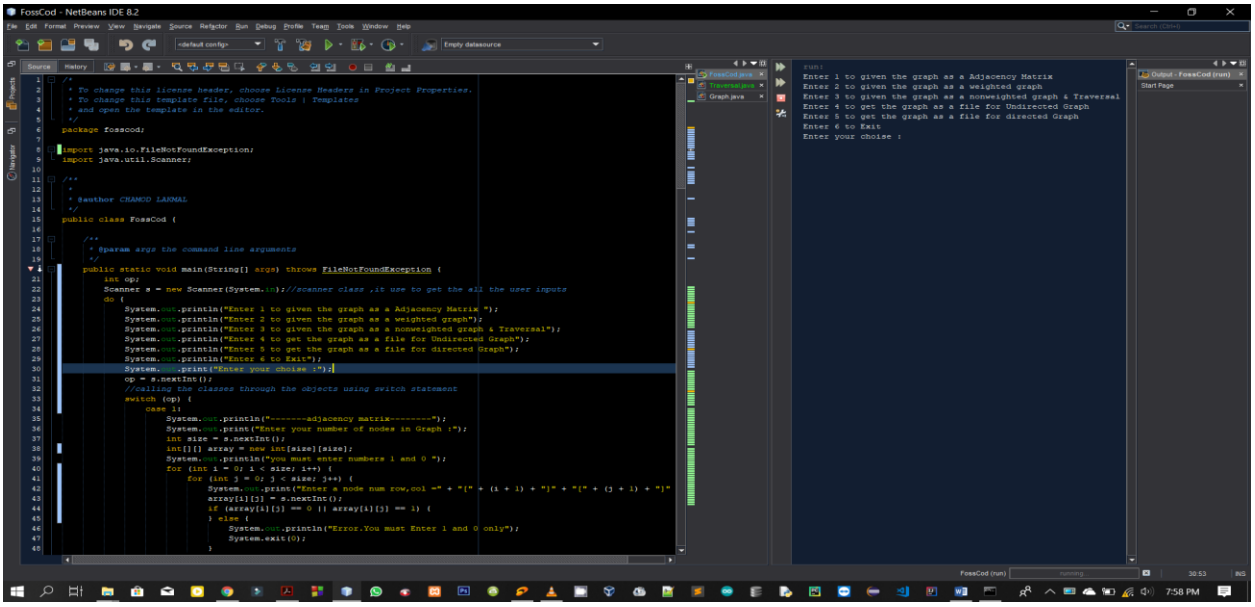
You should clone the my project from Github. Then you should open it on netbeans ide.

Design

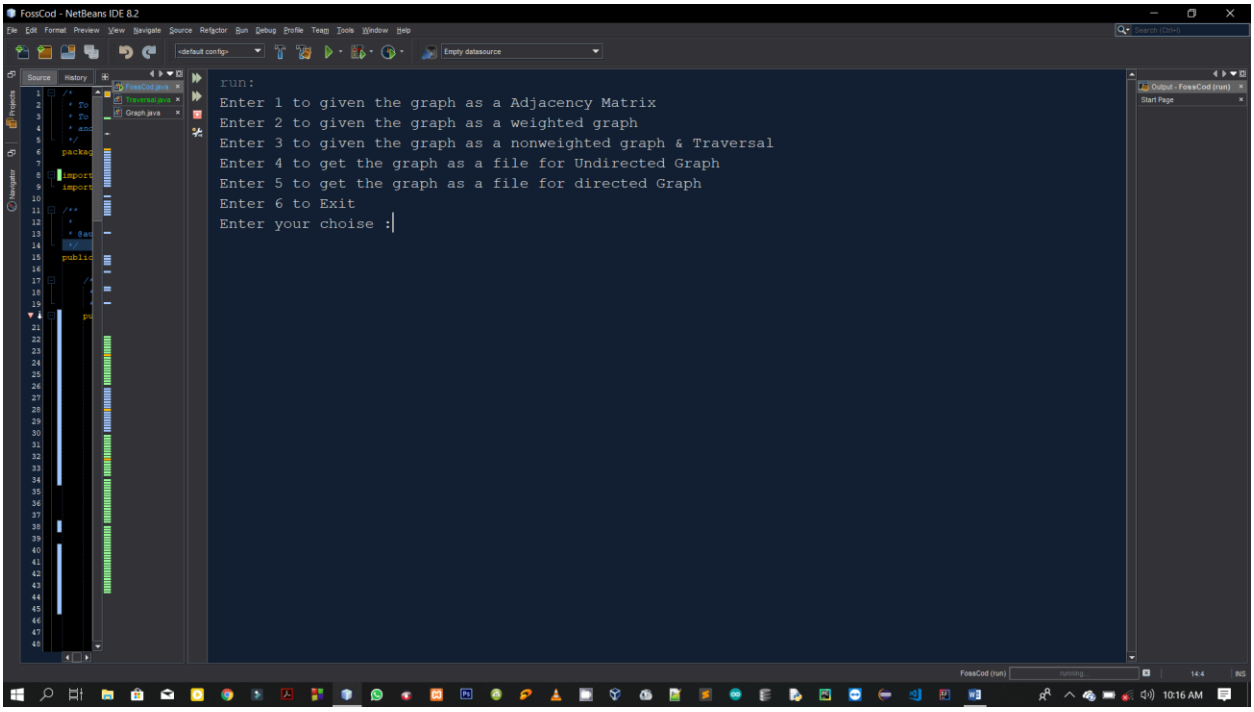
First you can see this window.



