



# CMP1124M – Algorithms and Complexity – Assessment 1

Learning Outcome	Criterion	Pass	2:2	2:1	1st
<p>[LO1] Understand the time and space efficiency of algorithms and how to calculate/estimate/evaluate and improve them.</p> <p>[LO2] Determine an appropriate algorithmic approach to a problem.</p> <p>[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.</p>	Report (40%)	<p>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.</p> <p>The report may not contain the correct sections.</p>	<p>The report explains the operation and structure of the application.</p> <p>The searching and sorting algorithms used in the code are assessed and discussed briefly.</p> <p>The report is correctly formatted.</p>	<p>The report details the operation and structure of the application.</p> <p>The searching and sorting algorithms used in the code are explained and justified in their selection.</p> <p>The report is correctly formatted.</p>	<p>The report fully details the operation and structure of the application.</p> <p>The searching and sorting algorithms used in the application are fully explained and assessed for their use in this application.</p> <p>The report is correctly formatted.</p> <p>Greater marks can be achieved in this section by the comprehensiveness of the report.</p>
<p>[LO1] Understand the time and space efficiency of algorithms and how to calculate/estimate/evaluate and improve them.</p> <p>[LO2] Determine an appropriate algorithmic approach to a problem.</p> <p>[LO3] Ability to select from a range of possible options, to</p>	Implementation of the program, selection of sorting and searching algorithms (60%)	<p>A basic solution that implements searching and sorting operations on an array and provides console output, which is appropriately formatted.</p> <p>One searching and one sorting algorithm are used in the code. The arrays analysed are of 256 length, and the number of steps are shown.</p>	<p>A basic solution that successfully implements searching and sorting operations using the console screen and generates appropriately formatted output.</p> <p>One searching and two sorting algorithms are used in the code. The arrays analysed are of 256 and 2048 length, and the number of steps are shown.</p>	<p>An implementation that includes a solution which shows searching and sorting operations on a console output screen.</p> <p>Two searching and three sorting algorithms are used in the code. The arrays analysed are of 256 and 2048 length, and the number of steps are shown.</p>	<p>An implementation that includes a solution which shows searching and sorting operations on a console output screen.</p> <p>Two searching and four sorting algorithms are used in the code. The arrays analysed are of 256 and 2048 length, and the number of steps are shown.</p>



provide justification for that selection, and to implement the algorithm in a particular context.			Fair program structure and some code comments are present.	Clear program structure and appropriate comments are present.	<p>The program code is well-structured and commented with high standard naming conventions.</p> <p>The best available searching and sorting algorithms are used to enhance and maximise the effectiveness of the application.</p> <p>Greater marks can be achieved by completing the enhanced additions as set out in the brief.</p>
<b>Weighting</b>	Weighting is indicated on individual criteria.				