

2. Nov/2021/Paper_32/No.3

JavaScript is a programming language used within HTML on web pages.

Explain why it is considered good practice when coding in JavaScript to:

(a) place all declarations at the start of each script or function

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..... [2]

(b) initialise variables when first declared

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..... [2]

(c) avoid using `eval()` to run a string as code

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..... [1]

(d) always declare local variables.

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..... [1]

(a) Explain the meanings of these terms when referring to JavaScript objects.

(i) string

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..... [1]

(ii) global

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..... [1]

(iii) regular expression

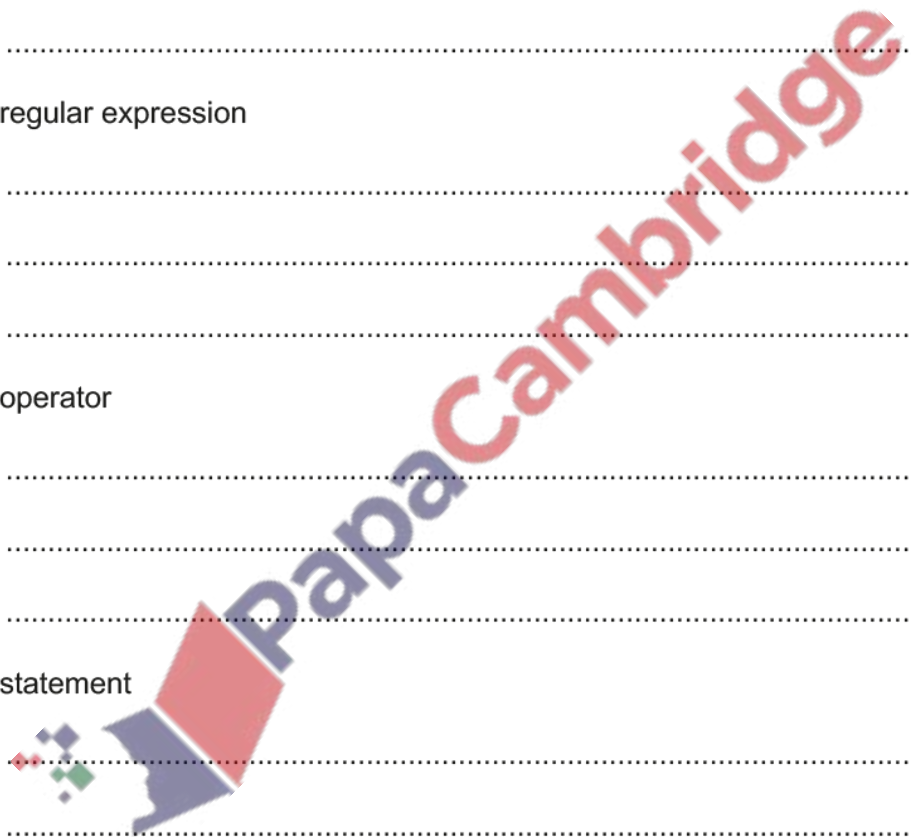
.....
.....
..... [1]

(iv) operator

.....
.....
..... [1]

(v) statement

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.....
..... [1]



- (a) The JavaScript code shown in Fig. 5.1 adds together 12 and 6 to produce the result 18. Line numbers are shown only for reference purposes.

```
1 <html>
2 <head>
3 </head>
4 <body>
5 <br>
6 <h1>A Web Page</h1>
7 <p>A Paragraph</p>
8 <script>
9     var x, y;
10    x=12;
11    y=6;
12    window.alert(x + y);
13 </script>
14 </body>
15 </html>
```

Fig. 5.1

Describe how the script operates to display the result on the screen.

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JavaScript uses the display capabilities of web browsers' windows to output the results of its scripts.