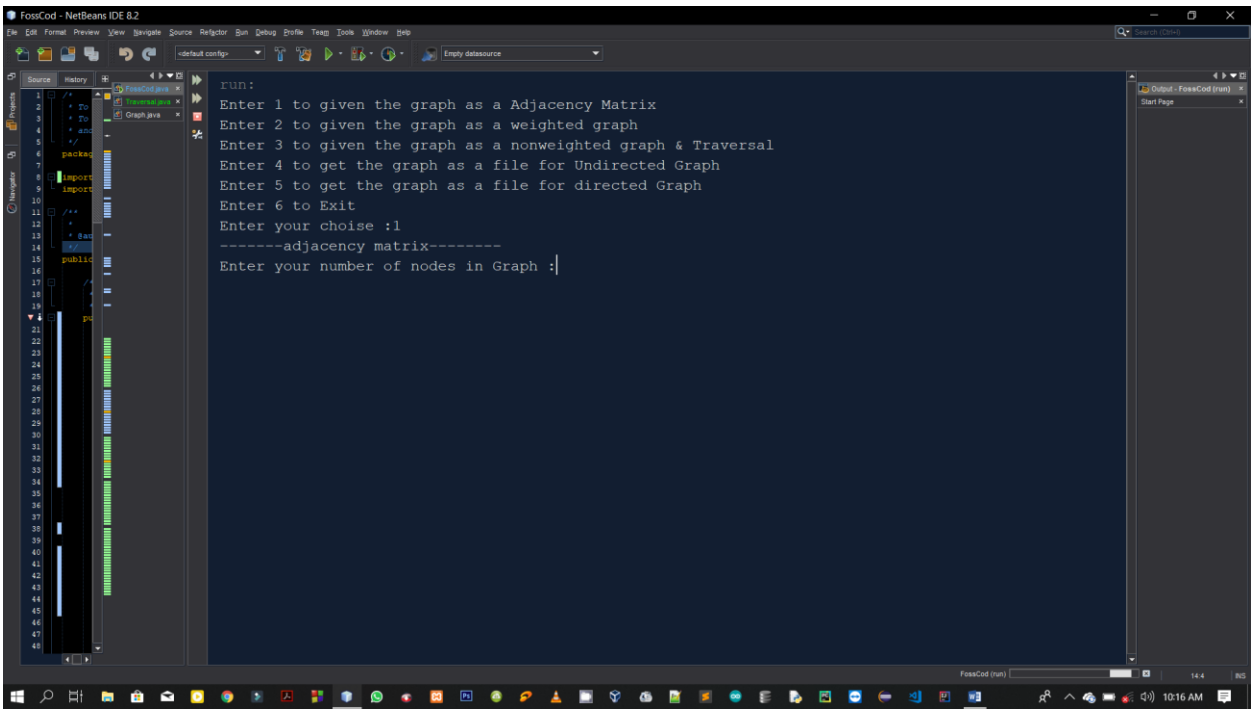
Then you want to open the Fosscod.java (main) class. Then you can see this code.



