



## Computer Science 2A

### Practical Assignment 01

2016-02-16

Time: Deadline — 2016-02-16 16h30

Marks: 50

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This practical assignment must be uploaded to [eve.uj.ac.za](http://eve.uj.ac.za) **before** 2016-02-16 16h30. Late or incorrect submissions **will not be accepted**, and will therefore not be marked. You are **not allowed to collaborate** with any other student.

Good coding practices include a [proper coding convention](#) and a good use of [JavaDoc comments](#). Marks will be deducted if these are not present. Every submission **must** include a batch file. See the reminder page for more details.

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

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This practical aims to familiarise you with the differences and similarities between C++ and Java.

Under additional files for this practical there is a C++ program (cpp.zip). Convert the classes which are available. The main function (and only the main function) must be placed in a **Main** Java class. Test your Java application against the C++ version to see if performs the same.

# Marksheet

## 1. **UJString**

- (a) Constructors [03]
- (b) Instance variables [04]
- (c) Methods [06]

## 2. **EncryptedString**

- (a) Constructors [03]
- (b) Instance variables [04]
- (c) Methods [06]

## 3. **Main**

- (a) Process strings [01]
- (b) Display [02]

## 4. Coding convention (structure, layout, OO design) and commenting (normal and JavaDoc commenting). [05]

## 5. Correct execution [16]

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# NB

Submissions which **do not compile** will be capped at 40%

Execution marks are awarded for a correctly functioning application and not for having some related code.

# Reminder

Your submission must follow the naming convention as set out in the general learning guide.

SURNAME\_INITIALS\_STUDENTNUMBER\_SUBJECTCODE\_YEAR\_PRACTICALNUMBER

## Example

|                  |             |
|------------------|-------------|
| Surname          | Berners-Lee |
| Initials         | TJ          |
| Student number   | 209912345   |
| Module Code      | CSC2A10     |
| Current Year     | 2016        |
| Practical number | P00         |

Berners-Lee\_TJ\_209912345\_CSC2A10\_2016\_P00

Your submission must include the following folders:

- `bin` - (*Required*) Should be empty at submission but will contain runnable binaries when your submission is compiled.
- `docs` - (*Required*) Contains the batch file to compile your solution, UML diagrams, generated JavaDoc and any additional documentation files.
- `src` - (*Required*) Contains all relevant source code. Source code must be placed in relevant sub-packages!
- `data` - (*Optional*) Contains all data files needed to run your solution.
- `lib` - (*Optional*) Contains all libraries needed to compile your solution.

## NB

Every submission **must** include a batch file. This batch file must contain commands which will compile your Java application source code, compile the associated application JavaDoc and run the application. **Do not** include generated JavaDoc in your submission. All of the classes/methods which were created/updated need to have JavaDoc comments.