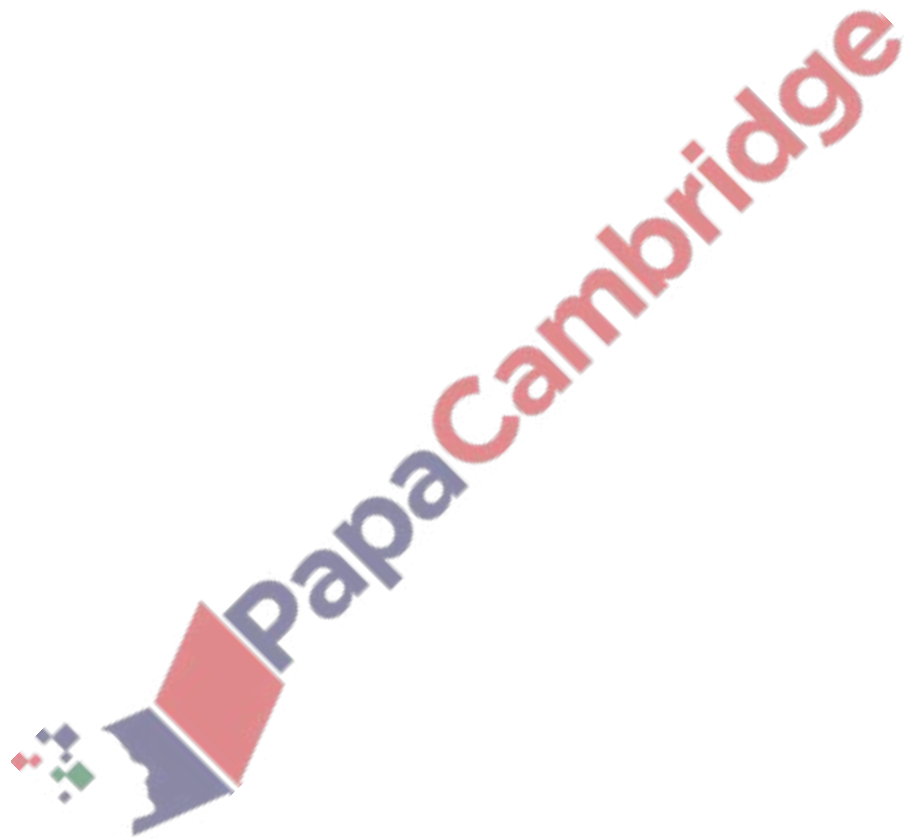
(b) Explain why JavaScript uses a browser's windows to display results of running scripts.

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..... [1]



When creating letters by mail merge, mail merge rules can be used to automatically select data from sources for inclusion in the letters.

Describe the use of the following mail merge rules to select data.

(a) If...Then...Else

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..... [3]

(b) Next Record If

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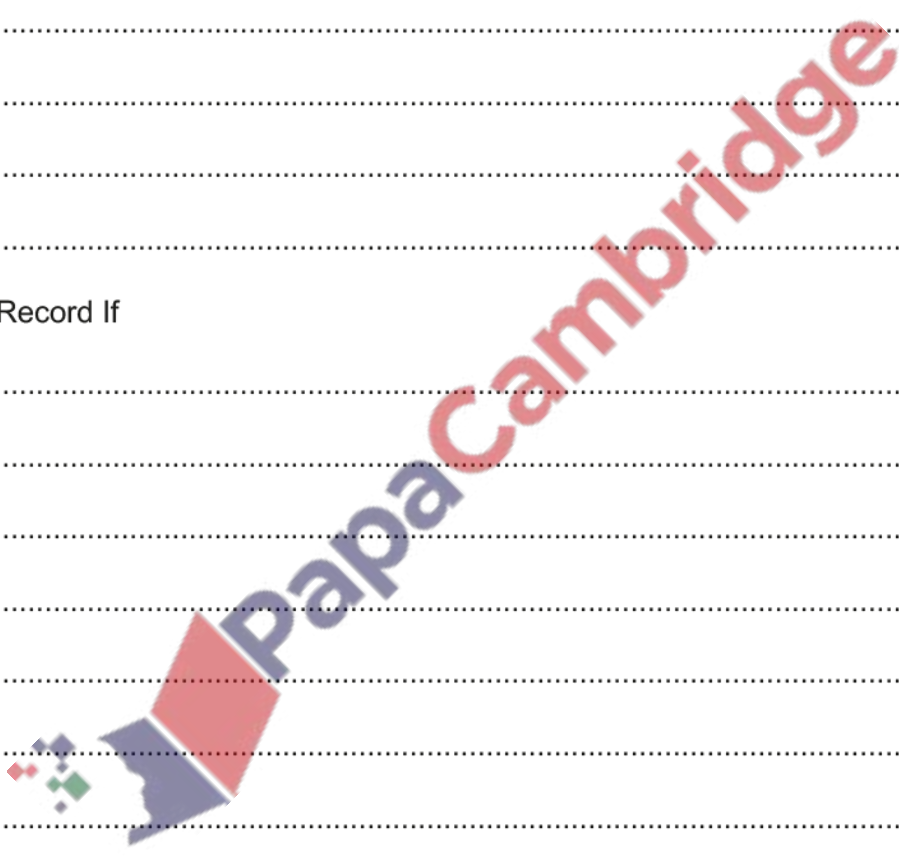
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..... [3]



(c) Skip Record If

.....