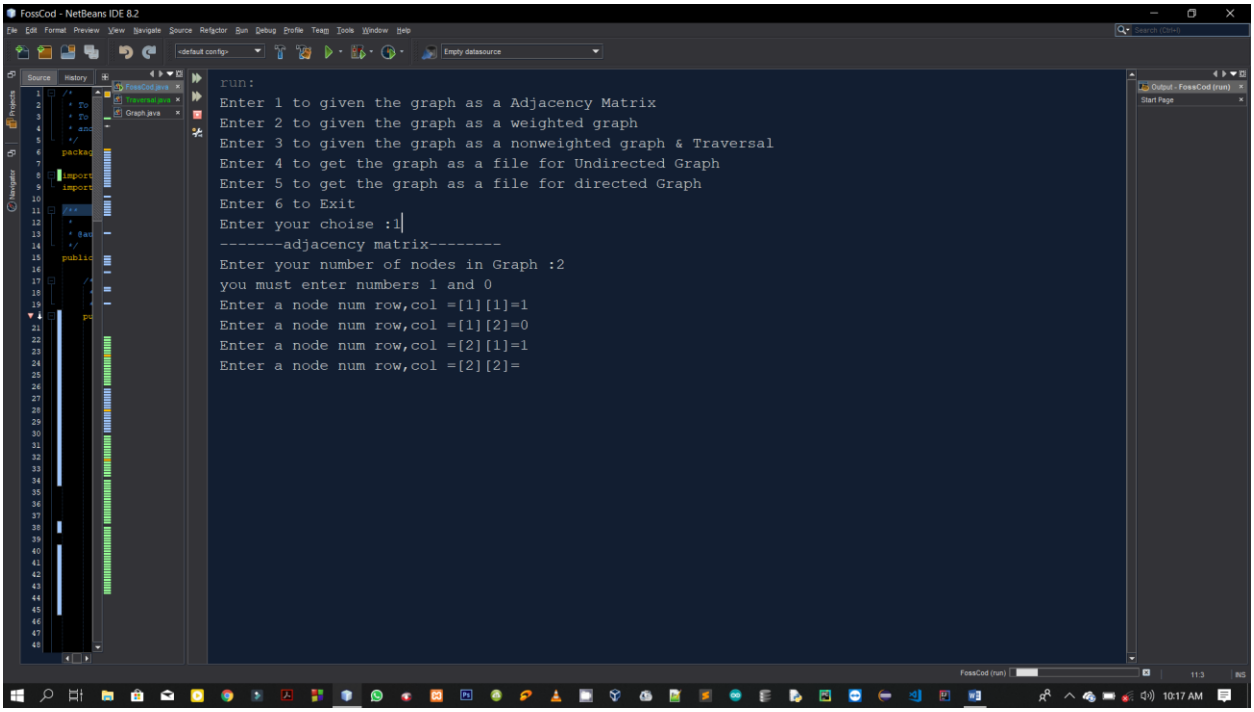
Then you can run it (shift+ F6). Now you can see this.



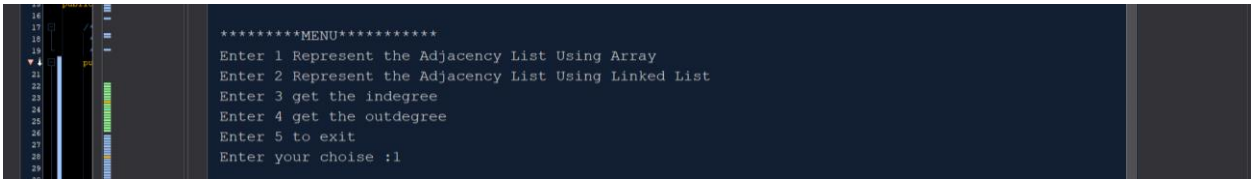
Then press 1 if you want. Then you can see this ,



Then you can enter number of nodes you want. I give it 2, then It creates the 2*2 matrix. It is the Adjacency matrix. Now you can give your graph as adjacency matrix.



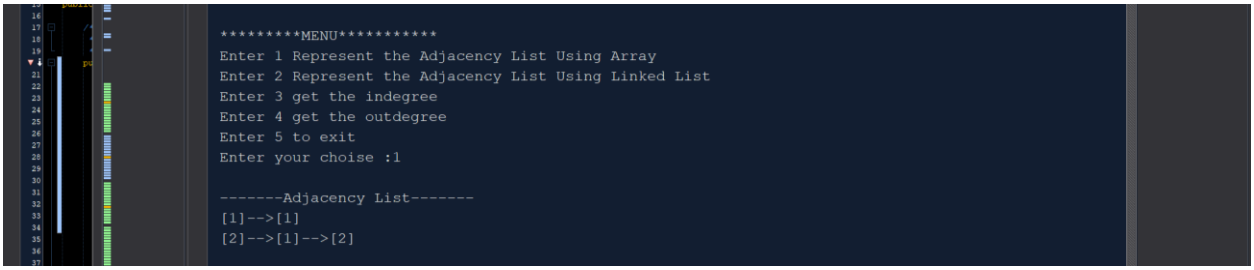
After entering your matrix you can see this menu.



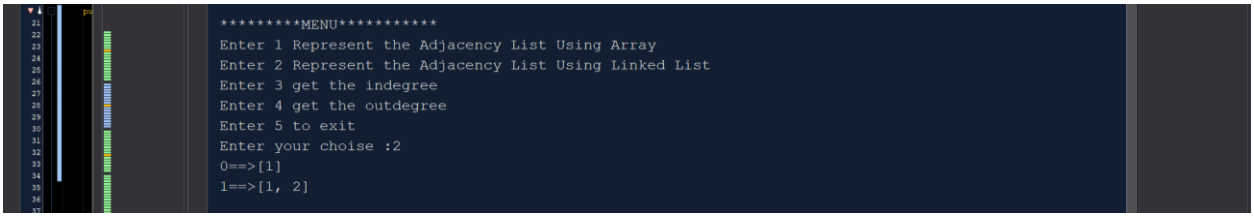
Then you can get 4 operations to do with this adjacency matrix.

