National 5
Coursework
Assessment Task

National 5 Computing Science
Assignment
Finalised 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 each for: ♦ If structure correct (3 if statements or if with elseif statements) ♦ if conditions correct for each size of dog ♦ appropriate messages are stored	Weights ranges may be indicated as: ♦ between 110 and 140 ♦ from 110 to 140 ♦ >=110 and <=140 Additional else for 'not recommended' statement is not required If display is not indicated assume the message is stored Ignore errors in design shapes	3	Design

Task	Expected response		Additional guidance	Marks available	
1	**Software design and development**				
1b	Array used to store each weight		Must be used and not simply declared	1	Implementation
	loop 5 times		Loop must contain code	1	
	Input Validation	Input validation — conditional while loop used		1	
		Input validation — correct loop condition	< 0 or > 200	1	
		Input validation — input of weight within loop	Award 1 mark if implemented without input validation loop	1	
		Input validation — error message displayed inside while loop		1	
	Running total inside loop			1	
	selection statements	small and total between 110 and 140	If conditions have a working range but have one repeating error in the conditions, >110 and <140 >330 and <440 >690 and <900 award 2 marks out of 3. Check operators carefully as incorrect use of AND, OR, NOT may invalidate condition	3	
		medium and total between 330 and 440			
		large and total between 690 and 900			
		Structure matches design (nested or else ifs used)		1	
	Calculate average weight			1	
	Display 5 weight inputs within a second loop			1	
	Display total value and the correct stored message from supplied design		No need to display total with additional text to construct a message	1	
	Display rounded average to 1dp		No need to display rounded average with additional text to construct a message	1	

Task	Expected response	Additional guidance	Marks available	
1	**Software design and development**			
1ci	Printed evidence of test run including all inputs and the output message displayed.	Required inputs: 134.23 74.99 25.31 112.33 53.78 medium Required output message: This weight of food is suitable for your medium dog. Output could be used as evidence of inputs.	1	Testing
1cii	1 mark each for: ♦ Test 1 Expected Result - This weight of food is not recommended for the size of dog ♦ Test 2 Inputs – Weights 1 to 5 should total between 110 and 140 size of dog should be small	Expected output could also be message from candidate's code.	2	
1d	Evaluation of the following for: (efficiency) 1 mark each for: ♦ identifying efficient code in own program ♦ justify why it is efficient (robustness) 1 mark: ♦ how robust the program is, including if it copes with unexpected inputs (readability) 1 mark: ♦ readability — comment on one aspect of readability in the candidate's own code	Efficiency examples could include: ♦ use of array ♦ nested ifs ♦ running total inside same loop as inputs ♦ use of a loop 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.	4	Evaluation

Task	Expected response	Additional guidance	Marks available	
2	**Database design and development**			
2a	1 mark for identifying: ♦ Reference code 1 mark for identifying the following seven property details: ♦ House number ♦ Street ♦ City ♦ Postcode ♦ Asking price ♦ Estimated property value ♦ Number of bedrooms	Names given to property details could differ from bullet list. Allow SellerID to be included in the property details (as a foreign key).	2	Analysis
2b	1 mark each for identifying: ♦ Both Primary Keys ♦ the Foreign key	PK Seller.SellerID Property.PropertyRef FK Property.SellerID	2	Design
2ci	1 mark each for: ♦ `UPDATE Property SET askingPrice = 112000` ♦ `WHERE propertyRef = "DUN-101";`	" can be ' Alternative conditions that will give the same result (as these are all unique values in the database associated with this record): ♦`WHERE postcode = "DD10 0QM"` ♦`WHERE askingPrice = 105500` ♦`WHERE street = "George Avenue"` ♦`WHERE SellerID = "3896"` ♦`WHERE houseNumber = 99` ♦`WHERE estimatedValue = 111000`	2	Implementation

Task	Expected response	Additional guidance	Marks available	
2	**Database design and development**			
2cii	1 mark each for: ♦ `INSERT INTO Seller(sellerID, sellerName, sellerAddress, email, telephoneNumber)` ♦ `VALUES ("1502", "Eve Grace", "128 Cameron Drive Edinburgh EH4 5DS", "EveGrace@yehoo.net", "0131 279100");`	Also accept ♦ `INSERT INTO Seller` ♦ `VALUES (1502, "Eve Grace", "128 Cameron Drive Edinburgh EH4 5DS", "EveGrace@yehoo.net", "0131 279100");` Although sellerID is a text field the insert statement will still execute if the "" are not included around 1502	2	Implementation
2ciii	1 mark each for: ♦ `SELECT email, telephoneNumber, postcode FROM Seller, Property` ♦ `WHERE seller.sellerid = property.sellerid` ♦ `AND numberOfBedrooms = 3` ♦ `AND askingPrice < 150000;`	SELECT - order of fields may be different from that shown The order of the conditions in the WHERE clause is not important Do not award a mark if SQL created by application: MS Access example `SELECT Seller.email, Seller.telephoneNumber, Property.postcode FROM Seller INNER JOIN Property ON Seller.sellerID = Property.sellerID WHERE (((Property.numberOfBedrooms)= 3) AND ((Property.askingPrice) <150000));`	4	
	Expected Output for 2ciii			

email	telephoneNum	postcode
ksimp@eyecloud.com	01382 52196	DD9 8PN
ckane@msnopy.com	0131 676221	EH48 8MH
marioph@liive.com	01738 66045	IV47 2YQ
Humphry@liive.com	01738 48908	IV10 3RH
cpark@eyecloud.com	01738 31943	PH38 9TA
terry@aeioul.com	01738 80979	PH9 7GU
boftx@coldmail.com	01786 19187	FK11 4TA
iansutherland@gmile.com	01786 55483	FK10 9MG

