Unit 1 Applied Computing – 2024

Outcome 1 Data analysis – Template for developing an assessment task – Blank

Outcome 1

On completion of this unit the student should be able to interpret teacher-provided solution requirements and designs, collect and manipulate data, analyse patterns and relationships, and develop data visualisations to present findings.

Key knowledge	Key skills
• functional and non-functional requirements of solutions, constraints and scope	• interpret solution requirements, constraints and scope
• design tools for representing the functionality and appearance of databases, spreadsheets and data visualisations, such as annotated diagrams and mock-ups	• interpret designs using appropriate design tools to represent the functionality and appearance of databases, spreadsheets and data visualisations
• types and purposes of qualitative and quantitative data • characteristics of data and information • sources, methods and techniques for acquiring and referencing primary and secondary data and information • factors affecting the quality of data and information, such as accuracy, bias, integrity, relevance and reliability • procedures for the legal and ethical collection and use of data and information, such as using consent forms • techniques for protecting data and information from misuse, such as de-identifying personal data and the use of physical and software security controls • Australian Privacy Principles relating to the acquisition, management and communication of data and information including non-identification of individuals (Principle 2), information only being held for its primary purpose (Principle 6) and the security measures used to protect personal information (Principle 11) • ethical issues arising from the acquisition, storage and use of data and information	• acquire and reference data and information from primary and secondary sources, taking into account legal and ethical considerations
• interpretation of information for communication and decision making	• analyse the selected data, and discuss the relationships and patterns identified
• characteristics of data types and data structures relevant to selected software tools • structural characteristics of spreadsheets and databases, such as cells, fields, records and tables • types and purposes of data visualisations suitable for educating, entertaining, informing and persuading audiences • formats and conventions suitable for databases, spreadsheets and data visualisations • software functions and techniques for efficiently and effectively manipulating, validating and testing data to develop databases, spreadsheets and data visualisations	• use software, and select and apply functions, formats, conventions, data validation and testing techniques to efficiently manipulate data and create data visualisations • compare and interpret data visualisations

Assessment task development