- Press 1 to get your graph as adjacency list

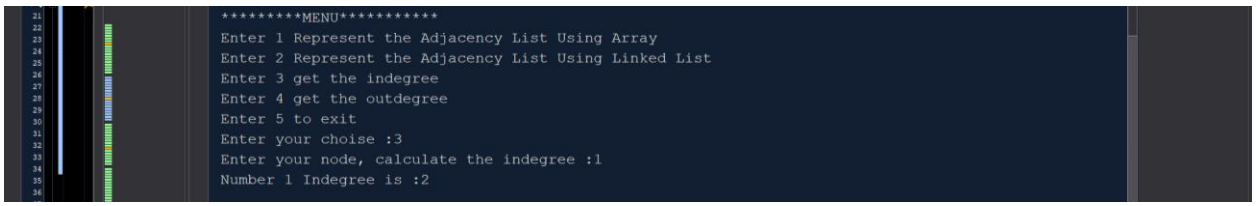
  This time I create the array then you can see the adjacency list using array concept. Its disadvantage is It waste lot of memory.



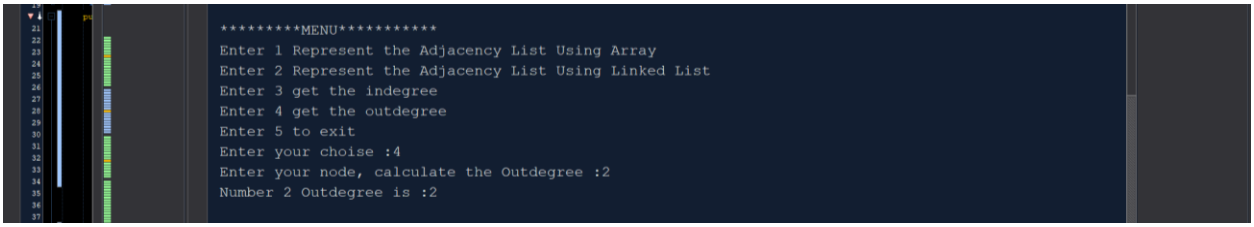
- Press 2 to get your graph as adjacency list(Using linked list)
  This time I create the linked list then you can see the adjacency list using linked list concept. Its advantage is It save the memory.



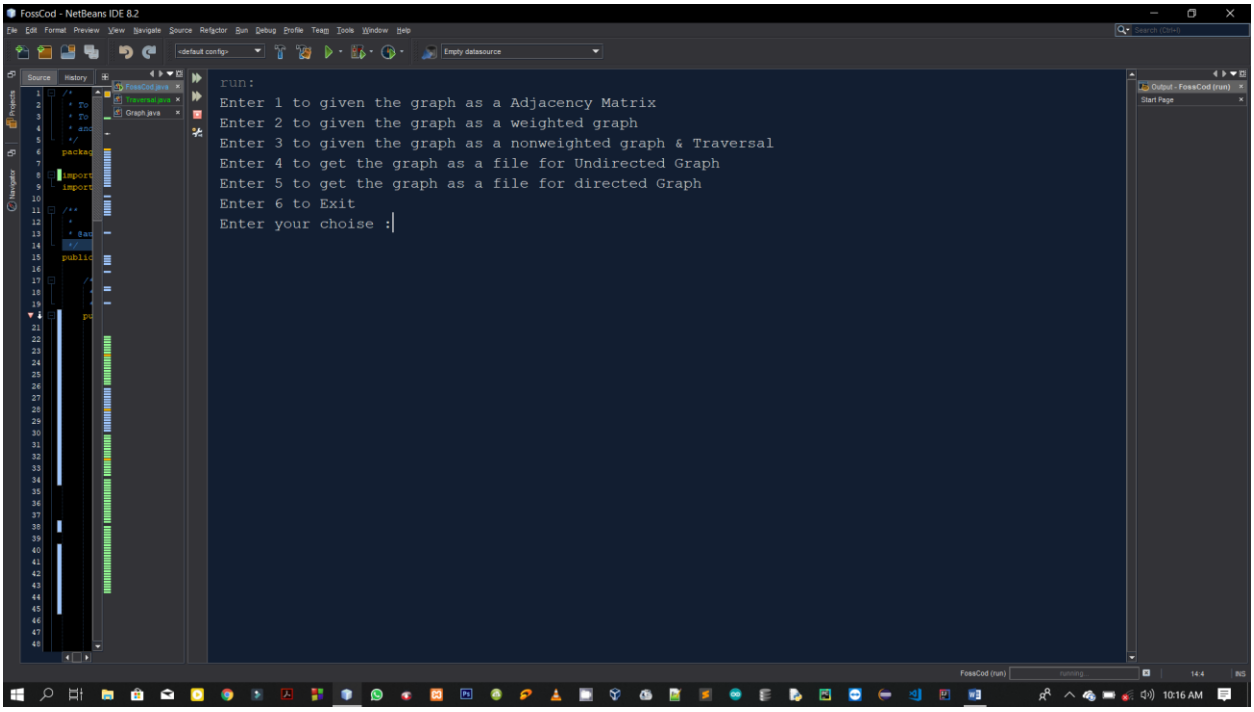
- Press 3 to get idegree. Then you want to enter the node you want to get the Indegree.



