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| **National Institute of Business Management**  **School of Computing and Engineering**  **Course work | Assessment Announcement Sheet** | | | |  | |
| **Course Name** | Higher National Diploma in Software Engineering | | | | | |
| **Module Name** | Data Warehousing and Business Intelligence | | | | |
| **Batch** |  | | | | |
| **Learning Outcomes Covered (Mention according to the Module Descriptor)** | Explain the concepts of Data warehousing and decision support systems. | | | | |
| Apply the de-normalized concept of data modeling in data warehousing. | | | | |
| Use of Oracle BI / MS Power BI tools for building Data Warehouses | | | | |
| Use data visualization for business intelligence | | | | |
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| **Assessment | CW No** | Course Work 1 | | | | |
| **Assessment Mode** | **Individual | ~~Group~~** | | **Group (if it is group mode only)** | | |
| **Group Size** | | **Grouping Criteria** |
| **5** | | Students are allowed to select their group members |
| **Assessment Type** | **~~Practical Test~~ | Report | ~~Software~~ | Presentation | VIVA | ~~MCQ~~** | | | | |
| **If other specify** |  | | | |
| **Hand in Date | Time** | 20.01.2025 | | | | |
| **Hand out Date | Time** | 08.02.2025 | | | | |
| **Submission Details (Format and Location)** | LMS Submission  PDF format | | | | |
| **Plagiarism Acceptance Level** | 20% | | | | |
| **Assessment | CW Description** | | | | | |

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| **You are required to analyze a large data set of your choice, which has been agreed with your module lecturer**   * Your project should use data analysis techniques, data-mining algorithms and software that has been covered in the module. * You should cover the areas indicated below and the findings should be presented in the form of a report of **2500 words**. * The aspects that you should consider:   **Introduction (10 marks)**   * The overview of chosen dataset * Discussion of any cleaning undertaken on the dataset.   **Data Analysis and Visualization (35 marks)**   * The analysis of the data using visualization techniques within Power BI. * There should be 10 visualizations. * Discussion and interpretation of result, trends and patterns observed.   **Selection of Data Mining Algorithm and Data Pre-processing (10 marks)**   * Select one data mining algorithm suitable for further analysis of your data. * Clearly justify your choice, with reference to the visualization analysis carried out. * Identify and resolve any anomalies (outliers, missing values) in the data. * Carry out any appropriate pre-processing and transformations to the data set.   **Data Mining (25 marks)**   * Use the chosen data mining algorithm for further analysis of pre-processed data sets. * Discuss the implementation of the data mining algorithm and interpret the results.   **Data Ethics** **(10 marks)**   * Discuss the data ethical issues related to the analysis and use of business data.   **Conclusion (10 marks)**   * A discussion of the overall visualization results (Summary of overall findings, trends and patterns). * A discussion of the data mining results (e.g. How well did the model fit your data?). * A discussion of the business intelligence that can be obtained from these results. * Presentation: Clearly present with limited spelling and grammatical errors.   **Marking Rubric**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Criteria** | **70%+** | **60%-69%** | **50%-59%** | **40%-49%** | **Less than 40%** | | **Introduction (10%):** | Outstanding discussion and justification of chosen dataset and cleaning carried out. | Thorough discussion and justification of chosen dataset and cleaning carried out. | Evidence of some discussion and justification of chosen dataset and cleaning carried out. | Adequate discussion and justification of chosen dataset and cleaning carried out. | Discussion and justification of chosen dataset and cleaning carried out is inadequate. | | **Discussion: Data Analysis and Visualization (35%)** | Excellent and well-informed understanding of techniques and concepts involved. | Good understanding of techniques and concepts involved. | Demonstrates satisfactory knowledge and  understanding of techniques and concepts. | Adequate content; limited depth of knowledge and understanding shown. | Inadequate content; limited depth of knowledge and understanding shown. | | **Discussion: Selection of Data Mining Algorithm and Data Pre-processing (10%)** | Excellent and well-informed understanding of theories and concepts involved. | Good understanding of theories and concepts involved. | Demonstrates satisfactory knowledge and  understanding theories and concepts. | Adequate content; limited depth of knowledge and understanding shown. | Inadequate content; limited depth of knowledge and understanding shown. | | **Discussion:**  **Data Mining (25%)** | Excellent and well-informed understanding of theories and concepts involved. | Good understanding of theories and concepts involved. | Demonstrates satisfactory knowledge and  understanding theories and concepts. | Adequate content; limited depth of knowledge and understanding shown. | Inadequate content; limited depth of knowledge and understanding shown. | | **Discussion:**  **Data Ethics (10%)** | Excellent and well-informed understanding of theories and concepts involved. | Good understanding of theories and concepts involved. | Demonstrates satisfactory knowledge and  understanding theories and concepts. | Adequate content; limited depth of knowledge and understanding shown. | Inadequate content; limited depth of knowledge and understanding shown. | | **Conclusion (10%)** | Tightly structured, logical and draws coherent conclusions to the topics covered. | Undertakes a systematic analysis of the issues and draws coherent conclusions to the topics covered. | Clear conclusions to the topics covered. | Adequate conclusions to the topics covered. | Inadequate conclusions to the topics covered. | |