Name: Terrence Jackson
Date: 9.24.24
Course : CMSC 340 Web Programming
Week: 6
Assignment: Develop a JavaScript Script to Create and Manipulate a JavaScript Array of Course Objects

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Rubric Criteria:
Number of correctly implemented specifications using JavaScript scripting out of five (5) specifications (50%)

Embed here (or submit separately) a copy of your JavaScript script HTML file(s):

Submit separately

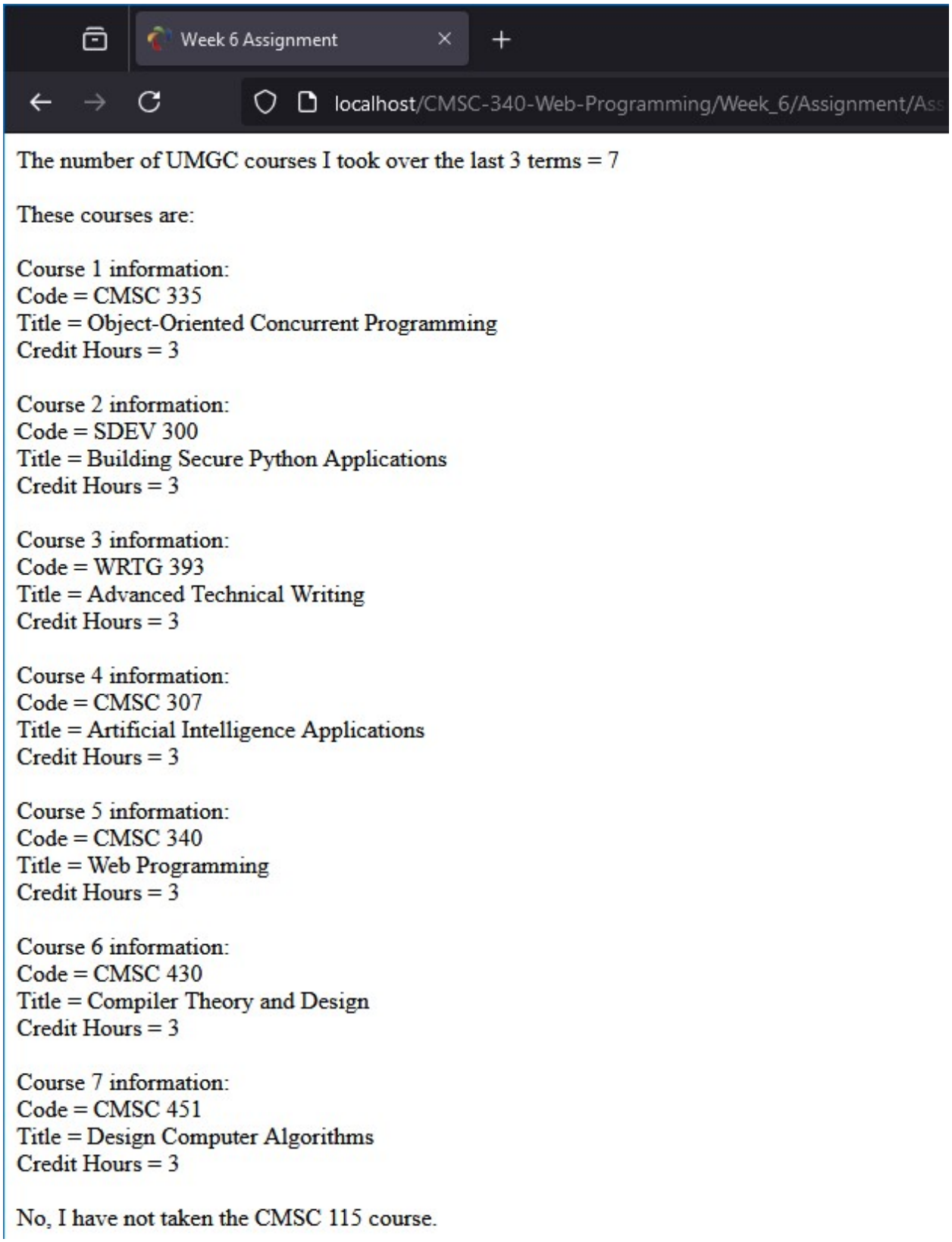
Copy and paste here the text of your JavaScript code:

```
<!DOCTYPE html>
<html lang="en">
 <meta
        author="Terrence Jackson"
        purpose="Week 5 Assignment"
        course="CMSC 340"
        date="Sept 21 2024"
 />
 <head>
        <title>Week 6 Assignment</title>
 </head>
 <body>
        <script type="text/javascript">
        // class of course objects
        function Course(code, title, creditHours) {
        this.code = code;
        this.title = title;
        this.creditHours = creditHours;
```

```
this.showCourse = function () {
document.write(
"Code = " +
this.code +
"<br>Title = " +
this.title +
"<br>Credit Hours = " +
this.creditHours +
"<br>"
);
};
}
function taken115(element, index, array) {
return element.code == "CMSC 115";
}

// numeric array of Course objects
objectArray = [
new Course("CMSC 335", "Object-Oriented Concurrent Programming", 3),
new Course("SDEV 300", "Building Secure Python Applications", 3),
new Course("WRTG 393", "Advanced Technical Writing", 3),
new Course("CMSC 307", "Artificial Intelligence Applications", 3),
new Course("CMSC 340", "Web Programming", 3),
new Course("CMSC 430", "Compiler Theory and Design", 3),
new Course("CMSC 451", "Design Computer Algorithms", 3),
];

// calc and display number of courses
document.write(
```

```
        "The number of UMGC courses I took over the last 3 terms = " +
        objectArray.length +
        "<br><br>These courses are:<br>"
        );

        // iterate over array
        for (course in objectArray) {
        document.write("<br>Course " + ++course + " information:<br>");
        objectArray[--course].showCourse();
        }

        // taken 115?
        result = objectArray.some(taken115);
        writeResult = result ? "Yes, I have" : "No, I have not";
        document.write("<br>" + writeResult + " taken the CMSC 115 course.<br>");
        </script>
        <noscript>
        Your browser doesn't support or has disabled JavaScript
        </noscript>
  </body>
</html>
```

