**Phil Feain** - Hello and welcome to the VCE Software Development Unit 3 School-based Assessment on-demand video for the Unit 3 Outcome 1 SAC for 2022. The purpose of Video 3 is to support teachers with understanding how to plan the Unit 3 Outcome 1 SAC task for Software Development. My name is Phil Feain and I'm the Curriculum Manager for Digital Technologies with the VCAA.

The purpose of this presentation is to: build the capacity of teachers to develop compliant, rigorous and engaging VCE assessment tasks in line with the VCE assessment principles and to provide an overview of how to plan the Unit 3 Outcome 1 School-assessed Coursework task. This presentation will cover the: Unit 3 Outcome 1 statement. Key knowledge. Key skills. The assessment task statement. A range of useful VCAA resources including: Task development template - blank and the Task development template - plan.

Over the next few slides we'll go through Unit 3 Outcome 1. Let's have a look at the outcome statement. On completion of this unit the student should be able to interpret teacher-provided solution requirements and designs, and apply a range of functions and techniques using a programming language to develop and test working software modules. You need to ensure the SAC task meets this. There were many issues with the Unit 3 Outcome 1 last year where the task did not even meet with the outcome statement.

Here's the key knowledge again. These could be used to help develop the task or tasks. The scenario for the task should only reference these bullet points. And here are the key skills again. You develop your assessment task to enable students to meet these. Next is the assessment task itself. In response to teacher-provided solution requirements and designs, create working modules. And it must be out of 100 marks. Over the remaining slides we'll look at planning the Unit 3 Outcome 1 SAC task.

This slide shows six useful VCAA resources that will help you with planning the assessment task. On the left, we have the Applied Computing Study Design that includes Software Development Unit 3 Outcome 1. Then we have the Advice for teachers with Sample approaches to developing an assessment task and the Unit 3 Outcome 1 Performance descriptors. This is followed by three resources on the study page: the Unit 3 Outcome 1 SAC template, the Unit 3 Outcome 1 Assessment task development template - blank and the Unit 3 Outcome 1 Assessment task development template - plan.

This slide shows a resource that I put together of a template showing how the key knowledge, key skills, and performance descriptors link together. The purpose of this resource is for you to put down your ideas or notes in the blank space, linking back to the performance descriptors, key skills and key knowledge.

You could use this resource to help you plan for the assessment task. This can be downloaded from the Software Development study page. I'll go through this in detail over the next few slides.

The first part of the document links the following three key knowledge bullet points to the key skill of - interpret solution requirements and designs to develop working modules. These link to the performance descriptor - all solution requirements and designs are interpreted accurately to develop working modules. When planning to meet this key skill or performance descriptor these are the three key knowledge bullet points that need to be addressed. In the assessment task students are interpreting the teacher-provided solution requirements and designs to develop their working modules.

The next part of the document links the following three key knowledge bullet points to the key skill of - use a range of data types and data structures. These link to the performance descriptor - Comprehensive selection of relevant data types and data structures to develop working modules. When planning to meet this key skill or performance descriptor, these are the three key knowledge bullet points that need to be addressed. In the assessment task students need to use a range of data types and data structures.

The next part of the document links the following five key knowledge bullet points to the key skill of - use and justify appropriate processing features of a programming language to develop working modules. These link to the two performance descriptors - Comprehensive selection and use of relevant processing features of the programming language to develop all working modules and Comprehensive justification and explanation of how the selection of appropriate processing features of the programming language are used to develop working modules. When planning to meet this key skill or performance descriptors, these are the five key knowledge bullet points that need to be addressed. In the assessment task students need to use the relevant processing features of the programming language. They also need to write a justification and explanation regarding how the selected processing features help them to develop their working modules.

The next part of the document links the following two key knowledge bullet points to the key skill of - develop and apply suitable validation, testing and debugging techniques using appropriate test data. These link to the two performance descriptors - Comprehensive use of relevant data validation techniques are applied efficiently and effectively to check the reasonableness of all input data and Comprehensive use of test data is expressed in a testing table, with both expected and actual output stated, and showing detailed evidence of debugging. When planning to meet this key skill or performance descriptors, these are the two key knowledge bullet points that need to be addressed. In the assessment task students need to use relevant data validation techniques to check the reasonableness of all input data. They are also to set up a testing table, include the headings for the columns of expected output and actual output. The testing table should show evidence of debugging.

The final part of the document links the following key knowledge bullet point to the key skill of - document the functioning of modules and the use of processing features through internal documentation. This links to the performance descriptor - All software modules include comprehensive internal documentation regarding the functioning of modules and use of selected processing features. When planning to meet this key skill or performance descriptor, this is the key knowledge bullet point that needs to be addressed. In the assessment task students need to include internal documentation regarding the functioning of modules and the use of the selected processing features.

This slide shows a resource that I've put together of a template showing how the key knowledge, key skills and performance descriptors link together with an explanation of how to create the assessment task on the right. The purpose of this resource is to assist teachers with planning the assessment task to ensure it links back to the performance descriptors, key skills and key knowledge. You can use this resource to help you write the assessment task. This can be downloaded from the Software Development study page. I'll go through this in detail over the next few slides.

This slide is about planning the case study or the scenario for the assessment task. Create a scenario that is a real-world example that provides students with solution requirements and designs that will enable them to apply a range of functions and techniques using a programming language to develop and test working software modules. The outcome may be completed as three to six modules. Key content within the tasks should be based on the targeted key knowledge and key skills. The total number of the marks for the outcome should be out of 100.

To meet the first key skill, the assessment task should be written to include: - Content to be included in the assessment task should introduce students to a scenario. The scenario should provide solution requirements and designs for between three and six modules. These modules should vary in length and difficulty, providing students with sufficient opportunities to demonstrate their knowledge and to meet the requirements of the outcome. A range of appropriate design tools should be used. Students are not to complete designs themselves. Software modules can be small programmes that may or may not form part of a larger software solution.

To meet the following key skill, the assessment task should be written to include: - The scenario with the solution requirements and designs should enable students to determine what data types and data structures they will need to use for the software modules.

To meet the following key skill, the assessment task should be written to include: - The scenario with the solution requirements and designs should enable students to determine the appropriate selection and use of processing features, naming conventions and sorting and searching algorithms they will need to develop the software modules. An appropriate programming language should be used by the students (Refer to the Programming requirements document on the study page). Students are to justify and explain their selection of processing features and sorting and searching algorithms used to develop their working modules. This written justification and explanation could be included within the internal documentation or as a separate written report.

To meet the following key skill, the assessment task should be written to include: - Students are to use and apply relevant data validation techniques to check all input data. A testing table is to be developed that involves the testing of all validation, objects and processing such as calculations, etc. The testing table should include columns for expected and actual output and show evidence of tests that work and don't work.

And to meet the final key skill, the assessment task should be written to include: Students are to include internal documentation within their working modules. Internal documentation should state how the modules function and describe the code involving processing and validation.

In this presentation we covered: The Unit 3 Outcome 1 statement. Looked at the Key knowledge. Looked at the Key skills. Looked at the assessment task. Gave an overview of some resources and went into detail about how to use the Task development template - blank and the Task development template - plan.

Thank you for following this presentation. If you have any questions regarding this presentation you can contact Phil Feain, the Digital Technologies Curriculum Manager at the contact details below.

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