



University of Maryland College Park

Dept of Computer Science

CMSC389N Summer 2015

Midterm II

Last Name (PRINT): _____

First Name (PRINT): _____

University Directory ID (e.g., umcpturtle)_____

I pledge on my honor that I have not given or received any unauthorized assistance on this examination.

Your signature: _____

Instructions

- This exam is a closed-book and closed-notes exam.
- Total point value is 200 points.
- The exam is a 75 minutes exam.
- Please use a pencil to complete the exam.
- WRITE NEATLY.
- **You don't need to use meaningful variable names; however, we expect good indentation.**

Grader Use Only

#1	Problem #1 (HTML/CSS/ PHP/JS Language)	(60)	
#2	Problem #2 (PHP Coding)	(65)	
#3	Problem #3 (JavaScript Coding)	(75)	
Total	Total	(200)	

Problem #1, (HTML/CSS/PHP Language)

1. (3 pts) Name one use of server side includes.
2. (9 pts) Complete the following PHP assignment so we can open a file named “data.txt” (for reading). If the file cannot be opened, the script should end and the message “File Opening Failed” should be displayed.

\$fp =
3. (3 pts) What role cookies play (when enabled) in PHP sessions?
4. (3 pts) From a security point of view, why we would like to use the PHP functions **htmlspecialchars** and **htmlentities**?
5. (9 pts) Write a SQL command that will create a table named “books” that has two fields: a title (string) and a year (integer).
6. (6 pts) Write a SQL command that will insert a record in the “books” table above for a book titled “Aliens” published in the year 2000.
7. (6 pts) Write a SQL command that will display the titles of books from the “books” table above that were published after the year 2000.
8. (6 pts) Define JavaScript code that reads a value using prompt and prints the value provided using alert.
9. (3 pts) Define a JavaScript array with the values 10, 7, and 50.

10. (3 pts) In JavaScript which value is associated with object properties that do not exist?

- a. undefined
- b. null
- c. a. and b.
- d. None of the above.

11. (3 pts) Which of the following expressions are true in JavaScript?

- a. NaN == NaN
- b. NaN === NaN
- c. "20" == 20
- d. None of the above.

12. (3 pts) What is the DOM?

13. (3 pts) Define a JavaScript object that has two properties: **semester** with a value of "summer" and **year** with a value of 2005.

Problem #2, (PHP Coding)

For this problem you will implement a loan processing application. The program consists of three files:

1. **apply.html** → Displays a form where the user will provide a loan amount (see image below). The form will use post and will call the script **verify.php**.

Amount:

2. **verify.php** → This script will approve or deny the loan. A loan is automatically approved if the amount is less than or equal to \$10,000; otherwise the loan is denied. **Using sessions** this script will pass the loan amount and whether the loan was approved or not to the **confirmation.php** script. The method used is post as well. The following image illustrates what **verify.php** should show after the loan has been evaluated:

Loan application processed

3. **confirmation.php** → **Using sessions** this script will retrieve the amount and loan application decision. If the loan was approved, the script will display a page with the message:

“Your loan for the amount <AMOUNT> has been approved”

where <AMOUNT> corresponds to the loan amount.

Otherwise the message to print will be:

“Your loan for the amount <AMOUNT> has been denied”

For this problem feel free to use the function `generatePage()` we saw in class that allows you to generate an HTML document when you provide the body (e.g., `generatePage($body)`). Assume this function is in the file `support.php` (make sure you include it). **You may not use JavaScript for this problem.**

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Problem #3, (JavaScript Coding)

Write a **JavaScript** (NOT PHP) program that allow us to display a table of even numbers between 0 and a number provided by a user through a form. For this problem you will provide the body of a **main** function and a **displayTable** function. In addition, you may add any HTML that you understand is needed. For this problem:

- Define the following form:

Square Even Numbers

Value:

Messages:

- If the user enters a non-numeric value (e.g., “bla”) or no value is provided, your program will display the message “Invalid value” next to “Messages:” when the **compute** button is selected. Here is an example:

Square Even Numbers

Value:

Messages: **Invalid value**

- If the user provides a numeric value, your program will display a table with the powers of even numbers between 0 and the number provided. For example, after entering 10 in the form and clicking on the **compute** button your program will print the following table:

Squares Even Numbers up to 10

0	0
2	4
4	16
6	36
8	64
10	100

- Your **main** function will define the **displayTable** as the function the **compute** button will call when selected.
- The **displayTable** function will validate the value provided in the form and display the table. Notice the **displayTable** function does not have any parameters.
- You can use the function `isNaN` to determine whether a value is a number.
- Notice that the HTML and JavaScript appears in a single file.

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