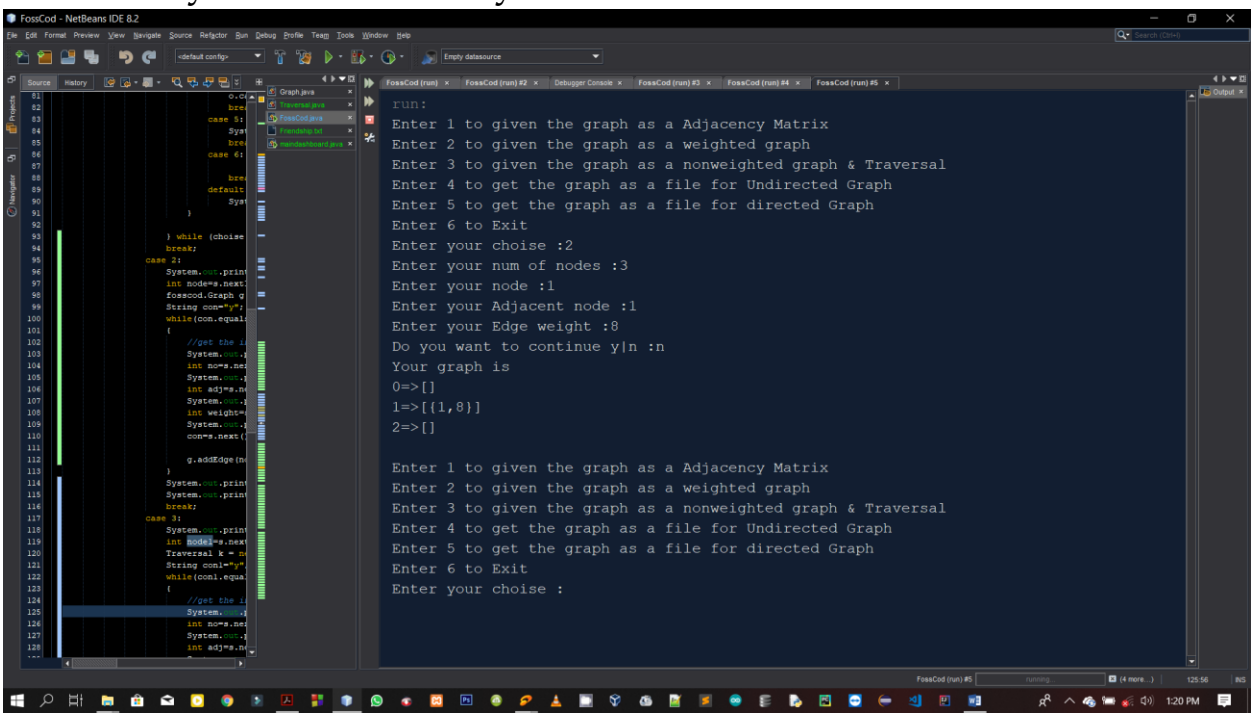
- Press 4 to get the outdegree. Then you want to enter the node you want to get the Outdegree.



Then you can exit the program , then you can run the codde again(press shift+F6).

