



# Computer Science 3A

## Practical Assignment 7

13 April 2023

Time: 13 April 2023 — 17h00

Marks: 50

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Practical assignments must be uploaded to `eve.uj.ac.za` **before** 17h00. Late submissions **will not be accepted**, and will therefore not be marked. You are **not allowed to collaborate** with any other student.

### Priority queue-based rating of restaurants

Priority queues are often useful for ordering or categorizing elements for a specific purpose. The restaurant industry has been hard hit by the pandemic with many good options that have closed in the last year. However, in certain areas there are many options and it becomes difficult to choose an appropriate restaurant. This makes choosing which restaurant to eat at a difficult task. A good way of solving this problem and promoting certain local restaurants is to start with what is nearby, prompt users to try them out and ask for feedback so that ratings drive promotions. For this practical we are going to read a collection of restaurants from a binary file, order them based on proximity with a Priority Queue. We then rate each of them based on the closest proximity and save the restaurants with the highest rating to a binary file.

You must complete the following classes marked by:

```
//TODO: <comment>
```

The following files must be submitted to EVE:

1. *studentnumber\_p7.zip*

## Marksheet

- |                                       |      |
|---------------------------------------|------|
| 1. Entry: compareTo                   | [5]  |
| 2. PriorityQueue: removeMin           | [8]  |
| 3. PriorityQueue: min                 | [5]  |
| 4. PriorityQueue: entries             | [2]  |
| 5. Main:rateRestaurants               | [8]  |
| 6. Main:saveRatedRestaurants          | [7]  |
| 7. Compilation and Correct execution. | [15] |