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**School of Computing Science and Digital Media**

**CM2100 Coursework Part 4 Assignment**

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| Surname | Muir |
| First name | Jamie |
| Student ID Number | 1607046 |
| Contact phone number | N/A |
| Course + Year | Computer Science Year 2 |
| Module Co-ordinator | David Lonie |
| Module Number  Module Name | CM2100 Advanced Software Design and Development |
| Coursework Title | QuickSort Algorithm Analysis |
| Coursework Part | 4 |
| Due Date | Monday 19 March 2018 by 5 pm |

**Declaration** \*\* *This* ***must*** *be affirmed by completing your name and Student ID below. Typing your name constitutes and electronic signature.*

**I confirm**

* **that the work undertaken for this assignment is entirely my own and that I have not made use of any nauthorized assistance**
* **that the sources of all reference material has been properly acknowledged.**

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| Student Signature | Jamie Muir |
| Date Submitted | 19/03/2018 |

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| **Marker's Comments** | |
| **Marker** | **Grade** |

## \*\* An extract from the University Regulations

## 6. Academic Misconduct

Refer also to Schedule 3.3 of this Regulation for guidance on this procedure.

6.1 **Academic Misconduct** is defined as any attempt by students to gain an unfair advantage in assessments and examinations. Examples of academic misconduct include plagiarism, cheating, falsifying data, collusion, bribery or attempted bribery, personation or any other activity intended to provide an unfair advantage.

(i)**Plagiarism** is the practice of presenting the thoughts or writings of another or others as original, without acknowledgement of their source(s). All material used to support a piece of work should be carefully referenced and should not normally be copied directly unless as an acknowledged quote. Text translated into the words of the individual student should in all cases acknowledge the source.

(ii)**Cheating** includes:

1. the taking of any unauthorised material into an examination;
2. obtaining copy of “unseen” papers in advance of an examination;
3. communicating or attempting to communicate in any way with another student during an examination;
4. copying or attempting to copy from another student during an examination or in the production of coursework;
5. wilful deception in any element of an examination or assessment.

(iii) **Falsification of data** consists of the misrepresentation of the results of experimental work or the presentation of results from fictitious work.

(iv) **Collusion** is the representation of unauthorised group work as that of an individual student.

(v) **Bribery** is the paying, offering or attempted exchange of an inducement for information or material intended to advantage the recipient in an examination or assessment.

(vi) **Personation** consists of a substitute taking the place of a student in an examination.

**A student who aids and abets a fellow student to commit academic misconduct shall be deemed to have committed academic misconduct and will be dealt with accordingly.**

**1: Introduction**

This report will outline the differences in performance characteristic operations between two versions of Quick Sort algorithms and their partitioning methods involved. This will be achieved by counting characteristic operations in each algorithm and then calculating how they differ based on that information.

**2: Experimental Method**

The experiments