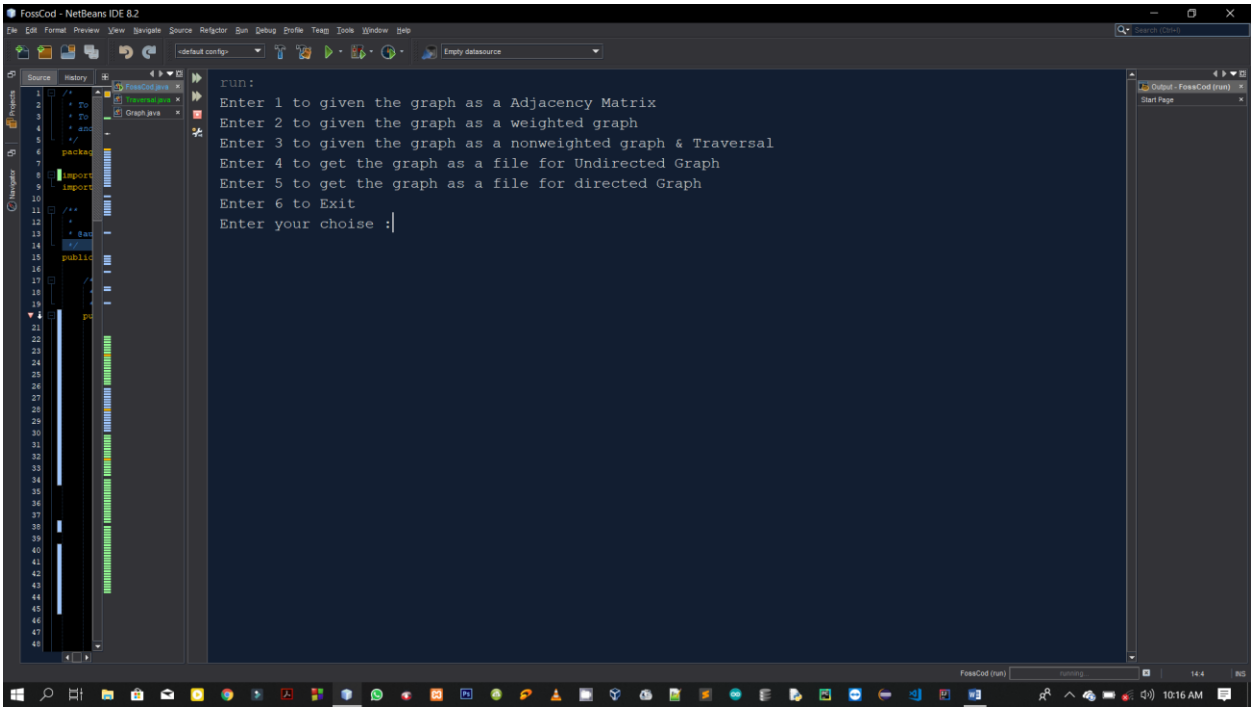


Enter 2 If you want. Then you can see this.

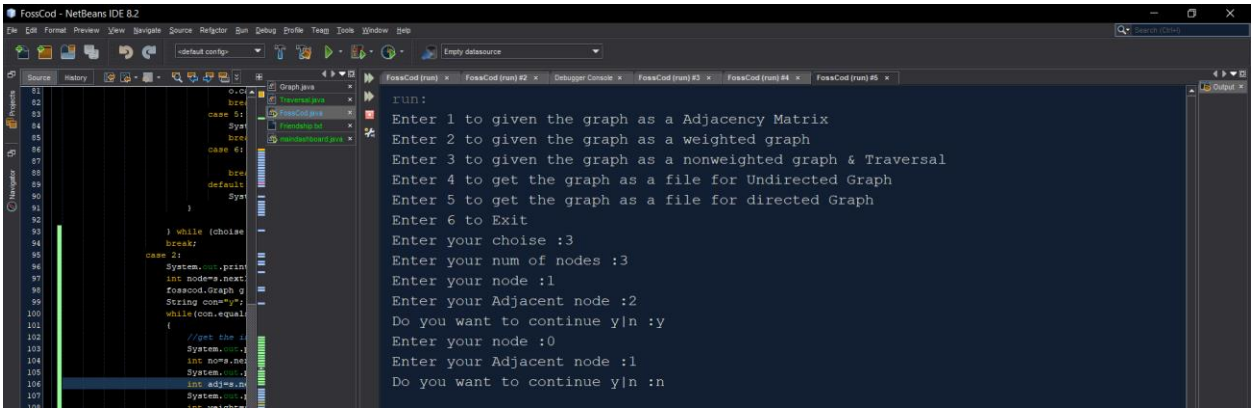


Then you can input inputs as I input above. You can input any number of inputs to the graph. Because I use the while loop. If you press the “n” then you can finish the input given.

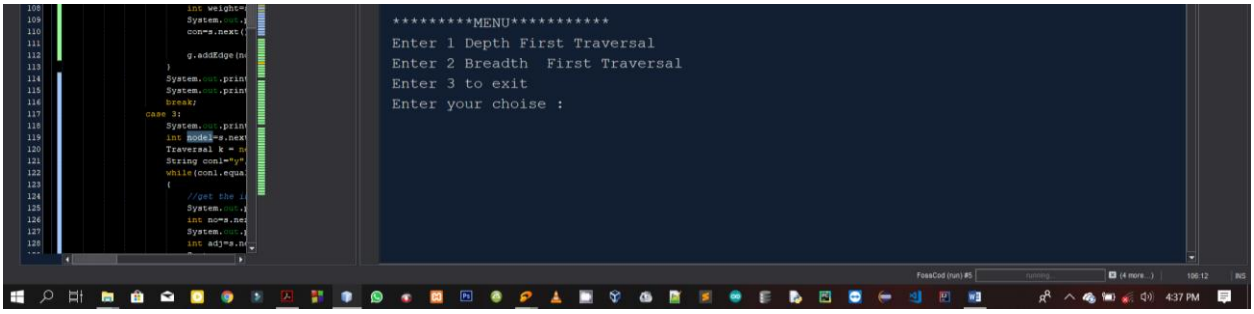
Now you can exit the program pressing 6.
Then you can re run the program.



