SOFTWARE DEVELOPMENT UNIT 3&4

In Software Development Units 3 and 4 students focus on the application of a problem solving methodology and underlying skills to create purpose-designed solutions using a programming language. In Unit 3 students develop a detailed understanding of the analysis, design and development stages of the problem-solving methodology and use a programming language to create working software modules.

UNIT 3

Outcome	SAC/SAT
AoS1 – Programming Practice (SAC / Portfolio)	In this area of study students focus on the design and development stages of the problem-solving methodology and computational thinking skills. Students examine the features and purposes of different design tools so they can accurately interpret the requirements for working software modules. Students interpret given designs and create working modules using a programming language, undertaking the problem-solving activities of coding, testing and documenting (development stage).
AoS2 – Analysis and (SAT part 1)	In this area of study students construct the framework for the creation of a software solution that meets a need or opportunity determined by individual students. This is the first part of a project, with the second part undertaken in Unit 4, Outcome 1. In this area of study students analyse a real-world need or opportunity identified by them. The analysis is stated in terms of solution requirements, constraints and scope (analysis stage of problem-solving methodology) and presented as a software requirements specification.

In Software Development unit 4 students focus on how the information needs of individuals and organisations are met through the creation of software solutions used in a networked environment. They continue to study the programming language used in Unit 3.

UNIT 4

Outcome	SAC/SAT
AoS1 – Software Solutions (SAT part 2)	In this area of study students further develop their computational thinking skills by using the programming language studied in Unit 3 to transform the design they prepared in Unit 3, Outcome 2 into a software solution that meets specific needs or opportunities. Students prepare a useability test that addresses the core features of their solution. The test must be undertaken by at least two other 'users' and the results recorded. Students can make any necessary adjustments to their solution based on these results.
AoS2 Interactions and Impacts (SAC)	In a globalised economy and society, organisations are increasingly dependent on data supplied by other organisations. The integrity of the supplied data can affect the ability of an information system to achieve objectives.

	In this area of study students focus on the interactions between information systems that share data and how the performance of one of these systems is dependent on the integrity of the data. For example, timely and accurate weather reports generated by one information system can be used by an airline's information system to reschedule flights, reducing risks to commuters.