Task	Expected response	Additional guidance	Marks available	
2	**Database design and development**			
2d	1 mark each for: ♦ town field doesn't exist ♦ price field doesn't exist		2	Testing
2e	1 mark for stating the database meets all the requirements.	If the functional requirements are listed in the answer, all four are required.	1	Evaluation

Task	Expected response	Additional guidance	Marks available	
3	**Web design and development**			
3a	End-user requirements could include any one of the following for 1 mark: The user would like to.. ♦ see images of the cake designs ♦ watch the video of a cake being iced ♦ view different types of cake ♦ find out how to register for rewards Functional requirements could include any two of the following for 1 mark each: The website should… ♦ display images of cakes ♦ display information about cake categories ♦ play a video of a cake being iced ♦ provide navigation between pages ♦ provide external links to similar sites ♦ provide information about rewards ♦ provide information about the company (title/slogan) ♦ provide information about the company promise		3	Analysis

Task	Expected response	Additional guidance	Marks available	
3	**Web design and development**			
3b	1 mark each for: ♦ consistent layout ♦ content for 'recommend a friend' page	The consistent layout should indicate: ♦ original banner (company name, slogan, logo) ♦ space for additional content ♦ bottom link section (home) The content section should indicate: ♦ message(s) ♦ an image ♦ (external) link	2	Design
3c	Using the printout of the orders HTML file, confirm the following for 1 mark each: ♦ add the following in correct place: o h1 heading o motto paragraph o bannerimage.jpg o home page link ♦ four messages ♦ working link to external page ♦ graphic inserted to correct size 300x240	Four messages ♦ you will receive a free slice of cake when a friend purchases ♦ you and your friend will receive 20% off ♦ most orders are delivered within three days ♦ take part in the 'Recommend a Friend' scheme by emailing their friend's name and email address Graphic could be sized in CSS.	4	Implementation

3d	Video added to home.html	`<video width="320" height="240">`
		`  <source src="cakeVideo.mp4" >`
		`</video>`
			1	

Task	Expected response	Additional guidance	Marks available	
3	**Web design and development**			
3e	Using the printout of the CSS file, confirm the following for 1 mark each: ♦ Three divs now the same colour DeepSkyBlue (#00BFFF) ♦ Company motto text now Arial and size 22 ♦ external link text orangeRed (or #ff4000) and size 16	Check with HTML that the CSS is implemented for the three changes. Do not award a mark if link 'a' style is changed to orangeRed. An id or class should be used to only change the external link colour.	3	Implementation
3f	1 mark each for: ♦ statement that their website is/ is not fit for purpose, matching their website ♦ justification of above (all the requirements have/have not been implemented)	If an error in 3c and 3d mean the functional requirements aren't met, do not award a mark if the candidate states their code is fit for purpose. If the candidates website is fit for purpose do not award a mark if the candidate states it is not fit for purpose. If the functional requirements are listed in the answer, all five are required.	2	Evaluation

Task 1 – Software Design and Development		Marks Available	Marks Awarded
1a – Design	IF structure	1	
	All conditions	1	
	Stored message	1	
			/3

1b - Implementation			
Array used to store each weight		1	
loop 5 times		1	
Input validation	Conditional loop used	1	
	Correct loop condition	1	
	Input of weight (within loop)	1	
	Error message displayed	1	
Running total inside loop		1	
Selection	Small and between 110 and 140	1	
	Medium and between 330 and 440	1	
	Large and between 690 and 900	1	
	if structure matches design	1	
Calculate average weight		1	
Display 5 weight inputs within a second loop		1	
Display total value and stored message		1	
Display rounded average to 1dp		1	
			/15

1c(i) – Testing	Evidence of inputs and outputs	1	**/1**

1c(ii) – Testing	Test 1 - food not recommended	1	
	Test 2 – total weight 110-140, small	1	
			/2

1d – Evaluation	Efficiency (identify, justify)	2	
	Robustness	1	
	Readability	1	
			/4

Task 2 – Database Design and Development		Marks Available	Marks Awarded
2a – Analysis	Reference code	1	
	Seven property details	1	
			/2

2b – Design	Both Primary keys	1	
	Foreign key	1	
			/2

2c(i) – Implementation	UPDATE statement	1	
	WHERE clause	1	
			/2

2c(ii) – Implementation	INSERT statement	1	
	VALUES statement	1	
			/2

2c(iii) – Implementation	SELECT statement	1	
	WHERE (join)	1	
	AND (numberOfBedrooms = 3)	1	
	AND (askingPrice < 150000)	1	
			/4

2d – Testing	town should be city	1	
	price should be askingPrice	1	
			/2

2e – Evaluation	fitness for purpose	**1**	**/1**

Task 3 – Web Design and Development		Marks Available	Marks Awarded
3a – Analysis	End-user requirement	1	
	Functional requirements	2	
			/3

3b – Design	Consistency of design	1	
	Additional content	1	
			/2

3c – Implementation HTML	Heading, motto, logo, home	1	
	Four messages	1	
	External link	1	
	Graphic inserted – 300 x 240	1	
			/4

3d – Implementation	Video inserted	1	**/1**

3e – Implementation CSS	Divisions same colour	1	
	Text formatting	1	
	External link text	1	
			/3

3f - Evaluation	Fitness for purpose statement	1	
	Justification of above	1	
			/2

	Marks Available	Marks Awarded
Assignment total	**40**	

[END OF MARKING INSTRUCTIONS]