Then you can enter 3 if you want. Then yo can enter nodes as I enter below.



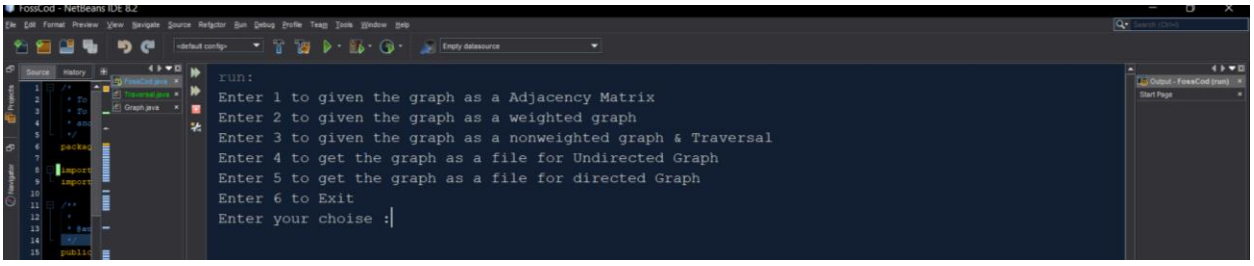
After entering nodes you can see this.



Now you can Traverse the Graph. Enter 1 for DFS , and Enter 2 for BFS.

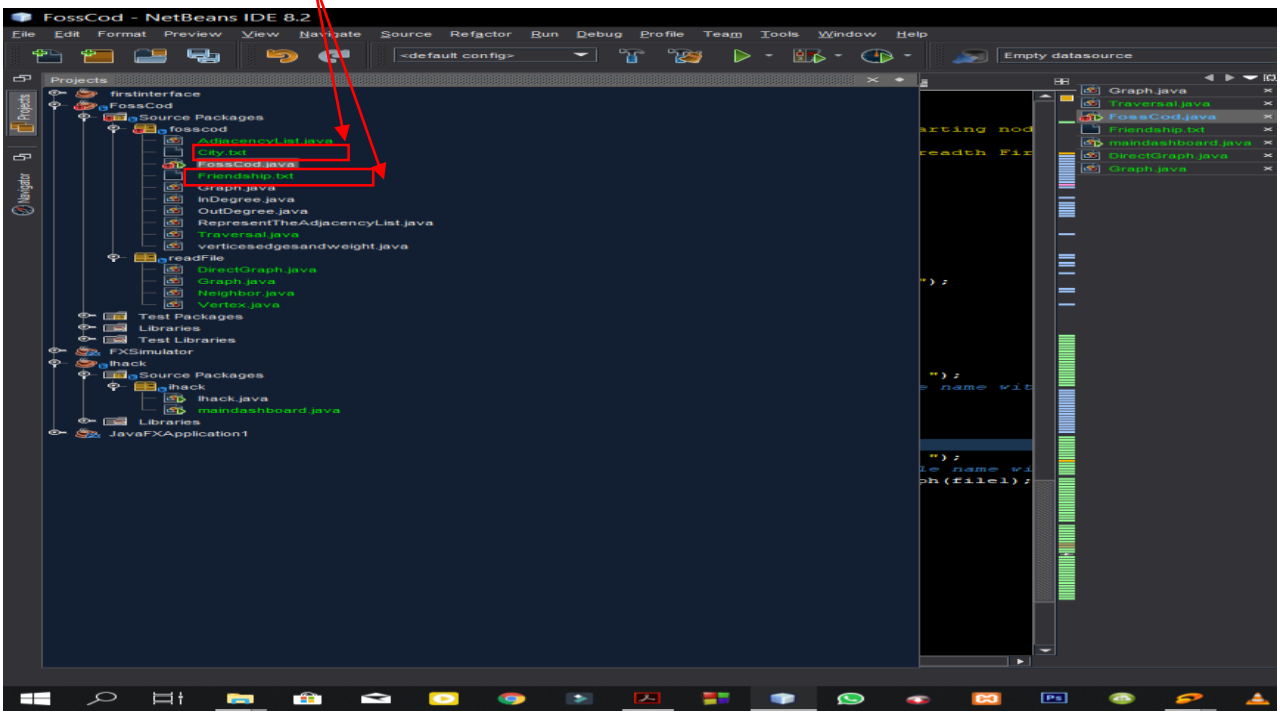
Enter 3 to exit.

