Oxford Revise | OCR Computer Science | Answers

Chapter 28 Safe and readable programs

Question	Answer	Extra information	Marks	AO / Specification reference
1	Authentication can be applied through the use of usernames and passwords. Each user will have a unique username that only they are permitted to use. Once they have entered their username, they would enter a password. The password should only be known to that user. The program will check the password against the correct password stored for that username, and if they match, the user is allowed entry.	1 mark for each correct statement explaining how a program applies authentication, up to 3 marks.	1 1 1	AO1/AO2 2.3.1

Question	Answer	Extra information	Marks	AO / Specification reference

2	```//inputting the number for the first time```
	 ```number = input("Enter a number between 1 and 500, inclusive")```
	 ```//loop entered if number out of range```
	 ```while number <1 OR number >500```
	 ``` //error message and re-entry of number```
	 ``` number = input("The number must be```
	 ``` between 1 and 500, try again")```
	 ```endwhile```
		Marking points:
		 • Initial entry of number
		 • Appropriate loop controls with correct test for out-of-range number
		 • Re-entry of number
		 • Appropriate prompts throughout
		 • Comments embedded in code.
			1
			 1
			 1
			 1
			 1
				AO3
				
				 2.3.1

3	Comments are words embedded within the code to explain the purpose of the section of code in which they are written. This is useful to remind a programmer what each part of the code does, to enable them to revisit the algorithm in the future and make changes. It is also useful if another programmer becomes involved in editing the code, as it helps them to understand the purpose of each part of the code. It makes the code more readable.	1 mark for each correct statement explaining why commenting is useful when designing algorithms, up to 3 marks.	1 1 1	AO2 2.3.1