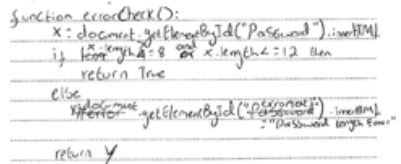


Mark scheme

Question		Answer/Indicative content	Mark	Guidance															
1	a	1 mark for each correct row. <table><tr><th>Task</th><th>Client Side</th><th>Server Side</th></tr><tr><td>Loading the website HTML code</td><td>✓</td><td></td></tr><tr><td>Applying CSS styles to a website</td><td>✓</td><td></td></tr><tr><td>Running JavaScript code to check that the customer surname has been entered on the order form</td><td>✓</td><td></td></tr><tr><td>Running queries on the database to check if an item is available in stock</td><td></td><td>✓</td></tr></table>	Task	Client Side	Server Side	Loading the website HTML code	✓		Applying CSS styles to a website	✓		Running JavaScript code to check that the customer surname has been entered on the order form	✓		Running queries on the database to check if an item is available in stock		✓	4	Accept alternatives to ticks in the boxes so long as it is clear which side is marked. <u>Examiner's Comments</u> Most candidates were able to gain 2 or 3 marks on this question with many gaining all 4 marks. The most common error was ticking server side for Running JavaScript to check the surname.
Task	Client Side	Server Side																	
Loading the website HTML code	✓																		
Applying CSS styles to a website	✓																		
Running JavaScript code to check that the customer surname has been entered on the order form	✓																		
Running queries on the database to check if an item is available in stock		✓																	
	b	Mark Band 3-High Level (9-12 marks) The candidate demonstrates a thorough knowledge and understanding of search indexing and page rank. The material is generally accurate and detailed. The candidate is able to apply their knowledge and understanding directly and consistently to the context provided. Evidence/examples will be explicitly relevant to the explanation. The candidate is able to assess the extent to which page rank and search engine optimization is important to online visibility. There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. <i>A mark band 3 answer will explain in detail how search indexing happens and the factors affecting PageRank scores. There will be clear evaluative points that identify how to improve PageRank score.</i> Mark Band 2-Mid Level (5-8 marks) The candidate demonstrates reasonable knowledge and understanding of search indexing and page rank; the material is generally accurate but at times underdeveloped. The candidate is able to apply their knowledge and understanding directly to the context provided although one or two opportunities are missed.	12	Points may include but aren't limited to: AO1 Knowledge and Understanding Search engine indexing: • Search engine indexing is where a database of key words is kept with links to relevant pages stored with the keyword • Words are stored along with their position on a page • Bots (spider/crawlers) will "crawl" the web finding web pages and looking for key words on them • The will navigate from page to page following hyperlinks • They are then sent back to the search engine's database • When you search for a website, you are not searching on the web, you are searching in the															

		Evidence/examples are for the most part implicitly relevant to the explanation. The candidate makes a reasonable attempt to come to a conclusion as to why page rank and search engine optimisation are important to online visibility. There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence. <i>A mark band 2 answer will cover both search indexing and page ranking and will expand the points, explaining what information is collected during indexing and factors that affect PageRank scores although these may not be balanced. There should be some attempt to identify how to improve PageRank score.</i> Mark Band 1-Low Level (1-4 marks) The candidate demonstrates a basic knowledge of search indexing or page rank; the material is basic and contains some inaccuracies. The candidate makes a limited attempt to apply acquired knowledge and understanding to the context provided. The candidate provides nothing more than an unsupported assertion. The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. <i>A mark band 1 answer will contain some basic, relevant facts about what search indexing is and/or what PageRank means. They may not discuss how the company can improve PageRank.</i> 0 mark No attempt to answer the question or response is not worthy of credit.		search providers database PageRank: - Used to find and rank website pages and then list the results in a search engine. If a website has a higher score, it will appear higher in the list of search results. - More links from more important pages, ranks a page higher - Stored as a weighted, directed graph - Pages are nodes - Hyperlinks are edges in one direction - Weightings are calculated by page rank AO2 Application To get more of presence they will need to... - Make effective use of meta tags that effectively describe the contents of the website. - Make effective use of H1 tags using suitable headings that describes the content of the website - Increase the number of quality of incoming links from other websites, ideally those with a high PageRank score themselves - Increase the number of outgoing links - Key words can be stored in meta tags, title tags or header tags (h1, h2 etc) - Damping factor is used to quash a PageRank based on the idea that a
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					user will only click through a certain number of links AO3 Evaluation • PageRank algorithm is only one algorithm that is used to Rank websites. • To get a better presence on the internet, the company will need to consider who links to their page, the more popular the better • They could potentially work with other companies who have established websites and get incoming links from those sites • It's important that a company ensures their site is malware free/secure as this can impact on their PageRank score <u>Examiner's Comments</u> Many candidates were able to discuss some factors that affect PageRank and how the website could improve it. Far less were able to discuss search engine indexing correctly. Some were able to apply their knowledge to the scenario. More successful candidates were able to give a good description of both search engine indexing and PageRank as well as relevant suggestions for how the website could improve their PageRank.
			Total	16	
2			• Correctly declared <u>function errorCheck ()</u> (CAO) • Use <u>getElementById</u> and assign to a variable • Use <u>if</u> statement to check if password length < 8 / password length > 12 ...	AO3. 2 (5)	Award 0 marks if it is clear JavaScript has not been used Allow nested if statements

