

**Extensibility of product**

The student should design the product so that it can be maintained by another party and/or be further developed. Therefore the design of the product should include appropriate folder and data structures, intuitive file and/or class naming conventions and, where appropriate, comments in the code.

**Criterion E: Evaluation**

This criterion should be completed as two parts.

**Evaluation of the product**

The evaluation of the product should refer directly to the success criteria in criterion A, feedback from the client/adviser, as well as any other appropriate feedback obtained.

**Recommendations for the future development of the product**

The student will use the feedback and the evaluation of the specific performance criteria to recommend possible future developments to the product. These recommendations should explain the benefits of these developments.

## Internal assessment criteria—SL and HL

### Rationale

**General overview**

The computer science internal assessment focuses on the balance between the level of algorithmic thinking and problem-solving required to develop a product within the framework of the design cycle.

**The assessment criteria**

Criteria A, B and E are process-oriented and examine how the internal assessment task was carried out and allow common assessment criteria to be applied to different types of product from the different options. Criterion C is a holistic assessment of the final product and assesses the student's understanding of the concepts involved in its development. Criterion D is a holistic assessment of the functionality and future extensibility of the product.

**Criterion A: Planning (6 marks)**

The success criteria identified in criterion A will be used in criterion D to evaluate the effectiveness of the product.

Marks	Description
0	The response does not reach a standard described by the descriptors below.
1–2	An appropriate scenario for investigation for an identified client is stated. The rationale for choosing the proposed product is identified. The criteria for evaluating the success of the product are generally inappropriate.

Marks	Description
3–4	An appropriate scenario for investigation for an identified client, providing evidence of consultation, is stated. The rationale for choosing the proposed product is partially explained and includes some appropriate criteria for evaluating the success of the product.
5–6	An appropriate scenario for investigation for an identified client, providing evidence of consultation, is described. The rationale for choosing the proposed product is justified and includes a range of appropriate criteria for evaluating the success of the product.

### Criterion B: Solution overview (6 marks)

- The student must provide a record of tasks and a design overview that includes an outline test plan.
- The *Record of tasks* form must be used.
- The record of tasks and design overview must refer to the product proposed in criterion A.

Marks	Description
0	The response does not reach a standard described by the descriptors below.
1–2	The record of tasks and the design overview, including an outline test plan, are limited. From this information it is difficult to see how the product was developed.
3–4	The record of tasks and the design overview, including an outline test plan, are partially complete. They provide a basic understanding of how the product was developed.
5–6	The record of tasks and the design overview, including an outline test plan, are detailed and complete. From this information it is clear how the product was developed.

### Criterion C: Development (12 marks)

- The student must identify techniques used in developing the product.
- The student must explain the techniques, with screenshots, that were used to develop the product identified in criterion A, explaining why they have been used and why they are adequate for the task.

Marks	Description
0	The response does not reach a standard described by the descriptors below.
1–4	The use of techniques demonstrates a low level of complexity and ingenuity or does not address the scenario identified in criterion A. It is characterized by limited use of existing tools. There is no explanation of why the techniques are used or how they are adequate for the task. Sources are used but are not identified.

Marks	Description
5–8	The use of techniques demonstrates a moderate level of complexity and ingenuity in addressing the scenario identified in criterion A. It is characterized by some appropriate use of existing tools. There is some attempt to explain the techniques used and why they are adequate for the task. All sources are identified.
9–12	The use of techniques demonstrates a high level of complexity and ingenuity in addressing the scenario identified in criterion A. It is characterized by the appropriate use of existing tools. The techniques are adequate for the task and their use is explained. All sources are identified.

### Criterion D: Functionality and extensibility of product (4 marks)

This criterion assesses the extent to which the product:

- functions, as evidenced in the video
- can be expanded and modified by future users as evidenced in the design and development documentation.

Marks	Description
0	The response does not reach a standard described by the descriptors below.
1–2	The video shows that the product functions partially. Some expansion and modification of the product is possible but difficult.
3–4	The video shows that the product functions well. Some expansion and modifications of the product are straightforward.

### Criterion E: Evaluation (6 marks)

- The student must evaluate the effectiveness of the product based on feedback from the client/adviser. This must include direct references to the success criteria identified in criterion A.
- The student must recommend proposals for the future improvement of the product.

Marks	Description
0	The response does not reach a standard described by the descriptors below.
1–2	There is a limited attempt to evaluate the product against the success criteria identified in criterion A. There is limited evidence of feedback from the client/adviser and any recommendations for further improvement are trivial or unrealistic.
3–4	The product is partially evaluated against the success criteria identified in criterion A including feedback from the client/adviser. Recommendations for further improvement of the product are largely realistic.
5–6	The product is fully evaluated against the success criteria identified in criterion A including feedback from the client/adviser. Recommendations for further improvement of the product are realistic.