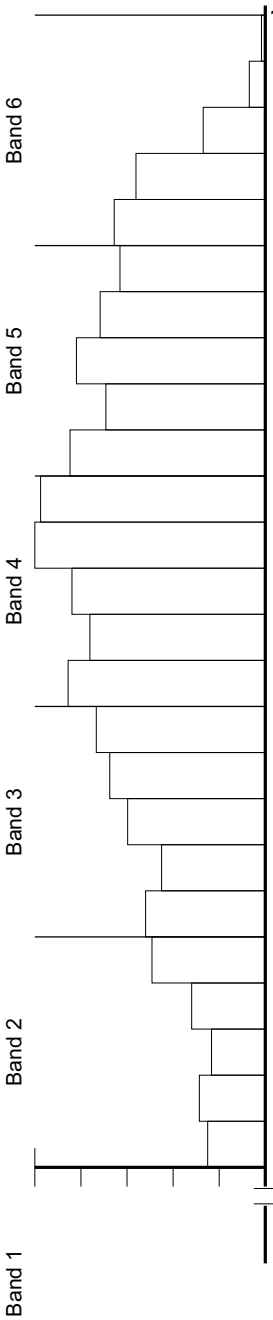
2024 Course Report

Software Design and Development

State Distribution | **The typical performance in this band:**



100

Demonstrates a thorough understanding of the phases of the software development cycle in producing a solution relevant to client needs and concerns. Uses appropriate development methodologies and project management techniques to analyse a problem and design a complete software solution. Develops well-constructed algorithms for a variety of unfamiliar problems using appropriate control and data structures. Effectively uses resources, tools and documentation to develop and communicate the essential features of software solutions. Designs an effective software solution with a sophisticated understanding of the interrelationships between hardware and software. Critically evaluates the social and ethical issues related to the development of software solutions and the impact on society of computer-based solutions. Analyses the effects of historical developments on current and emerging technologies and practices, and the development process.

90

Demonstrates an understanding of the phases of the software development cycle in producing a solution recognising client needs and concerns. Uses development methodologies and project management techniques to analyse a problem and design a relevant software solution. Develops algorithms for a variety of problems using appropriate control and data structures. Uses a variety of resources, tools and documentation to develop and communicate the essential features of software solutions. Designs a software solution reflecting an understanding of the interrelationships between hardware and software. Makes informed judgement about the social and ethical issues related to the development of software solutions and the impact on society of computer-based solutions. Relates knowledge and understanding of historical developments to current and emerging technologies and practices, and the development process.

80

Outlines the phases of the software development cycle required to produce a solution to a specified problem. Uses development methodologies and project management techniques to design a software solution. Develops an algorithm for a specified problem showing some understanding of control and data structures. Uses a limited number of resources, tools and documentation to develop and communicate some features of software solutions. Modifies a software solution reflecting knowledge of the interrelationships between hardware and software. Gives a clear explanation of the impact on society of computer-based solutions. Demonstrates knowledge and understanding of historical developments and current and emerging technologies.

70

Demonstrates a basic understanding of the phases of the software development cycle. Designs a partial software solution recognising the need for project management techniques. Reads, interprets and modifies simple algorithms that use a variety of data structures. Recognises and describes some resources, tools and documentation used to develop and communicate software solutions. Demonstrates a basic knowledge of the interrelationships between hardware and software. Describes some issues related to the impact on society of computer-based solutions. Shows some knowledge of historical developments and current technologies and describes some emerging technologies.

60

Identifies the phases of the software development cycle. Recognises some development methodologies and project management techniques. Reads and interprets simple algorithms that use simple data types. Recognises some resources, tools and documentation used in software development. Distinguishes between hardware and software components. Identifies some issues related to the impact on society of computer-based solutions. Identifies examples of current technologies.

50

Performance reported as Band 1 typically indicates that the minimum standard expected was not demonstrated.

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The candidature of this course was 1,708.