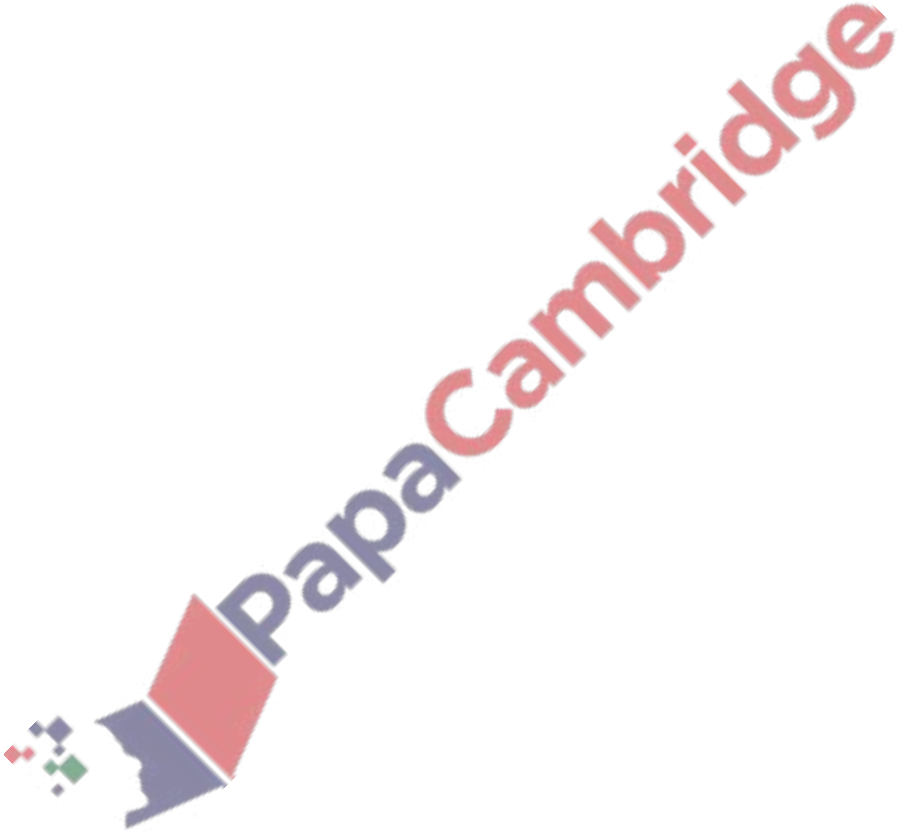
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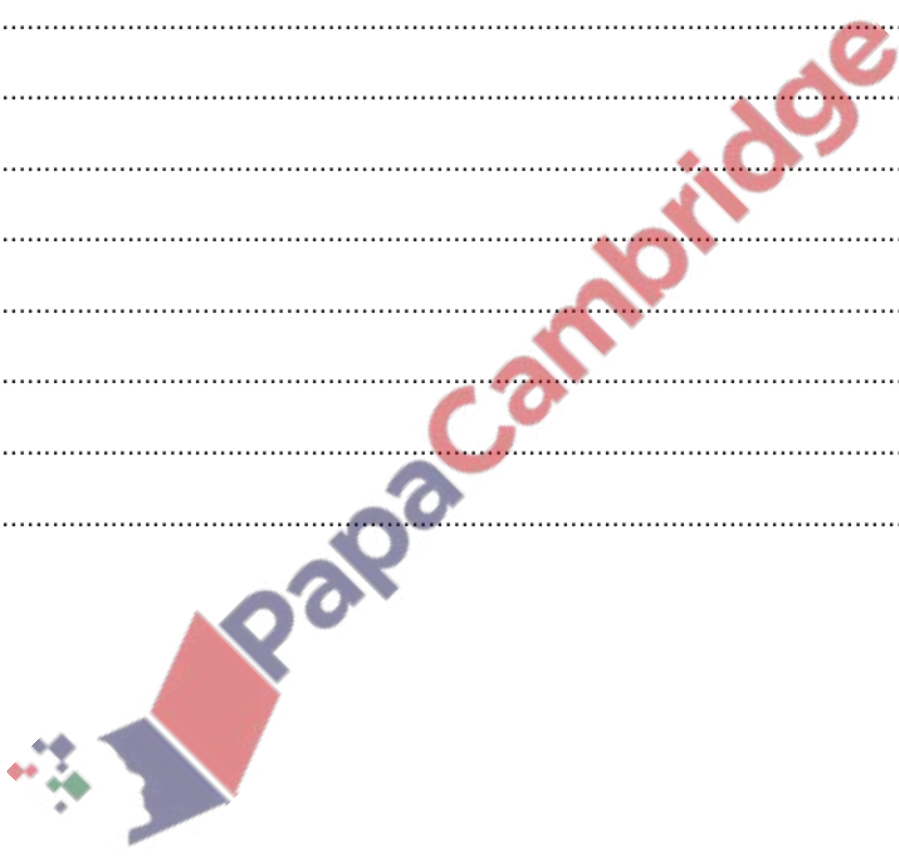
(b) The code could have been written using the 'switch' function, e.g. lines 4 to 7 could have been:

```
4 switch(true) {  
5   case age < 10:  
6     statement = "You are not old enough to go to this school";  
7   break;
```

