# **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** | Unit 14 – Business Intelligence |
| **Academic Year** | 2018 - 2019 |
| **Unit Assessor** | Kwaku Agyapong |
| **Assignment Title** | Data Analytics Project - Design & Implementation |
| **Issue Date** | 03/04/2019 |
| **IV Name** | Gurjeet Singh Kohli |
| **Draft submission date** |  |
| **Final submission date** |  |
| **Re-submission date (if required)** |  |

**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 Date: 22/01/20 |

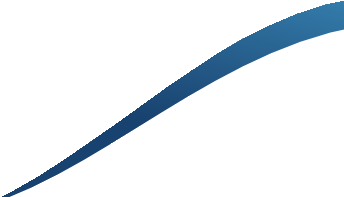
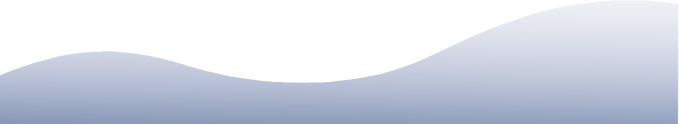
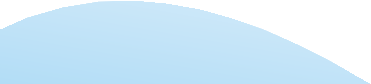
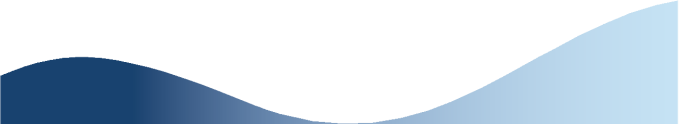
**Learning Outcomes and Assessment Criteria**

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|  | Grading Criteria | Met | Grading Criteria | Met | Grading Criteria | Met |  |
| **LO3** | P3 |  | M3 |  | D3 |  |  |
|  | P4 |  |  |  |  |  |  |
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| **LO4** | P5 |  | M4 |  | D4 |  |  |
|  | P6 |  |  |  |  |  |  |

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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: |
| 1. The submission is in the form of an individual written report. This should be written in a concise, formal business style using single spacing and font size 12. 2. You are required to make use of headings, paragraphs and subsections as appropriate, and all work must be supported with research and referenced using the Harvard referencing system. 3. Please also provide a bibliography using the Harvard referencing system. The recommended word limit is 2,500–3,500 words, although you will not be penalised for exceeding the total word limit. |
| Unit Learning Outcomes: |
| LO3 Demonstrate the use of business intelligence tools and technologies.  LO4 Discuss the impact of business intelligence tools and technologies for effective decision-making  purposes and the legal/regulatory context in which they are used. |
| Assignment Brief and Guidance: |
| **Case Study – THE WORLD FOOD PROGRAM**  You are taking part in an internship, working as a **Junior Business Intelligent Consultant** for **The World Food Program** national charity. The World Food Program is a very well-established charity, helping countries with food storages and humanitarian support across nations.  Climate change, suitable working conditions and effective food supply are only a handful of concerns the World Food Program is currently dealing with. With the political crisis in the Middle East and many countries currently having declared Martial Law, providing adequate food supply and humanitarian aid has become a growing challenge. **The 2018 Global Report on Food Crises** provides the latest estimates of **severe hunger in the world**. An estimated **124 million people in 51 countries are currently facing Crisis food insecurity or worse** (the equivalent of IPC/CH Phase 3 or above). **Conflict and insecurity continued to be the primary drivers of food insecurity in 18 countries, where almost 74 million food-insecure people remain in need of urgent assistance. Last year’s report identified 108 million people in Crisis food security or worse across 48 countries.**  A comparison of the 45 countries included in both editions of the report reveals an increase of 11 million people – an 11 percent rise – in the number of food-insecure people across the world who require urgent humanitarian action. The report is not an UN-owned publication but rather a public good, for use by those committed to achieving the objective of minimizing human suffering and eventually ending hunger. **Prepared collectively by 12 leading global and regional institutions under the umbrella of the Food Security Information Network, the report provides thematic, country-specific, and trends analysis of food crises around the world.**  With more and more countries struggling with the demand of food supplies and humanitarian aid in short supply, **The World Food Programme decided to fund a research project to analyse the Financial income for people of a “working age” and analyse these figures to somewhat predict the future demand for food supplies.** The WFP has acquired the numeric figures in Dollars as this currency is considered the World standards currency and is looking to forecast trends on how the income per head is changing over decades.  **The WFP is interested to see the world-wide demand for cheap humanitarian aid for these poorer nations**. Understanding why more and more countries are slipping into the lower end of the poverty line is important for the WFP, in order to determine and analyse future demand for humanitarian aid in specific parts of the world. The two world charts illustrated on the next page show the average income per head in **1981** and **2015**. When examining the charts, it can be clearly seen that more and more countries are slipping into the poverty line and hence more precautions need to be taken to accommodate food supplies on a larger scale. **The WFP is debating whether the future supply of food, which is already in short supply, should be GMO.**  **“GMO” refers to any living thing that has had its DNA altered using Genetic Engineering.** This could be a plant, animal (including humans) or bacterium and is usually conducted to introduce a desirable trait into the organism, such as **a larger size fruit or drought resistant capabilities.**  1981 – Chart showing income per “working person”  1981  2015 – Chart showing income per “working person”2015  The WFP BI department has asked you to look into the Dataset for Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population). Looking into the Dataset your aim would be gradually to predict/ analyse with BI tools the predicted headcount ration in 2050.  **Task 1**  WFP are not meeting targets, cannot find quick solution to problems to help the needy and poor victims. Emergency and relief items take much longer to reach disaster/war torn countries and other related problems. Some donor countries and other relevant stakeholders are withdrawing or withdrawn their involvement either financial or personnel support. As a Business Intelligence Consultant, your team leader wants their current operations updated in order to coordinate resources. Your team leader has asked you to develop a Management Information Systems to enhance decision-making process.    To provide the necessary evidence for the Data Science implementation project, you must prepare a fully comprehensive plan. Identify time scale where appropriate and use as a working document for the rest of the project.   * 1. Use the tools and techniques of Power BI and clean your poverty dataset to extract, load and transform (ELT) to be ready for modelling information.   Convert your data into visual information /dashboards using charts, graphs, maps, etc.  Write a report for the choice of your dashboards/visuals to help management in their decision-making process.   * 1. The directors do not fully understand the roles and the stages of a Data Science project and has   asked that you prepare a report describing the process you will undergo during contractual  period. Using a graphical representation, provide detailed discussion of the life cycle including the  following:  Define the goal  Collect and manage data  Build the model  Evaluate and critique model  Present results and documents  Deploy model   * 1. Customise your Business Intelligence design to ensure that it is user-friendly and has a functional interface to assist Management at all levels in their decision-making process.   2. Provide, in a formal document, a critical review of the design in terms of how it meets a specific user requirement and identify what has been integrated into the design.   **Task 2**  The vast majority of companies want to develop BI models because the perception is that having Business Intelligence is going to simplify Business processes and wastage for funds and downtime on certain BI solutions could be reduced.   * 1. Discuss how business intelligence tools can contribute to effective decision-making.   2. Conduct research to identify specific examples of organisations that have used business intelligence tools to enhance or improve operations.   3. Evaluate in a report format, how WFP and other charitable organisations could use business intelligence to reach their target audience.   4. In your evaluation research further to explore the legal, security, etc. issues into consideration. (Combine 1.7 & 1.8 for Distinction grade! 1500 – 2000 words limit). |

