



National 5
Coursework
Assessment Task



National 5 Computing Science Assignment Marking Instructions

Please note that these marking instructions have not been standardised based on candidate responses. You may therefore need to agree within your centre how to consistently mark an item if a candidate response is not covered by the marking instructions.

Marking instructions

General marking principles

This information is provided to help you understand the general principles that must be applied when marking candidate responses in this assignment. These principles must be read in conjunction with the specific marking instructions, which identify the key features required in candidate responses.

- a Marks for each candidate response must **always** be assigned in line with these general marking principles and the specific marking instructions for this assessment.
- b Marking should always be positive. This means that, for each candidate response, marks are accumulated for the demonstration of relevant skills, knowledge and understanding: they are not deducted from a maximum on the basis of errors or omissions.
- c Deputy Principal Assessors will provide guidance on marking specific candidate responses which are not covered by either the principles or specific marking instructions

Specific marking instructions

Task	Expected response	Additional guidance	Marks available	
1	Software design and development			
1a	1 mark for each Input: - number of words (in sentence) to be entered - each word in the sentence	Candidates may interpret this problem as requiring a conditional loop where the user is asked if they wish to enter another word. If so, the user's input to control the loop is an acceptable answer for the first bullet point.	2	Analysis (2)
1b	1 mark for each: - input of words in loop - running total of word lengths in loop - average calculated outside loop	The average should be calculated using the 'number of words' indicated in the supplied design.	3	Design (3)
1c	1 mark each for: - Array of strings used to store individual words - total (number of characters) variable initialised to 0		2	Implementation (15)
	Input Validation	input validation, on number of words, carried out before fixed loops	1	
		loop condition correct - Condition in loop may be either pre or post condition: - Until noOfWords >=1 and noOfWords <=20 - While noOfWords <1 or noOfWords >20 - Any other valid answer	1	
		input inside loop	1	
		error message inside validation loop	1	

Task	Expected response	Additional guidance	Marks available	
1	Software design and development			
	♦ two fixed loops (input and output of words) which match design ♦ correct number of iterations for both loops (number of words)	Award one mark if a conditional loop and counter is used for input	2	Implementation (15)
	Use of length function to calculate number of characters and words		1	
	Running total used to calculate total number of characters in a sentence		1	
	Average word length calculated correctly	Total number of characters divided by number of words	1	
	If conditions both correct: ♦ < 5 ♦ >= 5 and <= 7		1	
	If structure that matches design	Award a mark for either use of else if or for nested if statements Do not award a mark for use of three separate if statements.	1	
	Display words on individual lines		1	
	Display reading age message		1	
1d(i)	1 mark for evidence of testing supplied test data (Note that the correct output is: The average word length is 8.4 Long words suitable for senior readers)	Input and output should be included in evidence Do not penalise candidates for spelling errors made during input of words, which might result in a different average, as long as the correct message is displayed.	1	Testing (3)

Task	Expected response	Additional guidance	Marks available	
1	Software design and development			
1d(ii)	1 mark each for: ◆ Number of words completed along with a suitable sentence that has an average word length of less than 5 ◆ Number of words completed along with a suitable sentence that has an average word length between 5 and 7		2	
1e	Evaluation of efficiency of constructs within the candidates own code may include: ◆ efficiency ○ Use of an array instead of separate variables to store words ○ Use of loops to reduce code ○ nested if statements preventing unnecessary code execution ◆ inefficiency ○ discussion of own code if it varies from the efficient solution	Other acceptable answers may be marked correct if evident in candidates code.	1	Evaluation (2)
	Evaluation of readability: ◆ Discussion of candidates own code in terms of either: ○ Internal commentary ○ White space ○ Meaningful variable names	Evaluation must contain an element of evaluation rather than simple statements of terms. For example “I have used white space to highlight structures in my program” not “I have used white space”. The candidate’s code must also show evidence of this for a mark to be awarded. Accept modularity as candidates may have been taught to write procedures or have dropped down from Higher.	1	

