# **\Higher Nationals**

# **Assignment Brief – BTEC (RQF)**

**Higher National Diploma in Computing**

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| **Student Name /ID Number** | **Aaron Mascarenhas** |
| **Unit Number and Title** | **1 - Programming** |
| **Academic Year** | **2017-2018** |
| **Unit Assessor** | **Kwaku Agyapong** |
| **Assignment Title** | **Assignment 1** |
| **Issue Date** | **12.11.2018** |
| **IV Name** | **Gurjeet Kohli** |
| **Draft submission date** | **21/01/2019** |
| **Final submission date** | **28/01/2019** |
| **Re-submission date (if required)** | 11/02/2019 |

**Plagiarism**

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

**Student Declaration**

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| **Student declaration**  I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.  Student signature: Aaron.M Date: 14/01/2019 |

**Learning Outcomes and Assessment Criteria**

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|  | Grading Criteria | Met | Grading Criteria | Met | Grading Criteria | Met |  |
| **LO1** | P1 |  | M1 |  | D1 |  |  |
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| **Assessor Feedback:**  \*Please note that constructive and useful feedback should allow students to understand:   1. Strengths of performance 2. Limitations of performance 3. Any improvements needed in future assessments   Feedback should be against the learning outcomes and assessment criteria to help students understand how these inform the process of judging the overall grade.  Feedback should give full guidance to the students on how they have met the learning outcomes and assessment criteria. | | | | |
| **Grade:** | **Assessor Signature:** | | | **Date:** |
| **Resubmission Feedback:** | | | | |
| **Grade:** | | **Assessor Signature:** | **Date:** | | |

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| Submission Format: |
| The submission is in the form of a ten-minute Microsoft® PowerPoint® style presentation to be  presented to your colleagues. The presentation can include links to performance data with  additional speaker notes and a bibliography using the Harvard referencing system. The presentation  slides for the findings should be submitted with speaker notes. You are required to make effective  use of headings, bullet points and subsections as appropriate. Your research should be referenced  using the Harvard referencing system. The recommended word limit is 500 words, including speaker  notes, although you will not be penalised for exceeding the total word limit. |
| Unit Learning Outcomes: |
| LO1 Define basic algorithms to carry out an operation and outline the process of programming an  application. |
| Assignment Brief and Guidance: |
| You currently work for a software development company that produces software for mobile devices.  As you are part of the research and development arm, your role includes investigation into new  processes that can benefit the company. One particular area of research that you have been tasked  with is the use of algorithms and how they can be used to build more efficient software. This will  have an impact on the software developed as efficient software can result in longer battery life and  the ability to do more with the limited resources mobile devices have to offer.  As the results will need to be delivered to your peers, consider this as a mini research project that  will be presented. You will need to explain what an algorithm is, with examples of their use,  comparing their efficiency against brute forcing, and how it will relate to the application  development process, down to the implementation in a suitable language.  Research could be conducted on your choice of algorithms, including sorting and searching data or  encryption/decryption, compression/decompression.  To present your findings you can build a presentation with links to data showing the performance of  an algorithm |

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| **Learning Outcomes and Assessment Criteria** | | |
| Pass | Merit | Distinction |
| **LO1** Define basic algorithms to carry out an operation and outline the process of programming an application. | | |
| **P1** Provide a definition of what your chosen algorithm is and  outline the process in  building an application**.** | **M1** Determine the steps taken from writing code to execution within the compiler. | **D1** Examine the implementation of an algorithm in a suitable language. Evaluate the relationship between the written algorithm and the code variant |

