| 3.1. Analysis of the problem (10 marks) | Isaac |
|---|-------------|
| 3.1.1 Problem identification | |
| (a) Describe and justify the features that make the problem solvable by computational methods | <u>Open</u> |
| (b) Explain why the problem is amenable to a computational approach. | |
| 3.1.2 Stakeholders | |
| (a) Identify and describe those who will have an interest in the solution explaining how the solution is appropriate to their needs | <u>Open</u> |
| (this may be named individuals, groups or persona that describes the target end user). | |
| 3.1.3 Research the problem | |
| (a) Research the problem and solutions to similar problems to identify and justify suitable approaches to a solution | <u>Open</u> |
| (b) Describe the essential features of a computational solution explaining these choices. | <u>Open</u> |
| (c) Explain the limitations of the proposed solution | <u>Open</u> |
| 3.1.4 Specify the proposed solution | - |
| (a) Specify and justify the solution requirements including hardware and software configuration (if appropriate) | <u>Open</u> |
| (b) Identify and justify measurable success criteria for the proposed solution | <u>Open</u> |

| 3.2 De | sign of the solution (15 marks) | lsaac | | |
|---------|---|-------------|--|--|
| 3.2.1 | Decompose the problem | | | |
| | (a) Break down the problem into smaller parts suitable for computational solutions justifying any decisions made | <u>Open</u> | | |
| 3.2.2 [| Describe the solution | | | |
| | (a) Explain and justify the structure of the solution. | <u>Open</u> | | |
| | (b) Describe the parts of the solution using algorithms justifying how these algorithms form a complete solution to the problem. | <u>Open</u> | | |
| | (c) Describe usability features to be included in the solution | <u>Open</u> | | |
| | (d) Identify key variables / data structures / classes justifying choices and any necessary validation. | <u>Open</u> | | |
| 3.2.3 [| 3.2.3 Describe the approach to testing | | | |
| | (a) Identify the test data to be used during the iterative development and post development phases and justify the choice of this test data | <u>Open</u> | | |

| 3.3 De | eveloping the solution (25 marks) | Isaac | | | |
|-------------------------------------|--|-------------|--|--|--|
| 3.3.1 I | 3.3.1 Iterative development process | | | | |
| | (a) Provide annotated evidence of each stage of the iterative development process justifying any decision made | <u>Open</u> | | | |
| | (b) Provide annotated evidence of prototype solutions justifying any decision made. | <u>Open</u> | | | |
| 3.3.2 Testing to inform development | | | | | |
| | (a) Provide annotated evidence for testing at each stage justifying the reason for the test. | <u>Open</u> | | | |
| | (b) Provide annotated evidence of any remedial actions taken justifying the decision made. | <u>Open</u> | | | |

| 3.4 Evaluation (20 marks) | Isaac |
|--|----------------|
| 3.4.1 Testing to inform evaluation | |
| (a) Provide annotated evidence of testing the solution of robustness at the end of the development process. | <u>Open</u> |
| (b) Provide annotated evidence of usability testing (user feedback). | <u>Open</u> |
| 3.4.2 Success of the solution | |
| (a) Use the test evidence from the development and post development process to evaluate the solution against the success criteria from the a | na <u>Open</u> |
| 3.4.3 Describe the final product | |
| (a) Provide annotated evidence of the usability features from the design, commenting on their effectiveness. | <u>Open</u> |
| 3.4.4 Maintenance and development | |
| (a) Discuss the maintainability of the solution. | <u>Open</u> |
| (b) Discuss potential further development of the solution. | <u>Open</u> |