After that ,

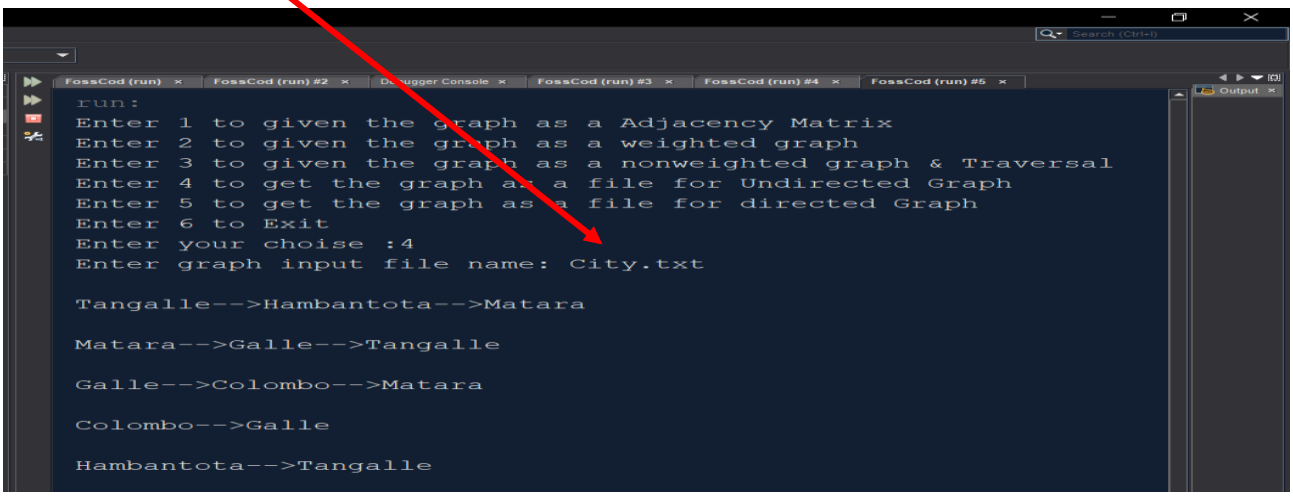


Enter 4 to get the graph as a file. If you enter 4,

Beforu entering the file name u should import the file in to your project. As below,

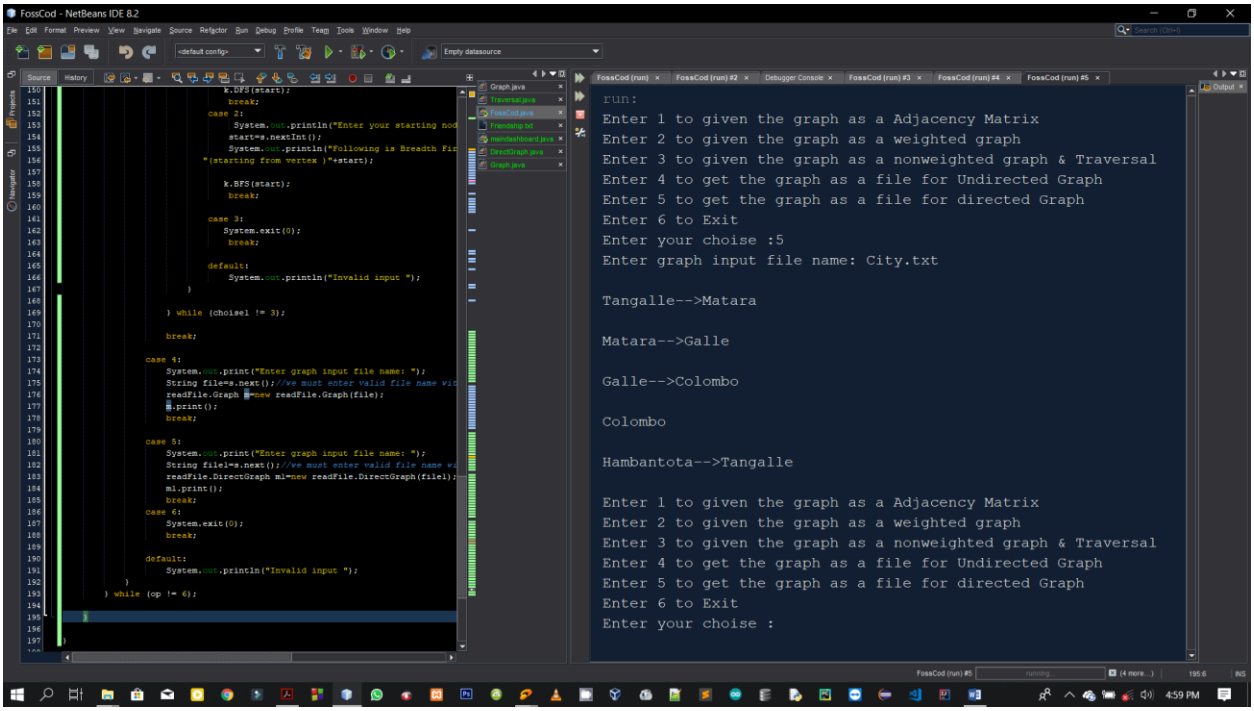


Now you can enter the file name with extension. As below.



This time u can get the graph as a Undirected graph.

If you enter 5 , you can get the graph as a directed graph. As below,



This is the all of my project. I think you can understand above my description.

Thank you