CMP1124M – Algorithms and Complexity - Assessment 2

Learning Outcome	Criterion	Pass	2:2	2:1	1st
[LO1] Understand the time and space efficiency of algorithms and how to calculate/estimate/evaluate and improve them. [LO2] Determine an appropriate algorithmic approach to a problem. [LO3] Ability to select from a range of possible options, to provide justification for that selection, and to implement the algorithm in a particular context.	Report (40%)	A basic report which explains the operation of the application as well as the selection of searching and sorting algorithms, but does not go into detail regarding the structure and/or the choices made. The report may not contain the correct sections.	The report explains the operation and structure of the application. The searching and sorting algorithms used in the code are assessed and discussed briefly. The report is correctly formatted.	The report details the operation and structure of the application. The searching and sorting algorithms used in the code are explained and justified in their selection. The report is correctly formatted.	The report fully details the operation and structure of the application. The searching and sorting algorithms used in the application are fully explained and assessed for their use in this application. The report is correctly formatted. Greater marks can be achieved in this section by the comprehensiveness of the report.
[LO1] Understand the time and space efficiency of algorithms and how to calculate/estimate/evaluate and improve them. [LO2] Determine an appropriate algorithmic approach to a problem. [LO3] Ability to select from a range of possible options, to	Implementation of the program, selection of sorting and searching algorithms (60%)	A basic solution that implements searching and sorting operations on a single array and string array (i.e. tasks 1 – 4) and provides console output, which is appropriately formatted. Appropriate searching and sorting algorithms are used in the code.	A basic solution that successfully implements searching and sorting operations on arrays and string arrays (i.e. tasks 1 – 6) using the console screen and generates appropriately formatted output. An attempt is made at implementing and testing searching and sorting	An implementation that includes a solution which shows searching and sorting operations on multiple on arrays and string arrays (i.e. tasks 1 – 8) on a console output screen. Consideration has been given to implementing and testing different searching and sorting algorithms. Evaluation in terms of counting the main steps of different searching	An implementation that includes a solution which shows searching and sorting operations on multiple on arrays and string arrays (i.e. tasks 1 – 9) on a console output screen and/or using a web page implementation for visualization. Consideration has been given to implementing and testing different searching and sorting algorithms. Evaluation in terms of counting the main

provide justification for that selection, and to implement the algorithm in a particular context.			algorithms. Evaluation in terms of counting the main steps of searching and sorting algorithms is used for example. Appropriate searching and sorting algorithms are used in the code. Consideration has been given to internal program documentation	and sorting algorithms is used for example. Appropriate searching and sorting algorithms are used effectively in the application. Internal program documentation is helpful and consistent.	steps of different searching and sorting algorithms is used for example. All internal program documentation and naming conventions are of highest standard. The best available searching and sorting algorithms are used to enhance and maximise the effectiveness of the application. Greater marks can be achieved by completing the enhanced additions as set out in the brief.
Weighting	Weighting is indicated on individual criteria.				