**Program Structures & Algorithms**

**Spring 2022**

**Assignment No. 3**

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* **Task: WQUPC**
* **[Part1]   
  (a) Implementing Code**

**Text

Description automatically generatedText

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Description automatically generated  
(b)Unit Test**

**Pass 13 Tests, Fail Test testFind4**

**Graphical user interface, text

Description automatically generated**

**[Part2]**

The File Name is called: unionFindPartTwo.java

Text

Description automatically generatedText

Description automatically generated

**[Part3] Result**

|  |  |  |
| --- | --- | --- |
|  | Numer of N after 100 trials | Average Connection |
|  | 10 | 16.25 |
|  | 100 | 265.88 |
|  | 1000 | 3775.96 |
|  | 10000 | 49963.1 |
|  | 100000 | 598717.43 |
|  | 1000000 | 6541126.0 |
|  | 10000000 | 2226524.5 |

The more Number of N the more connection