**Instrument-specific marking guide**

Criterion: Retrieving and comprehending

### Assessment objectives

1. recognise and describe key elements of an application, components of data exchange systems, and data security processes

2. symbolise and explain data interface, structures and specifications; data flow relationships within and between systems; and digital methods of exchanging data

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| **The student work has the following characteristics:** | **Marks** |
| * accurate and discriminating recognition and discerning description of key elements of an application, components of data exchange systems, and data security processes * adept symbolisation and discerning explanation of data interface, structures and specifications; data flow relationships within and between systems; and digital methods of exchanging data. | 5-6 |
| * appropriate recognition and description of key elements of an application, components of data exchange systems, and data security processes * competent symbolisation and appropriate explanation of data interface, structures and specifications; data flow relationships within and between systems; and digital methods of exchanging data. | 3-4 |
| * variable recognition and superficial description of elements of an application, components of data exchange systems, or data security processes * variable symbolisation and superficial explanation of aspects of data interface, data flow relationships or digital methods of exchanging data. | 1-2 |
| * does not satisfy any of the descriptors above. | 0 |

Criterion: Analysing

### Assessment objectives

3. analyse a data exchange problem and information related to data security

4. determine data exchange system requirements, a security strategy for data, and prescribed and self-determined criteria

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| **The student work has the following characteristics:** | **Marks** |
| * insightful analysis of the data exchange problem and relevant information related to data security to identify the data structures, data exchange methods, risks to data and code components * astute determination of data exchange requirements, security strategy for data, code for the data conversion program and essential prescribed and self-determined criteria. | 6-7 |
| * considered analysis of the data exchange problem and relevant information related to data security to identify the data structures, data exchange methods, risks to data and code components * logical determination of data exchange requirements, security strategy for data, code for the data conversion program and effective prescribed and self-determined criteria. | 4-5 |
| * appropriate analysis of the data exchange problem and information related to data security to identify the data structures, data exchange methods, risks to data and code components * reasonable determination of data exchange requirements, security strategy for data or code for the data conversion program and some criteria. | 2-3 |
| * makes statements about aspects of the data exchange problem, data structures, data exchange methods, risks to data or code components * vague determination of some data exchange requirements, security strategy for data and some criteria. | 1 |
| * does not satisfy any of the descriptors above. | 0 |

Criterion: Synthesising and evaluating

### Assessment objectives

5. synthesise information and ideas to determine selected data, algorithms and coded components of data exchange solutions

6. generate components of the data exchange solution

7. evaluate impacts, coded components and a data exchange solution against prescribed and self-determined criteria to make refinements and justified recommendations

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| **The student work has the following characteristics:** | **Marks** |
| * coherent and logical synthesis of relevant information and ideas to determine selected data, algorithms and coded components of data exchange solutions * purposeful generation of efficient components of the data exchange solution * critical evaluation of impacts, coded components and a data exchange solution against essential prescribed and self-determined criteria to make discerning refinements of code and astute recommendations justified by data. | 7-8 |
| * logical synthesis of relevant information and ideas to determine data, algorithms and coded components of data exchange solutions * effective generation of components of a data exchange solution * reasoned evaluation of impacts, coded components and the digital data exchange solution against effective criteria to make effective refinements of code and considered recommendations justified by data. | 5-6 |
| * simple synthesis of information or ideas to determine data, algorithms and coded components of data exchange solutions * adequate generation of components of the data exchange solution * feasible evaluation of impacts, coded components and a digital data exchange solution against some criteria to make adequate refinements of code and fundamental recommendations justified by data. | 3-4 |
| * unclear combinations of information or ideas to determine data, algorithms or coded components of data exchange solutions * superficial evaluation of impacts, or the digital data exchange solution, against criteria. | 1-2 |
| * does not satisfy any of the descriptors above. | 0 |

Criterion: Communicating

### Assessment objective

8. make decisions about and use mode-appropriate features, written language and conventions for a technical audience

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| **The student work has the following characteristics:** | **Marks** |
| * discerning decision-making about, and fluent use of   + written and visual features to communicate about a solution   + language for a technical audience   + grammatically accurate language structures   + referencing and project conventions. | 3-4 |
| * variable decision-making about, and inconsistent use of   + written and visual features   + suitable language   + grammar and language structures   + referencing or project conventions. | 1-2 |
| * does not satisfy any of the descriptors above. | 0 |