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1  <!DOCTYPE html>
2  <html>
3  <meta lang="en">
4  <meta charset="UTF-8">
5  <head>
6      <title>Week 4: JavaScript</title>
7      <link rel="stylesheet" href="style.css">
8      <link rel="icon" href="https://icon-library.com/images/icon-ninja/icon-ninja-15.jpg">
9
10     <script>
11         function sumsort() {
12             let size = parseInt(prompt("Kindly enter the size of elements in the array: "))
13         );
14             var arr=[],sorted=[];
15             var sum=0,temp;
16             for(let i = 0; i < size; i++)
17             {
18                 arr.push(+prompt("Enter element " + (i+1) + ": "));
19                 sorted[i]=arr[i];
20                 sum+=arr[i];
21             }
22             for(let i = 0; i < size; i++)
23             {
24                 for(let j = 0; j < size-i-1; j++)
25                 {
26                     if(sorted[j]>sorted[j+1])
27                     {
28                         temp=sorted[j];
29                         sorted[j]=sorted[j+1];
30                         sorted[j+1]=temp;
31                     }
32                 }
33             }
34             alert('Given array: ' + arr.join(', ') + "\n\nSum of elements: " + sum + "
35             \nSorted array: " +sorted.join(', '));
36
37             function grades() {
38                 let studsize = parseInt(prompt("Enter the number of students in the class: "))
39             ;
40                 let subsize = parseInt(prompt("Enter the number of subjects: "));
41                 let classSumMarks = 0;
42                 let classSumGrade = 0;
43                 let output = "<h3>Grades:</h3>";
44
45                 for (let i = 1; i <= studsize; i++) {
46                     let studSumMarks = 0;
47                     output += "<h4>Student " + i + ":</h4><ul>";
48                     for (let j = 1; j <= subsize; j++) {
49                         let grade = parseFloat(prompt("Enter the grade of Student " + i + "
50                         for Subject " + j + ": "));
51                         output += "<li>Subject " + j + ": " + grade + "</li>";
52                         studSumMarks += grade;
53                     }
54                     let studAvgMarks = studSumMarks / subsize;
55                     let gradeLetter = calculateGradeLetter(studAvgMarks);
56                     classSumMarks += studAvgMarks;
57                     classSumGrade += gradeLetter.charCodeAt(0);

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55         output += "<li><strong>Student Average Marks:</strong> " +
studAvgMarks.toFixed(2) + "</li>";
56         output += "<li><strong>Student Grade:</strong> " + gradeLetter + "</li><
/ul>";
57     }
58     let classAvgMarks = classSumMarks / studsize;
59     let classAvgGrade = String.fromCharCode(Math.round(classSumGrade / studsize));
60     output += "<h3>Class Average Marks:</h3><p>" + classAvgMarks.toFixed(2) + "<
/p>";
61     output += "<h3>Class Average Grade:</h3><p>" + classAvgGrade + "</p>";
62     document.getElementById("gradesOutput").innerHTML = output;
63 }
64
65 function calculateGradeLetter(average) {
66     if (average >= 90) {
67         return "A+";
68     } else if (average >= 80) {
69         return "A";
70     } else if (average >= 70) {
71         return "B";
72     } else if (average >= 60) {
73         return "C";
74     } else if (average >= 50) {
75         return "D";
76     } else if (average >= 40) {
77         return "E";
78     } else {
79         return "F";
80     }
81 }
82 </script>
83 </head>
84
85 <body>
86     <hr style="color:darkgrey ; width: auto; height: 5px; background-color:darkgrey ;">
87     <div style="text-align: justify;">
88         <h5> (Q1) This is a Javascript program to do the following:-
89         <ol type="a">
90             <li>Find the sum of array</li>
91             <li>Implement Bubble Sorting using a function</li>
92         </ol>
93         An alert is used to print the output
94     </h5>
95 </div>
96 <button onclick="sumsort()">Calculate Sum & Sort Elements </button>
97
98 <hr style="color:darkgrey ; width: auto; height: 5px; background-color:darkgrey ;">
99 <div style="text-align: justify;">
100     <h5> (Q2) This is a Javascript program to do the following:-
101     <ol type="a">
102         <li>Calculate grades of students</li>
103         <li>Calculate average grade of class</li>
104     </ol>
105     Use prompt to get input, use document.write() to display the output
106 </h5>
107 </div>
108 <button onclick="grades()">Calculate Grades</button>
109 <div id="gradesOutput" style="text-align: justify;"></div>
110 </body>
111 </html>

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