



National 5
Coursework
Assessment Task



2020 National 5 Computing Science Assignment Marking Instructions

© Scottish Qualifications Authority 2020

These marking instructions have been prepared by examination teams for use by SQA appointed markers when marking external course assessments.

Please note, as we were not able to carry out live marking in 2020, these marking instructions are not presented in a final state and have not been referenced against candidate responses.

The information in this document may be reproduced in support of SQA qualifications only on a non-commercial basis. If it is reproduced, SQA must be clearly acknowledged as the source. If it is to be reproduced for any other purpose, written permission must be obtained from permissions@sqa.org.uk.

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	Database design and development – part A			
1a	<p>1 mark for identifying:</p> <ul style="list-style-type: none"> ◆ order ID/order code <p>1 mark for identifying:</p> <ul style="list-style-type: none"> ◆ order price ◆ collection date ◆ flower type ◆ size of bunch ◆ chocolates ◆ message 	<p>Must identify all six attributes</p>	2	Analysis (2)

Task	Expected response	Additional guidance	Marks available	
1	Database design and development – part B			
1b	1 mark each for: <ul style="list-style-type: none"> ◆ adding length check validation (=11) to telephoneNo field ◆ adding range validation (>=5 and <=50) to price field 	Field size 11 is not acceptable for telephoneNo as this would allow <11 characters to be entered.	2	Implementation (8)
1ci	1 mark each for: <ul style="list-style-type: none"> ◆ UPDATE FlowerOrder ◆ SET flowerType = "Tulip" ◆ AND price = 17 ◆ WHERE OrderID = "CHQ3848"; 	Award 3 marks if candidate uses two separate, correct SQL statements to update values. Note that a comma may be used instead of AND in the SET clause.	4	
cii	1 mark each for: <ul style="list-style-type: none"> ◆ INSERT INTO Customer (customerID, forename, surname, telephoneNo) ◆ VALUES ('2986', 'Richard', 'Glass', '07654 029336'); 	Alternative correct answer: INSERT INTO Customer VALUES ('2986', 'Richard', 'Glass', ' ', '07654 029336'); Null value for address must be present for second mark in above answer.	2	
1d	Any two of the following for 1 mark each: <ul style="list-style-type: none"> ◆ no field called “customerName” ◆ no field called “size” ◆ restricted choice field doesn’t include “smallest” option 		2	Testing (2)

Task	Expected response	Additional guidance	Marks available	
2	Software design and development			
2a	1 mark each for design including: <ul style="list-style-type: none"> ◆ assignment: random number between 1 and 10 ◆ selection: if random number = 1, set customer's bill to 0 ◆ selection: if random number >= 2 and <=6, set customers bill to 50% 	Random number assignment must include range. There is no requirement for the design to show the bill does not change for random numbers between 7 and 10	3	Design (3)
2b	Fixed loop for number of items entered by user		1	Implementation (15)
	conditional loop used		1	
	correct loop condition	Until item = "c" OR item = "t" OR item = "b" or While until item ≠ "c" AND item ≠ "t" AND item ≠ "b"	2	
	input of item type	Award 1 mark if not implemented within input validation loop	1	
	error message		1	
	Running total for bill using correct prices for items		1	
	Random number: <ul style="list-style-type: none"> ◆ store random integer (1-10) ◆ display random number 		2	
	If random number = 1 set bill total to 0	Accept <2 as condition	1	
	If random number >= 2 and <= 6 set bill to 50% of bill	1 for condition 1 for correct calculation	2	
	Display final bill to 2 decimal places		1	
	If statements match design:		2	

Task	Expected response	Additional guidance	Marks available
2	Software design and development		
	<ul style="list-style-type: none"> ◆ nested or else if statements used to add up bill items ◆ separate if statements used to determine final bill 		

Task	Expected response	Additional guidance	Marks available	
2	Software design and development			
2ci	Table completed correctly with all three possible outputs: <ul style="list-style-type: none"> ◆ 0 ◆ 4.5 ◆ 9 	For reference total = 9: (c = 2.25 + t = 1.85 + t = 1.85 + b = 3.05)	1	Testing (3)
	Printed evidence of test run producing one of the above outputs.	Both inputs and outputs should be printed	1	
cii	Table completed with one exceptional value.		1	
2d	Evaluation of the following Efficiency (2 marks) <ul style="list-style-type: none"> ◆ two comments on the efficient use of coding constructs Robustness (1 mark) <ul style="list-style-type: none"> ◆ how robust the program is, including if it copes with unexpected inputs Readability (1 mark) <ul style="list-style-type: none"> ◆ the readability of the candidate's own code 	Candidate may describe either efficiencies or inefficiencies in their code 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 (4)

Task	Expected response	Additional guidance	Marks available	
3	Web design and development			
3b	<p>Using the completed wireframe, confirm the following for 1 mark each:</p> <ul style="list-style-type: none"> ◆ position of all content marked in upper section ◆ link to home page marked in lower section 	<p>Page content checklist:</p> <ul style="list-style-type: none"> ◆ delivery statement ◆ payment statement ◆ payfriend external link ◆ email statement ◆ email address ◆ parcel graphic (with size) <p>Allow payfriend link to be added to lower section with home page link.</p>	2	Design (2)
3c	<p>Using the printout of the orders HTML file, confirm the following for 1 mark each:</p> <ul style="list-style-type: none"> ◆ text content added within appropriate elements <ul style="list-style-type: none"> ○ delivery statement ○ payment statement ○ email statement and address ◆ links to: <ul style="list-style-type: none"> ○ www.payfriend.com ○ home page ◆ graphic inserted to correct size (200x100) ◆ order of content on the implemented 'Orders' page matches the candidate's design. 		4	Implementation (7)
3d	<p>Using the printout of the CSS file, confirm the following for 1 mark each:</p> <ul style="list-style-type: none"> ◆ three <div> elements styled using the same colour ◆ text in heading the same font and text size as <h1> 	<p>The three <div> elements may be styled by changing the style of each class in the css file or by using a single class in all three <div> elements within the html pages.</p>	3	

Task	Expected response	Additional guidance	Marks available	
3	Web design and development			
	<ul style="list-style-type: none"> ◆ hyperlink text for www.payfriend.com white and font size 12 			
3e	<p>Any of the following for 1 mark:</p> <ul style="list-style-type: none"> ◆ Website does not contain video ◆ Website does not contain photos of all products 		1	Evaluation (1)

[END OF MARKING INSTRUCTIONS]