



# Computer Science 3A

## Practical Assignment 1

22 February 2023

Time: 22 February 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.

Part of image processing is the application of morphological filters to images in a predefined pipeline to minimise noise and maximise the clarity of the salient information in an image before further processing. These pipelines are first formulated and can be made parallel for efficient processing and scaling. In this practical, you must implement one of these pipelines that contain image operators that can add existing image operations found in a provided utility library (`p02.jar`). This includes adding operations, removing operations applying all of the operations in the pipeline and getting the final result. You must use Java as the implementation language, and your program should consist of various classes where you implement your solution.

## Marksheet

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|--|------|
| 1. List: <code>addAfter</code>                 | [5]  |
| 2. List: <code>remove</code>                   | [5]  |
| 3. Main: <code>removeOperatorFromList</code>   | [5]  |
| 4. Main: <code>addOperatorToList</code>        | [5]  |
| 5. Main: <code>processBitmapProcessList</code> | [10] |
| 6. Main: <code>main</code>                     | [5]  |
| 7. Compilation and Correct execution           | [15] |