

**Gebze Technical University
Computer Engineering**

CSE 222 - 2018 Spring

HOMEWORK 8 REPORT

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Course Assistant:

INTRODUCTION

1.1 Problem Definition

In this assignment, our aim is to find the most popular number including the transition status. The most popular number is the number shown by multiple sources. Inclusion of the transition feature also makes the directive graph data structure necessary.

1.2 System Requirements

The program can work smoothly with IntelliJ IDEA in any operating system. There are 4 classes in the program.

→ Transitive

→ Mainclass

→ Graph

→ Edge

Graph is an interface. Transitive implements from Graph. Edge is written for edges. Mainclass is testclass and Transitive provides transitive matrix.

Edge has the following functions:

getDestination(): This function returns destination value.

getSource(): This function returns source value.

Transitive has the following functions::

transitiveClosure(): It provides an adjacency matrix transitive.

AddEdge(): It adds new edge.

getNumV(): returns vertices.

getEdge(): Takes edge and returns matrix index.

IsDirected: returns boolean

popularValue(): It returns output value.

Hardware requirements:

System requirements for IntelliJ IDE:

GNOME or KDE desktop

2 GB RAM minimum, 4 GB RAM recommended

1.5 GB hard disk space + at least 1 GB for caches

1024x768 minimum screen resolution

The minimum system requirements for Java Virtual Machine are as follows:

Windows 8/7/Vista/XP/2000. ...

Windows Server 2008/2003.

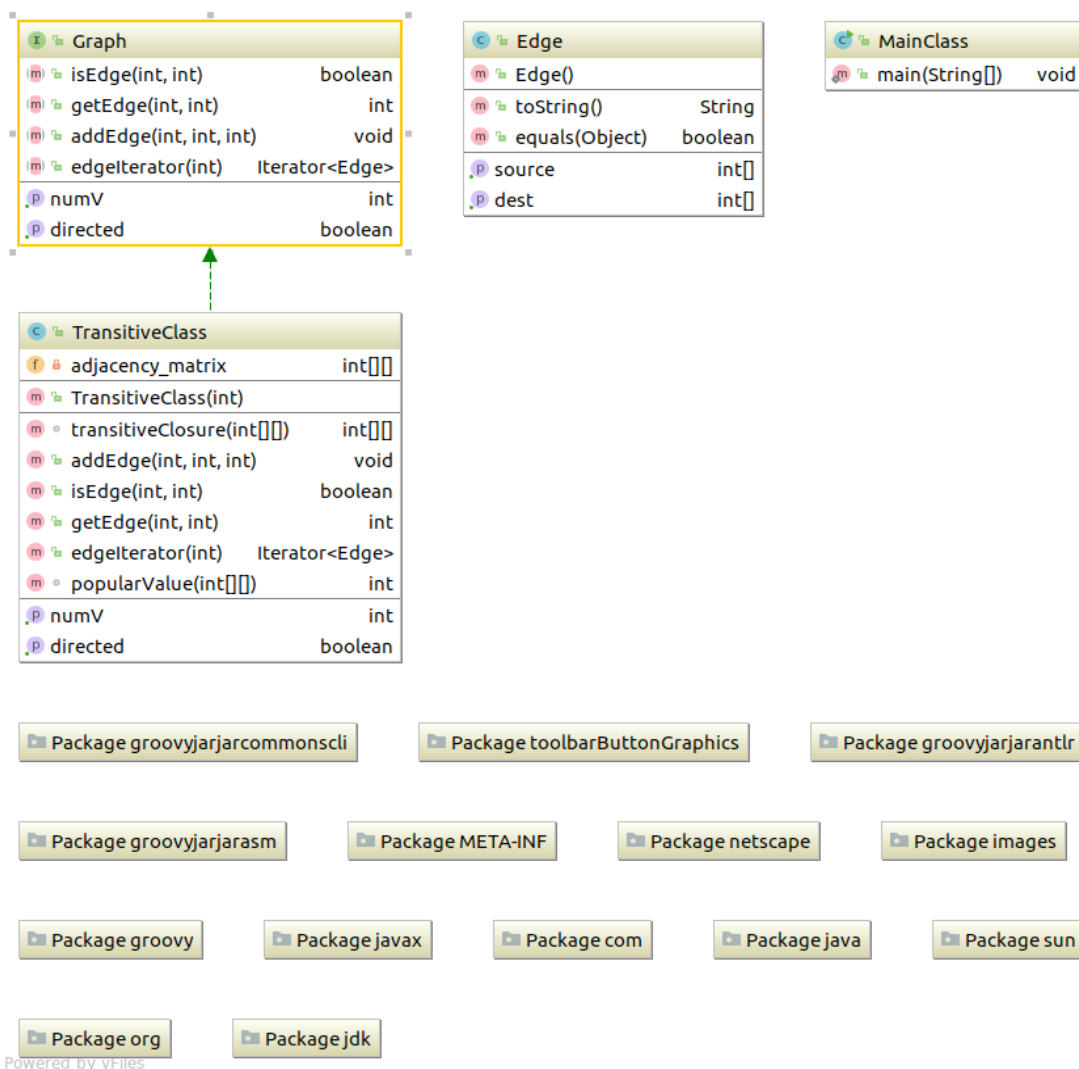
Intel and 100% compatible processors are supported.

