Midterm #2 Review Questions, CMSC198N

These questions will help you prepare for the midterm. Solutions will not be provided, however, you are welcome to discuss your solutions with T'As and your instructor during office hours. **Do not use a computer when writing JavaScript programs; write your solution on paper then verify your solutions with the computer.** That is the best way for you to prepare for the exam.

**Problem 1**

1. (2 pts) Which of the following is considered an invalid variable name in JavaScript?
   a) realHappy#                       b) HoT
   c) temperature                      d) To2he

2. (2 pts) Which of the following is not a reserved word?
   a) if                                b) do
   c) function                          d) segmentVar

3. (2 pts) In JavaScript there is only one approach to specify comments.
   a) true                              b) false

4. (2 pts) The following code represents an infinite loop.
   var t = 1;
   while (t == 1);
   a) true                              b) false

5. (2 pts) JavaScript is another name for the Java Programming language.
   a) true                              b) false

6. (2 pts) Which of the following allow us to determine the current date in JavaScript?
   a) new GMTVar()                     b) new Date()
   c) DateAndTime()                    d) new Time()

7. (2 pts) The expression x++ is equivalent to:
   a) x = x - 1                        b) x = x + 1
   c) x = x * 10                       d) x = x / 10

8. (2 pts) The body of a `do while` statement will always be executed at least twice.
   a) true                              b) false

9. (2 pts) The body of a `while` statement will always be executed at least once.
   a) true                              b) false

10. (2 pts) A call to the prompt function returns a string.
    a) true                              b) false
Problem 2

Write a trace table for the following JavaScript program.

```javascript
<script type="text/javascript">
    var x = 100;
    var y = 20;
    var name = "Bob";
    var p = 1;
    var t = false;

    if (x > y) {
        x = x * 3;
        p = p - y;
    }
    t = !t;
</script>
```

Problem 3

Write a JavaScript program that reads two values. The program will then compute the average of the values and print a message based on the average. The values must be read using prompt and the result must be printed using document.writeln. The following data represents the cutoffs to be used for the generation of the output message:

- Average >= 90.0 ➔ “You did very well”
- Average >= 80.0 ➔ “You did good”
- Less than 80.0 ➔ “Not satisfactory”

Use the message “Enter value” to request values. The output should display one of the above strings. You don’t need to use meaningful variable names.

Problem 4

Write pseudocode for a program that computes the sum of odd values from 1 up to a maximum value provided by the user.

Problem 5

Write a JavaScript program that implements the pseudocode you define in Problem 4. Your program will read the maximum value by using the `prompt` function and it will display the result by using `document.writeln`. You don’t need to use meaningful variable names.
Problem 6

A histogram is a graph where each column represents a particular value. Write a program that reads four values from the user and then plots those values as a histogram. For example, if the user enters the values 1, 2, 6, 3 your histogram will be:

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