with additional lines for the other conditions.

Explain the drawbacks of using the 'switch' function.

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[4]

10. June/2020/Paper_31/No.8

Nigel is creating a website which uses JavaScript. He uses scripts to manipulate text held in HTML elements so that it can be displayed on his pages.

(a) Explain what is meant by an 'HTML element'.

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..... [2]

Nigel uses this code to manipulate the text on his page. The line numbers are shown only for reference purposes.

```
1  
2 <html>  
3 <body>  
4  
5 <h2>Nigel uses this JavaScript to change HTML</h2>  
6  
7 <p id="a1">Nigel's original text was here</p>  
8  
9 <script>  
10 document.getElementById("a1").innerHTML = "Nigel changed this!";  
11 </script>  
12  
13 <p>The paragraph above was changed by Nigel's script.</p>  
14  
15 </body>  
16 </html>
```

(b) Explain, in detail, how this JavaScript would change what is displayed on the web page.

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11. June/2020/Paper_32/No.10

A teacher is creating a web page for his students to find out their result, Merit, Pass or Fail, by entering their test score. The teacher has chosen to use the JavaScript switch function to examine the test score entered by the student and report the result on the web page.

The code for the web page is shown in Fig. 10.1. The lines are numbered only for your convenience.

```
1
2 <html>
3 <body>
4
5 <input id="myTscore" type="number" value=0>
6 <button onclick="tscorelookup()">Check Your Result by entering your
  test score 0-100 </button>
7 <p id="myresult"></p>
8
9 <script>
10 function tscorelookup(){
11 var report;
12 var result = document.getElementById("myTscore").value;
13
14 switch(true){
15 case result < 0:
16 report = "You cannot score a mark below 0";
17 break;
18 case result > 100:
19 report = "You cannot score a mark above 100";
20 break;
21 case result >= 40:
22 report = "Your result is a Merit";
23 break;
24 case result >= 20:
25 report = "Your result is a Pass";
26 break;
27 case result < 20:
28 report = "Your result is a Fail";
29 break;
30 default:
31 report = "Please enter a valid mark";
32 }
33 document.getElementById("myresult").innerHTML = report;
34 }
35 </script>
36
37 </body>
38 </html>
```

Fig. 10.1

Nigel is creating a website which uses JavaScript. He uses scripts to manipulate text held in HTML elements so that it can be displayed on his pages.

(a) Explain what is meant by an 'HTML element'.

.....
.....
.....
.....
.....
..... [2]

Nigel uses this code to manipulate the text on his page. The line numbers are shown only for reference purposes.

```
1  
2 <html>  
3 <body>  
4  
5 <h2>Nigel uses this JavaScript to change HTML</h2>  
6  
7 <p id="a1">Nigel's original text was here</p>  
8  
9 <script>  
10 document.getElementById("a1").innerHTML = "Nigel changed this!";  
11 </script>  
12  
13 <p>The paragraph above was changed by Nigel's script.</p>  
14  
15 </body>  
16 </html>
```

(b) Explain, in detail, how this JavaScript would change what is displayed on the web page.

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..... [2]