Pentium 166 MHz or faster processor with at least 64 MB of physical RAM.

98 MB of free disk space.

METHOD

2.1 Class Diagrams



2.2 Use Case Diagrams

This program will get an input file. It will print the screen by reading all such commands. A sample driver class is also written.

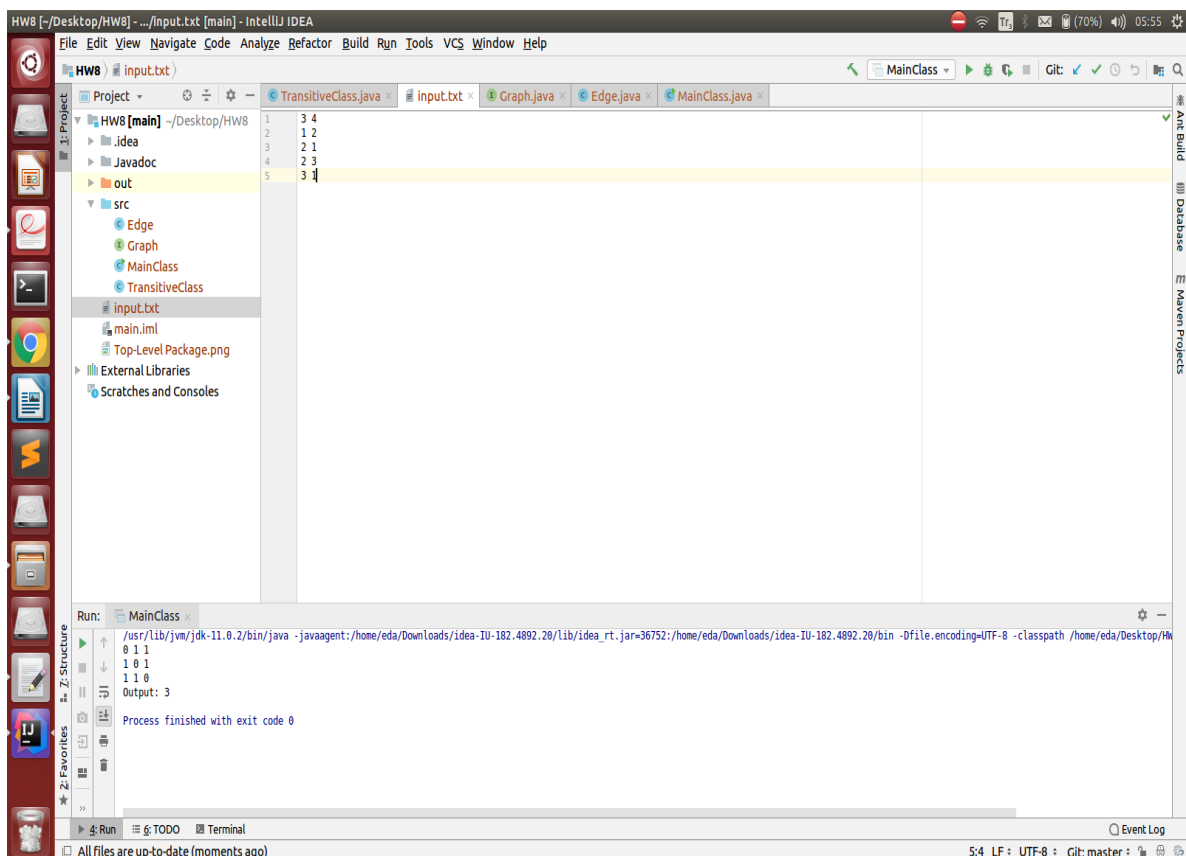
2.3 Problem Solution Approach

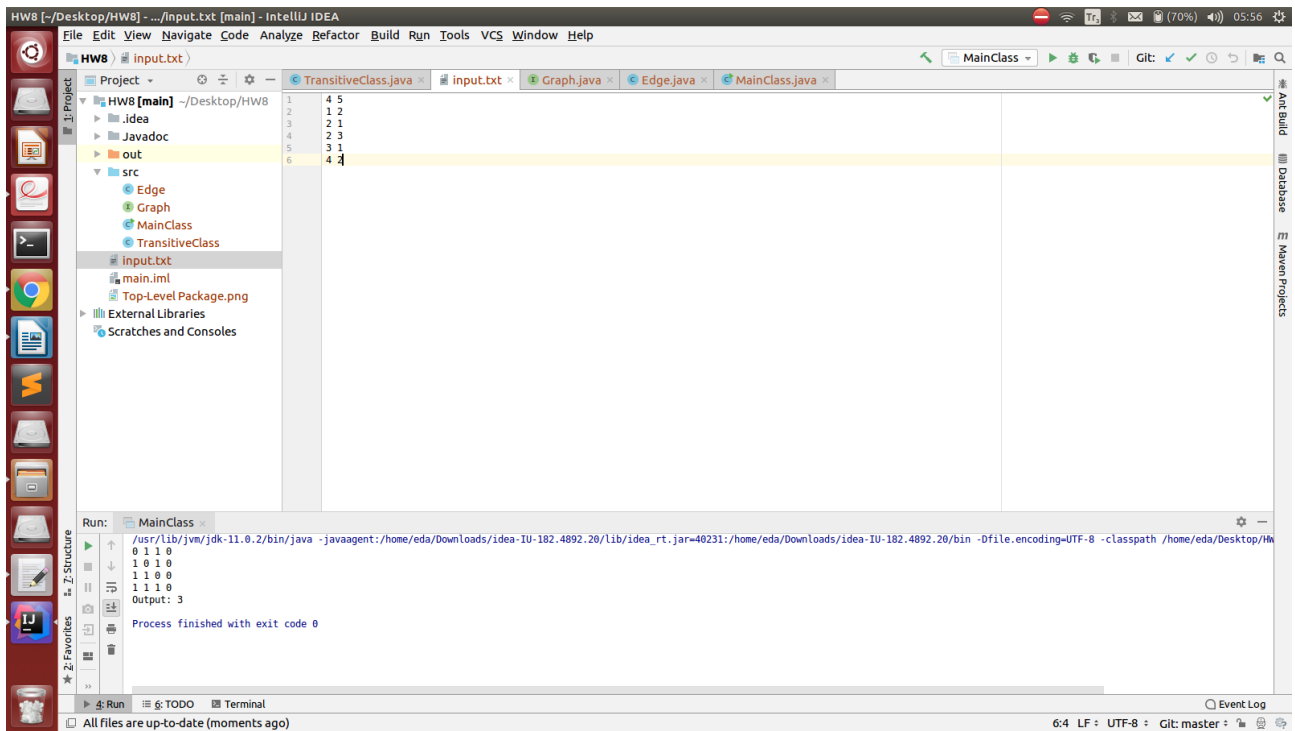
1.1 Graphs are used as data structure in this program. Providing a link between the source and destination nodes and checking all the states, and adding a new connection according to the transition state is very similar to the graph structure. Square matrix with up to vertex number is used for graph structure. Nodes with no relation to nodes 1 associated with the adjective matrix are shown with 0 for the matrix solution method.

