## 1 Introduction

The program is working correctly on the test case.

## 2 Implementation

We used python3, you can invoke the file main.py either with the filename (containing the distance matrix) as an argument or answering the prompt for this file.

Differences from slide 62 are the following:

- The matrix n is not explicitly constructed, each element will be compared to the current minimum immediately after calculating it
- Also there will be only  $n_{ij}$  calculated, where i < j.
- The values  $r_i$  will only once be calculated by iterating over the complete matrix, afterwards there are calculated based on the last value in (each) constant time

## 3 Experiments