



### 1.2.3 Client and Server-Side Scripting

#### Computer Science (9608)

May/June 2015.P11-Specimen Paper

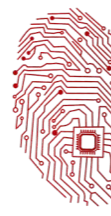
4 The website [www.checkyourwellbeing.com](http://www.checkyourwellbeing.com) offers help and advice about personal well-being.

The website has a link – ‘Calculate my BMI’ – that users can click to work out their ‘Body Mass Index’.

When the ‘Calculate my BMI’ link is clicked on the client computer, this webpage is requested.

```
1 <html>
2 <head>
3 <title>Body Mass Index</title>
4
5 </head>
6
7 <body>
8 Calculate my body mass index
9
10 <Script Language = "JavaScript">
11
12 var myWeight = prompt("Enter your weight (in kg.)", "");
13
14 var myHeight = prompt("Enter your height (in m.)", "");
15
16 var myBMI = myWeight / (myHeight * myHeight);
17 myBMI = myBMI.toFixed(2)
18
19 alert("My calculated BMI is ..." + myBMI) ;
20
21 if (myBMI < 18.5)
22 {
23     alert("UNDERWEIGHT") ;
24 }
25
26 if (myBMI > 25)
27 {
28     alert("OVERWEIGHT") ;
29 }
30 if (myBMI >=18.5 && myBMI<=25)
31 {
32     alert("WITHIN RANGE")
33 }
34
35 </Script>
36
37 </body>
38 </html>
```





### 1.2.3 Client and Server-Side Scripting

Loading the webpage produced this sequence of dialogue boxes:



(a) Which lines in the webpage script are JavaScript code? [1]

(c) By studying the web page script and its use, what is the use in JavaScript of:

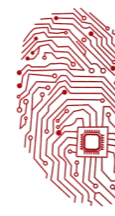
- (i) the prompt function? [2]
- (ii) the alert function? [2]

(e) Put five of these statements in the correct sequence to describe how the content of the page shown is displayed by the client computer's browser software.

Two of the statements will not be used.

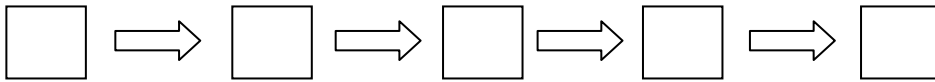
- A. The client computer processes the JavaScript code.
- B. The page content is transmitted to the client computer.
- C. The page is displayed on the client computer.
- D. The user clicks on the hyperlink and the web page is requested from the network file server.
- E. The web server processes the JavaScript code.
- F. The user clicks on the hyperlink and the web page is requested from the www.checkyourwellbeing.com web server.
- G. The server finds the web page.





### 1.2.3 Client and Server-Side Scripting

The sequence is: (fill in the letters)



[5]

(f) How is this JavaScript code run?

[1]

(g) The web developer tested the JavaScript code without involving the web server.

Explain how this is possible.

[1]

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7 (c) A web page offers a link for users to request another web page. The requested web page contains HTML code and JavaScript code.

Put each statement in the correct sequence by writing the numbers 1 to 5 in the right-hand column.

Statement	Sequence number
The requested web page is displayed on the client computer	
The user clicks on the hyperlink and the web page is requested from the web server	
The requested web page content is transmitted to the client computer	
The client computer processes the JavaScript code using the web browser software	
The web server locates the requested web page	

[5]

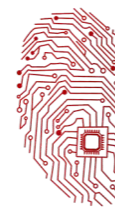
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7 An amusement park has a website. This includes a page where potential visitors can enquire about the price for an individual or group visit.

The user can enter the number of people in their group.

The admission price will be calculated and displayed.





### 1.2.3 Client and Server-Side Scripting

```
1 <html>
2 <head>
3 <title>Amusement park visit ticket cost</title>
4 </head>
5 <body>
6 Calculate my ticket price
7 <Script Language = "JavaScript">
8 var groupSize = prompt("Enter number of visitors in
9 your group)", "");
10 var groupPrice = groupSize * 20;
11 if (groupSize > 4)
12 {
13 groupPrice = groupPrice * 0.8;
14 }
15 alert("Price for the group is " + groupPrice);
16 alert("Thank you for your enquiry");
17 </Script>
18 </body>
19 </html>
```

- (a) Give the range of line numbers in the web page script that are JavaScript code. [1]
- (b) (i) Give the identifiers of two variables which have been used by the programmer. [2]
- (ii) Give the range of line numbers where selection is performed. [1]
- (c) Explain the use of the following in JavaScript.
- (i) the `prompt` function [2]
  - (ii) the `var` keyword [2]
  - (iii) [2]

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- 5 (c) Students use the college's learning resource website. Several of the web pages include PHP script. Describe the sequence of events when a student requests a web page with embedded server-side code. [4]