			... if statement checks both password length < 8 and password length > 12 - Inside if statement set innerHTML of errorText to "Password Length Error" (CAO) POSSIBLE SOLUTION: <pre>function errorCheck() { var pass = document.getElementById("Password").value; if (pass.length > 12 pass.length < 8) { document.getElementById("errorText").innerH TML = "Password Length Error"; } }</pre>		<u>Examiner's Comments</u> Although candidates were required to write this response in JavaScript, marks were still given if the syntax was close, and the logic was generally correct. A number of candidates didn't use JavaScript and gave responses in alternative scripts or Python. The question states that JavaScript code must be written, therefore any other code received no marks. Exemplar 3  This candidate response was given full marks. The second part of the 'if' statement is not entirely correct, but the overall code provided is very close to each mark scheme point and was therefore given full marks.  Assessment for learning Appendices 5d in the specification gives guidance on what students are expected to know regarding JavaScript with examples.
			Total	5	
3	a	i	 and - href - Login - text/password - submit	5	<pre><html> <head> <title>Robot User Interface</title> </head> <body> <h1>Robot directives</h1> Serve the company</pre>

				<pre>trust Protect data Uphold standards Updates <p>Login</p> <form action="dologin.php"> Password <input type = "text" name="pw"> <input type = "submit"> </form> </body> </html></pre> HTML tags are not case sensitive Correct answer only <u>Examiner's Comments</u> Generally well answered and many candidates gained full marks with most being able to gain at least two.
	ii	• h1 and other code contained in { } • color :white; • background-color : red; /background: red;	3	Ignore presence or lack of <style> tags. Ignore lack of semicolons Penalise misspelling of "color" once and then FT <pre>h1 { color:white; background-color: red; }</pre> White can be #FFFFFF or #FFF Red can be #FF0000 or #F00 <u>Examiner's Comments</u> Many candidates were able to gain full marks. The most common reasons candidates lost marks was through the use of quotes around the colour equals instead of colons and for misspelling colour

	b	i	<u>Copyright Designs and Patents Act</u> Any two from: - Gives the author (the programmers) ownership/copyright of the photographs ...no need to apply / this is automatic - Others cannot use/distribute / can be prosecuted/fined for using/distributing... ...without permission - Permission can be granted / bought / licenced	3	Must be full name of Act for MP1 FT for versions of Copyright or nothing for MP2-6 <u>Examiner's Comments</u> Many candidates were able to gain 2 marks but many did not give the full name of the legislation.
		ii	- Ask permission of author / photographer / owner - Use images marked as copyright free (e.g. Creative Commons Licence) - Purchase (licence to use) image	2	Do not accept just "ask permission" <u>Examiner's Comments</u> Many candidates were able to gain 2 marks. It was surprising to see how many believed that you could use copyright images for your business just by crediting the artist. Candidates should be made aware that although crediting the artist may help avoid plagiarism it does not allow you free use of a copyright image.
		Total		13	
4	a		- Correct <a> with close - href property to correct page - correct tag with src property to correct file	3 AO3. 2	
	b		2.99 - nonUKprice - numtickets - return	4 AO3. 2	Correct answer only. Penalise spelling if incorrect. Do not accept £ sign in first bullet point.
	c	i	- processing done away from the user's control/Client side processing could be altered - Browser may not support client-side language/ scripting could be turned off - Booking fee calculation needs to be correct for all locations	3 AO2. 1	
		ii	To the customer any 2x1: No need to submit to server and wait for response	2 AO1. 2	

			- Website will work more quickly for user To the company any 2x1: - Reduces load on the server - Will need to spend less on processing power/bandwidth		
	d	i	- Web crawler /spider visits site - Either be selecting it from an existing list or following a link. - Records information ...such as text / metatags / etc - Records the position of each word within the page - Storing them in an index - Follows links to other sites - Robots.txt file can be used to instruct web crawlers	4 AO1. 1	
		ii	- A value between 0 and 1 - Probability that a user will not follow a link	1 AO1. 1	
		iii	- Number of links to target site - PageRank score of those sites (linking inwards)	2 AO1. 1	
	e		- HTML defines the structure of a web page - HTML defines the content of a web page - Using tags (enclosed in <>) - CSS defines the style / appearance - Using selectors such as classes / IDs / etc - Can be placed within HTML or externally in a file - Multiple pieces of CSS can be combined (the more local instances overriding)	4 AO1. 1	Do not accept layout/format for HTML as this is too vague and can be used to describe CSS
			Total	23	
5			1 mark per bullet up to a maximum of 6 marks: - Correct syntax for css class for "model"(including opening and closing curly brackets) - Correct syntax for css id for "beeb" (including opening and closing curly brackets) - Correct syntax for setting the font family to arial for class "model" - Correct syntax for setting the font colour to red on class "model" - Correct syntax for setting colour to green for id "beeb"	6 AO3. 1 (6)	Example: <pre>li.model { color: red; font-family: arial; } #Beeb { color: green; font-family: times; }</pre> Ignore if li is not put in front of .model

			Correct syntax for setting font family to times for id “beeb”		Reject if any other tag is put in front of <code>.model</code> Responses written in HTML mark as NAQ
			Total	6	