

1.2 SOFTWARE & SOFTWARE DEVELOPMENT · 1.2.4

Programming paradigms & procedural languages

Original practice questions · 32 marks · about 40 minutes · spec 1.2.4(a)(b)

Instructions. Answer all questions. Write code in OCR Exam Reference Language (pseudocode). The number of marks is shown in brackets [].

1 Total: 4 marks

This question is about programming paradigms.

(a) State what is meant by a *programming paradigm*. [1]

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(b) Name **three** programming paradigms. [3]

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2 Total: 6 marks

This question is about procedural languages.

(a) Describe **two** characteristics of procedural languages. [4]

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(b) Give **two** examples of languages that can be used procedurally. [2]

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3 Total: 5 marks

(a) Explain why a variety of programming paradigms is needed. [3]

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(b) State one type of problem that suits a procedural approach, giving a reason. [2]

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4

Total: 4 marks

Write a procedural pseudocode program that inputs two numbers and outputs the result of the first divided by the second. If the second number is 0, the program should output "Cannot divide by zero" instead. [4]

5

Total: 5 marks

A procedural program is split into subroutines.

(a) State what is meant by a *subroutine*. [1]

(b) Explain **two** benefits of structuring a procedural program as subroutines. [4]

Discuss why a variety of programming paradigms exists, using the procedural paradigm and **one** other paradigm as examples. In your answer, justify one situation where the procedural approach is the most suitable choice.

[8]

END OF QUESTIONS