

**Gebze Technical University
Computer Engineering**

CSE 222 - 2018 Spring

HOMEWORK 8 REPORT

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1 INTRODUCTION

1.1 Problem Definition

Creating a Graph ADT and finding most popular people of a group.

1.2 System Requirements

I used IntelliJ IDEA 2018.3.5 (Community Edition) with

Build #IC-183.5912.21, built on February 26, 2019

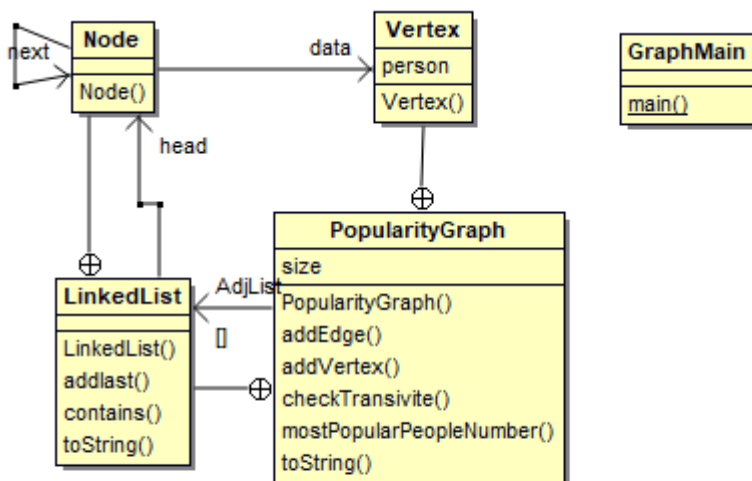
JRE: 1.8.0_152-release-1343-b28 amd64

JVM: OpenJDK 64-Bit Server VM by JetBrains s.r.o

Windows 10 10.0

2 METHOD

2.1 Class Diagrams



2.2 Problem Solution Approach

Firstly, I chose the adjacency list technique to implement Graph ADT. Then, I created my own Linked List data structure and implemented linked list methods. After that, I implemented `addVertex` and `addEdge` method. `addEdge` method takes two parameters(`value1` and `value2`) and returns void. `addEdge` method calls linked list methods and two additional methods(`addVertex` and `checkTransitive`). `addVertex` adds a vertex to the list so there cannot be empty linkedlist. `checkTransitive` method checks the transitive situation and call `addEdge` method again if necessary. `mostPopularPeopleNumber` method finds the people that popular by other people and returns as integer. In main method, I created a Linked List array and added the relation to the this array.

3 RESULT

3.1 Test Cases

I used the example in the pdf file and created my own driver methods.

3.2 Running Results

```
"C:\Program Files\Java\jdk-11.0.2\bin\java.exe"  
[1,2] [1,3]  
[2,1] [2,3]  
[3]  
  
Most Popular People Number:1  
  
Process finished with exit code 0
```

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- Subtitles -> 14pt, 1.5 line break
- Paragraph -> 12pt, 1.5 line break