Unit 4 Software Development

Unit 4 Outcome 2 – SAC task template

Instructions

The purpose of this template is to assist teachers with the development of the Unit 4 Outcome 2 School-assessed Coursework task and in the meeting of requirements by following the VCE assessment principles. Teachers can use this template to insert the necessary content for the School-assessed Coursework task.

The following content is included in this template:

* Relevant VCAA resources for the development of the Unit 4 Outcome 2 SAC task.
* The Unit 4 Outcome 2 statement.
* The Unit 4 Outcome 2 Key knowledge.
* The Unit 4 Outcome 2 Key skills.
* Details related to task development including:
  + task
  + conditions
  + case study/scenario
  + assessment (marking scheme)

Use of commercial tasks

When referring to or using a commercially produced task teachers need to ensure that the tasks they develop are to be sufficiently modified from the original commercial task.

All commercially produced tasks must be cross-checked against the:

* outcome statement
* key knowledge
* key skills.

Also, for authentication reasons, the context (the background to the case study or scenario) and the content (the organisation’s current software development practices, risks with current security strategies and legal and ethical issues) of the task must be significantly changed from the original publication each year. This involves the current year’s commercial task as well as previous years and also any previous year’s school-developed assessment tasks.

VCAA Resources

The following resources for developing the Unit 4 Outcome 2 School-assessed Coursework task can be found on the Applied Computing: Software Development study page:

* Applied Computing Study Design (2020–2024)
* VCE Applied Computing: Software Development School-based Assessment report (2020)
* Advice for teachers (Unit 4 Software Development)
* On-demand videos:
* Unit 4 School-based Assessment
* Background to the Unit 4 Outcome 2 SAC
* Planning the Unit 4 Outcome 2 SAC
* Assessing the Unit 4 Outcome 2 SAC
* Using the Unit 4 Outcome 2 SAC Template
* Unit 4 School-based Assessment Audit
* Support material:
* 2022 VCE Applied Computing: Software Development Unit 4 Outcome 2 Assessment task development template – blank
* 2022 VCE Applied Computing: Software Development Unit 4 Outcome 2 Assessment task development template – plan
* 2022 VCE Applied Computing: Software Development Unit 4 Outcome 2 Developing a marking scheme – sample
* 2022 VCE Applied Computing: Software Development Unit 4 Outcome 2 SAC Template

The following resource can be found on the VCE General advice and policy page:

* VCE assessment principles

Unit 4 Outcome 2

On completion of this unit the student should be able to respond to a teacher-provided case study to examine the current software development security strategies of an organisation, identify the risks and the consequences of ineffective strategies and recommend a risk management plan to improve current security practices.

Key knowledge

*Digital systems*

* physical and software security controls used to protect software development practices and to protect software and data, including version control, user authentication, encryption and software updates
* software auditing and testing strategies to identify and minimise potential risks
* types of software security and data security vulnerabilities, including data breaches, man-in-the-middle attacks and social engineering, and the strategies to protect against these
* types of web application risks, including cross-site scripting and SQL injections
* managing risks posed by software acquired from third parties

*Data and information*

* characteristics of data that has integrity, including accuracy, authenticity, correctness, reasonableness, relevance and timeliness

*Interactions and impact*

* reasons why individuals and organisations develop software, including meeting the goals and objectives of the organisation
* key legislation that affects how organisations control the collection, storage (including cloud storage) and communication of data: the *Copyright Act 1968*, the *Health Records Act 2001*, the *Privacy Act 1988* and the *Privacy and Data Protection Act 2014*
* ethical issues arising during the software development process and the use of a software solution
* criteria for evaluating the effectiveness of software development security strategies
* the impact of ineffective security strategies on data integrity
* risk management strategies to minimise security vulnerabilities to software development practices.

Key skills

* analyse and discuss the current security controls to protect software development practices and to protect software and data
* identify and discuss the potential risks to software and data security with the current security strategies
* propose and apply criteria to evaluate the effectiveness of the current security practices
* identify and discuss the possible legal and ethical consequences to an organisation for ineffective security practices
* recommend and justify an effective risk management plan to improve current security practices.

Task

[**Insert** the name of the task here.]

[When developing the task refer to the *Unit 4 Outcome 2 Key knowledge and Key skills*, *Advice for teachers – Sample approaches to developing an assessment task* and the *Unit 4 Outcome 2 Support material* on the study page for further information.]

Conditions

[**Insert** the conditions for the task here.]

Case study/scenario

[**Insert** the case study/scenario here.]

[**Insert** the structured questions or brief prompts for the written report here. Include marks allocated for each question or brief prompt.]

Assessment

[**Insert** your marking scheme for the School-assessed Coursework task here. **Note:** Do not insert the VCAA Performance descriptors here without modifying them to meet your task.]

[Determine how you will be assessing student performance in response to the case study. Will it be through structured questions, a report in written format or a report in multimedia format? Refer to the *Unit 4 Outcome 2 Key skills* and the *Advice for teachers – VCAA Performance descriptors* and the *2022 VCE Applied Computing: Software Development Unit 4 Outcome 2 Developing a marking scheme - sample* on the study page for further information.]

[Marking schemes should be clear and accessible for students to help ensure that they can achieve the full range of marks. When developing marking schemes, schools must ensure criteria within the marking scheme are appropriately weighted. Marking schemes should also provide sufficient opportunity for schools to differentiate between levels of achievement. Schools must also ensure that the appropriate number of marks are awarded to the task.]