



Computer Science 2B

Practical Assignment 05

2016-08-30

Deadline: 2016-10-04 12h00

Marks: 100

This practical assignment must be uploaded to eve.uj.ac.za **before** 2016-10-04 12h00. Late or incorrect submissions **will not be accepted**, and will therefore not be marked. You are **not allowed to collaborate** with any other student.

The Java Development Kit (JDK) has been installed on the laboratory computers along with the [Eclipse](#) Integrated Development Environment (IDE).

The national security agency has tasked you with creating a system to transfer images between operatives. The system should allow operatives to upload images to the server as well as retrieve any of the uploaded images. You will have to develop both the server and client to facilitate the image transfer.

Server:

- The server should run on port 7451, waiting for connection.
- The server should maintain a text file that will store a list of images with corresponding IDs
- The server must handle the following requests:
 - LIST - return a full list of images names and IDs
 - RET <ID> - return the image
 - SEND <ID> <Name> <Image> - Store the image and add it to the text file. If successful reply with "Success" else return "Failure"

Client:

- The client should allow the user to select and upload an image to the server
- The client should allow the user to request a list of images that are available
- The client should allow the user to enter an ID after which the corresponding image is retrieved from the server and displayed to the user

Marksheet

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|---|------|
| 1. Server - Returning of image list | [10] |
| 2. Server - Uploading of image | [15] |
| 3. Server - Returning requested image | [15] |
| 4. Server - Handling simultaneous requests | [5] |
| 5. Client - Uploading image | [10] |
| 6. Client - Requesting image list | [5] |
| 7. Client - Retrieving and display of image | [15] |
| 8. Graphical User Interface | [5] |
| 9. Compilation and Correct execution. | [20] |