Insert here a screenshot(s) of the result of executing your JavaScript script:



Rubric Criteria:
Number of relevant explanations out of three (3) explanations of approach, design, and steps of completing the assignment
(30%)

Your response here:

Approach: For this assignment, I modeled my JavaScript script on my previous PHP work, adapting it to meet the specific requirements. After the discussion prompt introduced me to JavaScript conventions, I found it easier to implement. I focused on creating a Course class with three attributes and a method, then utilized an array of course objects to print out the relevant details and check if I had taken CMSC 115.

Design: The design centered around the Course class, which included course code, title, and credit hours, along with a showCourse method for displaying course information. I stored the course objects in an array, iterating through the array to display the course details and checking if a specific course (CMSC 115) had been taken using the some() array method.

Steps:

I first defined the Course class, created an array of course objects based on the courses I've taken, and wrote a loop to print out the details of each course. I also implemented a section to check for CMSC 115, using the some() method to determine if that course was present in the array. Testing the script locally ensured everything functioned as expected, including the handling of the course index with ++course and --course adjustments.

Rubric Criteria:
Number of objective self-evaluations out of three (3) self-evaluations of strengths, weaknesses, and areas of improvement of self-performance on the assignment
(10%)

Your response here:

One strength was my ability to quickly adapt my previous PHP approach to JavaScript, especially after the discussion activity. However, I struggled initially with indexing and printing course numbers correctly, requiring me to adjust the ++course and --course logic. Going forward, I can improve by paying more attention to off-by-one errors and practicing more with JavaScript syntax to reduce minor stumbling blocks.

Rubric Criteria:
Number of relevant reflections on the learning experience out of three (3) reflections of setbacks,

triumphs, and lessons learned
10%

Your Response here:

The hardest part of the assignment was adjusting the printed course number to align with the index, but once I figured out the ++course and --course logic, everything fell into place. I didn't face any major setbacks thanks to the prior discussion, and it was a rewarding experience to see how my understanding of JavaScript is improving. This assignment helped solidify the differences between PHP and JavaScript while reinforcing the importance of proper array handling.