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| **Learning Outcomes and Assessment Criteria** | | |
| Pass | Merit | Distinction |
| LO1 Discuss business processes and the mechanisms used to support business decision-making | |  |
| **P1** Examine, using examples, the terms ‘Business Process’ and ‘Supporting Processes’. | **M1** Differentiate between unstructured and semi-structured data within an organisation. | **D1** Evaluate the benefits and drawbacks of using application software as a mechanism for business processing. |
| **LO2** Compare the tools and technologies associated with business intelligence functionality | |  |
| **P2** Compare the types of support available for  business decision-making  at varying levels within an organisation. | **M2** Justify, with specific examples, the key features of business intelligence functionality. | **D2** Compare and contrast a range of information systems and technologies that can be used to support organisations at operational, tactical and strategic levels. |



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| **Learning Outcomes and Assessment Criteria** | | |
| Pass | Merit | Distinction |
| **LO3** Demonstrate the use of business intelligence tools  and technologies | |  |
| **P3** Determine, with  examples, what business intelligence is and the tools and techniques associated  with.  **P4** Design a business  intelligence tool, application or interface that can perform a  specific task to support  problem-solving or decision-making at an  advanced level. | **M3** Customise the design  to ensure that it is user-friendly and has a  functional interface. | **D3** Provide a critical review of the design in terms of how it meets  a specific user or business  requirement and identify what  customisation has been integrated into the design. |
| **LO4** Discuss the impact of business intelligence tools and technologies for effective decision-making purposes and the legal/regulatory context in which they are used. | |  |
| **P5** Discuss how business intelligence tools can contribute to effective decision-making  .  **P6** Explore the legal issues involved in the secure exploitation of business intelligence tools | **M4** Conduct research to  identify specific examples  of organisations that have used business  intelligence tools to enhance or improve  operations. | **D4** Evaluate how organisations  could use business intelligence  to extend their target audience and make them more competitive within  the market, taking security legislation into consideration. |