Task	Expected response	Additional guidance	Marks available	
2	Database design and development			
2a	1 mark for identifying the remaining attributes of club: ♦ club name ♦ date formed ♦ league 1 mark for identifying the remaining attributes of player: ♦ registration ♦ mobile number ♦ date of birth ♦ position ♦ shirt number	A surrogate field for Club details is not required as the scenario states that club names must be unique. Should candidates identify ClubID this should be ignored and the candidate not penalised for providing an additional input.	2	Analysis (2)
2b	1 mark for identifying: ♦ PK - club name in Club entity ♦ PK - registration in Player entity 1 mark for identifying: ♦ FK - club name in Player entity	Candidates should not be penalised if they correctly identify keys using alternative notations: • Primary • P • PK • * next to correct field		Design (2)
2c	1 mark for printed evidence of: ♦ shirtNumber validation - range ≥ 1 AND ≤ 25		1	Implementation (8)
2di	1 mark each for: ♦ UPDATE Player ♦ SET clubName= "Dundee North", shirtNumber = 24 ♦ WHERE registration = 814209	For third bullet do not accept use of the player forename and surname in WHERE as there could be two players of the same name.	3	
2dii	1 mark for each for: ♦ SELECT forename, surname, mobileNo, clubName FROM Club, Player	Do not award first bullet if extra fields are included in SELECT clause as the task states "only" these fields should be displayed.	4	

Task	Expected response	Additional guidance	Marks available	
2	Database design and development			
	♦ WHERE position = "Goalkeeper" ♦ AND league = 1 ♦ AND Club.clubName = Player.clubName			
2e	1 mark for identifying: ♦ The SQL statement finds all players with the required shirtnumber rather than just the strikers.	Accept code based answer if candidate states that: <code>position = 'striker'</code> is missing from the WHERE clause.	1	Testing (1)
2fi	Unknown		1	Evaluation (2)
2fii	1 mark for either: ♦ Referential integrity has been implemented or ♦ The database should prevent a player being added to the database if they do not have a valid club		1	

Task	Expected response	Additional guidance	Marks available	
3	Web design and development			
3a	Any two of the following for 1 mark each: The user would like to see... ◆ where the club meets ◆ when the club meets ◆ photographs of each leader ◆ a paragraph about each leader ◆ a list of activities for this week ◆ a list of activities for next week ◆ additional information on events where required ◆ the cost of each activity		2	Analysis (2)
3b	1 mark each for: ◆ all 5 bullet points included ◆ bullet points included in a logical order with: ○ heading at top ○ paragraph before list	◆ main heading ◆ a link to external webpage (video) ◆ a graphic called "armsling.jpg" ◆ a paragraph of text ◆ a numbered list	2	Design (2)
3c	Using the printout of the HTML file for the first aid page, confirm the following for 1 mark each: ◆ heading, paragraph and graphic added ◆ numbered (ol) list added ◆ link to external webpage ◆ layout matches candidates design	Marks should be awarded for candidates code rather than printout of webpage as viewed in a browser.	4	Implementation (8)
3di	Using the printout of the HTML file for the events page, confirm that code to play the file		1	

Task	Expected response	Additional guidance	Marks available	
3	Web design and development			
	'mixExample.mp3' has been added.			
3dii	Using the CSS and HTML for home page, confirm the following for 1 mark each: ◆ background colour of the page changed to blue ◆ middle <div> element styled a different colour using either an id or class ◆ h2 style rewritten: ○ text size 14 ○ font changed to Arial		3	
3e	1 mark for explaining that some of the text is not visible following the change of background to lightblue.	Any correct answer relating to candidates website, evidenced by their code. Note: Accept answers that no errors were found if candidates indicate that they corrected their code.	1	Testing (1)
3f	Confirm that the following functional requirements have not been met by identifying missing content from the list below: ◆ No photographs of leaders ◆ No information about when the club meets ◆ No paragraph on each leader 1 mark each up to a maximum of 2.		2	Evaluation (2)

[END OF MARKING INSTRUCTIONS]