

2. Software Design and Development, HSC course

Assessment program

Five tasks have been selected to address the 17 HSC course outcomes. Each outcome is formally assessed at least once. A substantial weighting has been given to practical activities and project work to reflect the intent of the syllabus and to balance the HSC examination, which is a 100 % written paper.

Syllabus components and weightings	Task 1: Group Project Outcomes: H4.3, H6.3, H6.4 Date: Week 6, Term 4, 2000	Task 2: Programming task Outcomes: H5.2, H4.1, H4.2, H4.3 Date: Week 8, Term 1, 2001	Task 3: Research task (Option Topic 1) Outcomes: H1.2, H2.1, H2.2, H 4.1, H6.1 Date: Week 7, Term 2, 2001	Task 4: Individual project Outcomes: H4.3, H5.1, H5.2, H5.3, H6.2 Date: Week 3, Term 3, 2001	Task 5: Trial examination Outcomes: H1.1, H1.2, H1.3, H2.1, H2.2, H3.1, H4.1, H4.2, H4.3, H5.2, H6.1 Date: Week 6, Term 3, 2001
Development and impact of software solutions and the software development cycle: 20 %	-	-	10 %	-	10 %
Design and development of software solutions: 35 %	5 %	10 %	5 %	5 %	10 %
Project management techniques: 20 %	5 %	5 %	-	10 %	-
Project(s): 25 %	5 %	-	5 %	10 %	5 %
Total: 100 %	15 %	15 %	20 %	25 %	25 %

HSC assessment task 1

This is the first scheduled task in the assessment program shown above.

It will occur early in the HSC course as part of a six-week unit of work. The unit of work addresses content from the core strands of *Software Development Cycle* and *Developing a Solution Package*.

The unit of work is based on a group project. The project provides learning experiences which address many of the course outcomes.

Students work as members of a team to design and develop a piece of educational software. The software should be suitable for use by a selected group of students in infants, primary or junior high school, and their teacher.

The assessment task is scheduled during the group project. While the group project addresses many of the outcomes, the assessment task focuses specifically on three outcomes: H4.3, H6.3 and H6.4. This has been done to ensure that a manageable number of outcomes is being assessed and that the task is effectively measuring those outcomes.

The student handouts shown on the following pages for the assessment task and the feedback sheet would be provided to the students at the beginning of the project.

Software Design and Development

HSC ASSESSMENT TASK 1

Design and development of educational software

Assessment task 1	Outcomes to be assessed:
Time allowed 6 weeks	H4.3 applies a modular approach to implement well structured software solutions and evaluates their effectiveness
Due date Week 6, Term 4, 2000	H6.3 uses a collaborative approach during the software development cycle
Marks 15	H6.4 develops effective user interfaces, in consultation with appropriate people
Weighting 15%	

This assessment task relates to your group project, designing and developing a piece of educational software suitable for use by a selected group of students and their teacher.

This assessment task involves you and your team in submitting specific material that demonstrates your progress towards achievement of the above outcomes.

As an individual you are required to submit:

- An *individual module report* that documents the module you developed as part of the group solution. The report should include:
 - the specifications for the module
 - evidence of your initial attempts at the module
 - the source code for the module (in hard copy and digital format)
 - an explanation of any differences between the initial attempts and the implemented solution
 - test data used and the results from testing your module
 - an explanation of how your module interfaces with the rest of the solution.
- A *self-evaluation sheet* that evaluates your performance in the team.
- *Team member evaluation sheets* that evaluate the performance of other members in your team.

As a group you are required to submit:

- A group technical report that documents the entire solution to the problem. The report should include:
 - a description of the problem and the specifications for its solution
 - a representation of the solution using a recognised design tool
 - test data used and the results from testing the solution
 - details of any changes made to the problem's specifications during the project
 - the source code for the solution (in hard copy and digital format).
- *Minutes* of all group meetings, including individual responsibilities, decisions made and reasons.
- The finished product: *educational software* and *user manual*.
- *End user evaluation sheets* completed by the teacher and students for whom the solution was developed.

Student feedback sheet

Student's name: _____

H4.3 Applies a modular approach to implement well structured software solutions and evaluates their effectiveness

The minutes of meetings, individual module report, group technical report and finished product will be used to look for evidence of:

- appropriate planning for your module
- the correct use of control structures in your module
- efficient and elegant code
- evaluating the module to see that it meets initial specifications
- testing the module
- appropriate connection of the module to the rest of the code.

Comments:

/5 marks

H6.3 Uses a collaborative approach during the software development cycle

The minutes of meetings, self-evaluation form, team members' evaluation forms and end users' evaluation forms will be used to look for evidence of:

- actively contributing to the group
- negotiation with other group members
- constructive suggestions to the solution of the problem
- consultation with team members
- participation in group decision-making
- completion of an adequate share of the work
- identification of individual strengths and weaknesses
- identification of strengths and weaknesses in other team members.

Comments:

/5 marks

H6.4 Develops effective user interfaces, in consultation with appropriate people

The minutes of meetings, individual module report, finished product and end users' evaluation forms will be used to look for evidence of:

- user requirements being met
- user interface being well documented
- user interface being appropriate for age group
- involvement in the consultation with the end user
- involvement in the development of the user interface
- involvement with other members of the team to develop the user interface.

Comments:

/5 marks

TOTAL MARKS: /15 MARKS

(Note: 5 marks indicates that the criteria have been soundly addressed and 0 marks indicates that no relevant evidence was found.)