Software Development

Subject Guide

Computer software is a vital part of modern technological solutions driving our society.

Software development involves much more than writing a computer program. The success of a software solution relies on the effective and efficient processes that software developers follow to create quality products on time, within budget and which meet the complex needs of users. As such, students of Software Development aspire to be both skilled programmers and disciplined managers, who can steer software projects to successful outcomes.

Software Development provides students with the opportunity to solve problems through the design and creation of apps using a programming language. Students work on a real-world project and build an app that solves a problem. Students develop skills in computational thinking and designing algorithms that fulfill specific requirements. These skills prepare students for further study in software engineering and allow them to create digital solutions such as business apps, websites and games.

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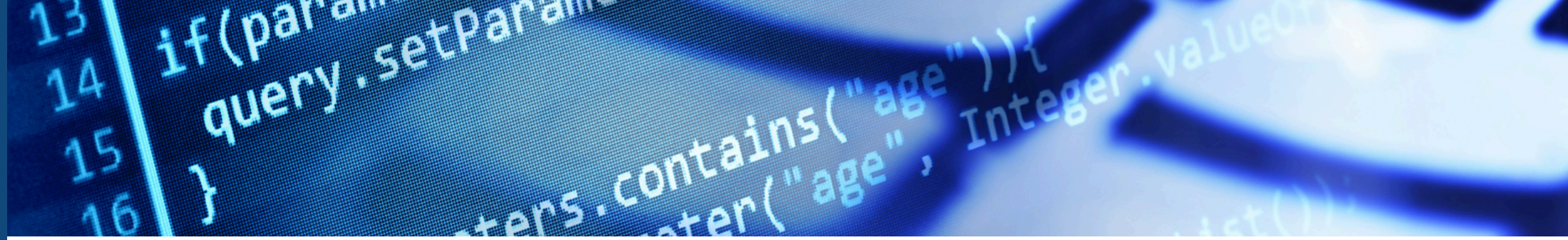

Unit focus areas

Unit 3 – Programming practice, analysis and design

This area of study focuses on building fundamental skills in programming to develop working apps that meet specific needs. Students interpret solution requirements and designs, and apply a range of functions and programming techniques as they use an object-oriented programming language to develop working software modules. Students also explore the use of artificial intelligence (AI) in software development as a cutting-edge tool to improve efficiency and productivity, as well as the ethical issues surrounding such practices.

Students also engage with authentic clients to identify and analyse a need or opportunity for a real-world project, and generate the designs needed to develop an app for that project.

Unit 4 – Development, evaluation and cybersecurity

This area of study provides students with an opportunity to complete their real-world project by utilising the fundamentals of programming to develop, test and evaluate their app.

Students also examine cybersecurity threats and study physical and software controls used to secure data and protect its integrity. They understand and learn how to defend against common threats to software security.

Pre-requisites

Students undertaking Units 3 and 4 Software Development need to have successfully completed Units 1 and 2 Applied Computing and have experience with Python.

Note: VCE Software Development is also running on Pangea, subject to numbers.

Assessment

For Software Development Units 3 and 4, students complete School-Assessed Coursework (20%) subject to external moderation, a School-Assessed Task (30%) subject to external moderation, and an end-of-year examination (50%).