RESULT

3.1 Test Cases

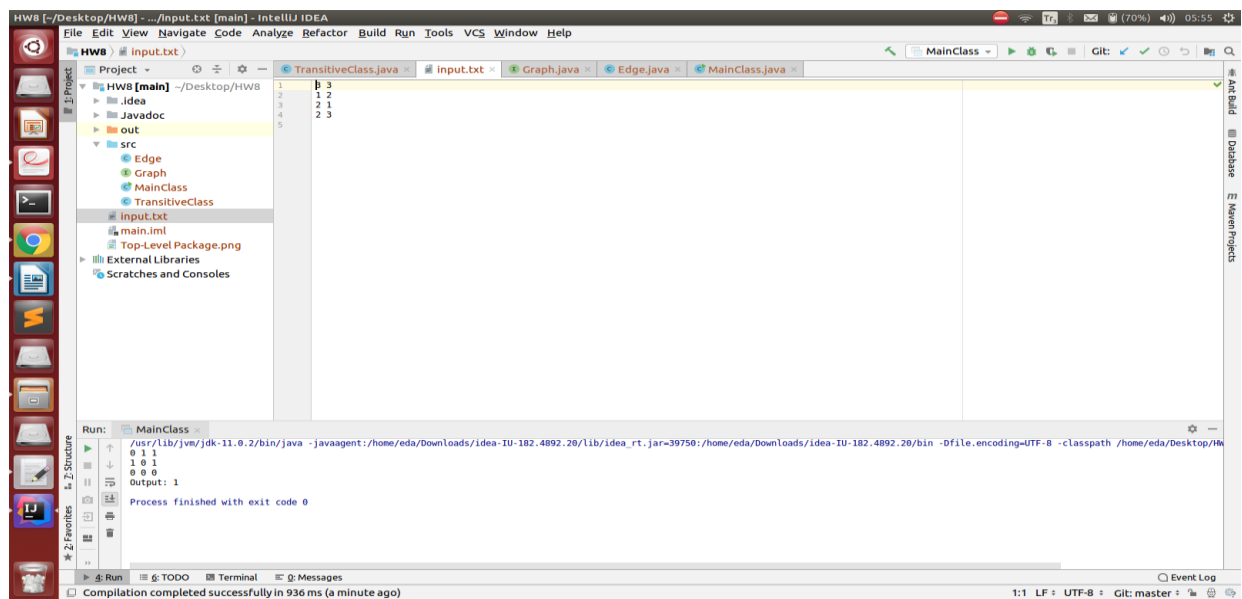
Examples of input files for testing are as follows: Inputs are shown with sample output values. In order to see the results correctly, the transition matrix was shown in the images.



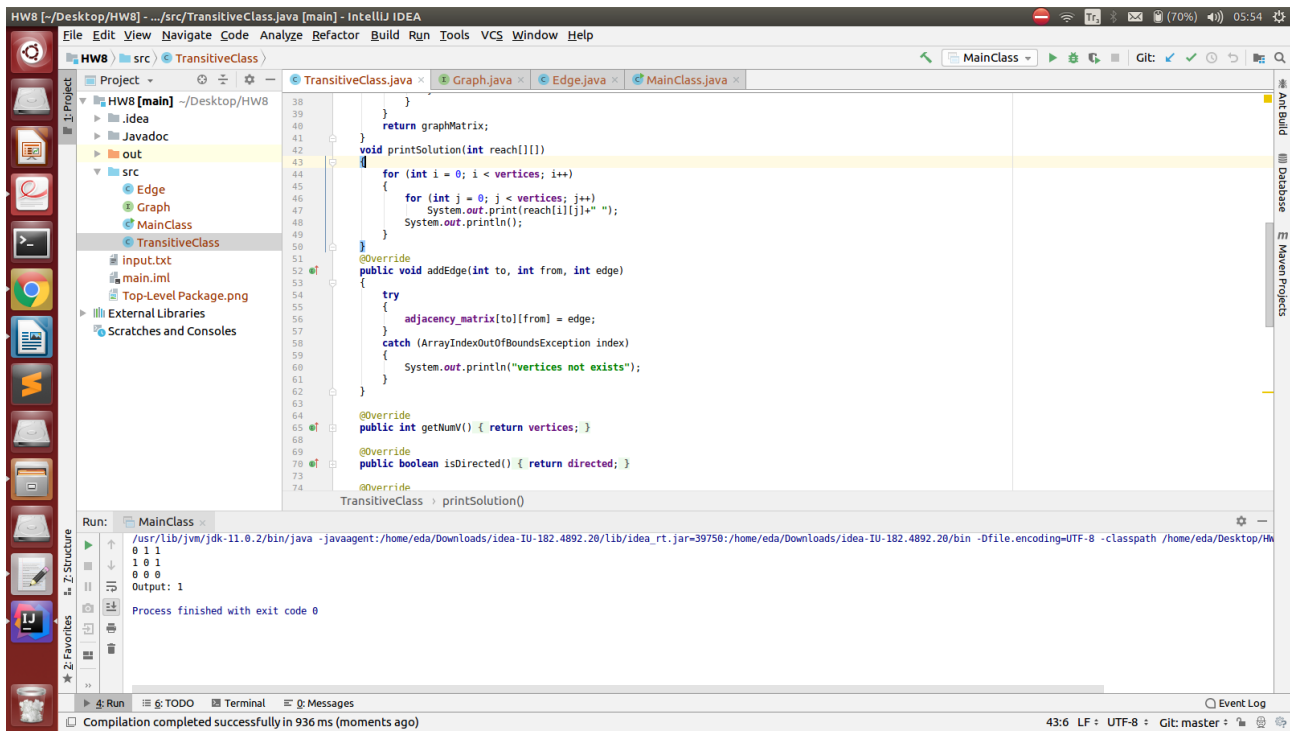


3.2 Running Results

required input:



View generated in the project output:



There is no matrix output in the original.