

CSC 436: Web Applications

Homework 1

DUE DATE: Apr 5, 2022 5:30 PM

Before You Begin

The hw1 folder contains an NPM project; the package.json file currently only contains one dependency, Jest. Jest is a JavaScript testing framework which will be used to validate your solutions for Part 2 of this assignment. You'll be adding the Bootstrap package in Part 1 to install Bootstrap's CSS and JavaScript files.

Part 1: HTML Using Bootstrap

Goal: Create a simple HTML login form using Bootstrap.

Prerequisite Steps:

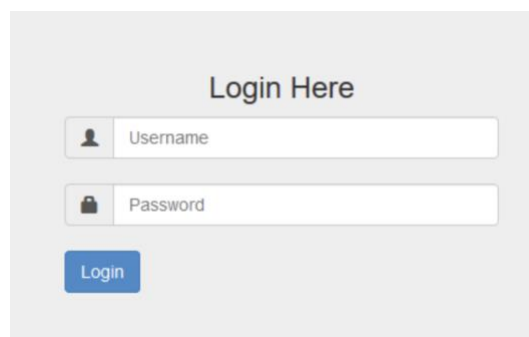
1. Change directory (cd) to the directory containing the hw1 package.json
2. Add Bootstrap as a project dependency: **npm install bootstrap --save**
3. The **node_modules/bootstrap/dist/css/** directory now contains the **bootstrap.css** file you need to include in your HTML file. The **node_modules/bootstrap/dist/js/** directory now contains the **bootstrap.js** file you need to include in your HTML file.

Requirements:

Use Bootstrap to create a 1 column page containing a login form and a static navbar. Reference our class discussion on Bootstrap, [Bootstrap Documentation](#), and [Bootstrap 5 Snippets](#).

1. The navbar should have the title "Homework 1" in the top left.
2. The main container should contain a login form centered on the page, similar to the screenshot below.

Note: The form need not match the below screenshot exactly (you will find that implementing the icons requires other dependencies), the icons are not mandatory. The purpose of this exercise is to get you familiar and comfortable with leveraging documentation and online resources to put together simple Bootstrap HTML/CSS interfaces.



The screenshot shows a login form with a light gray background. At the top, the text "Login Here" is centered. Below it, there are two input fields. The first field has a user icon on the left and the placeholder text "Username". The second field has a lock icon on the left and the placeholder text "Password". Below these fields is a blue button with the text "Login" in white.

The following specific docs are a good starting point if you'd like to reference the documentation: [Containers](#), [Grid](#), [Columns](#), [Forms](#), and [Navbar](#). You may also find the [examples](#) helpful.



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Part 2: JavaScript Exercises

Goal: Update the code in hw1.js to provide solutions for the exercises.

Steps:

1. Change directory (cd) to the directory containing the hw1 package.json
2. Execute the command **npm install** to ensure the Jest dependency is installed.
3. Open hw1.js and update the code to complete the requirements outlined in the comments.
4. As you update the code and save your changes, execute the command **npm test** to execute the hw1.test.js test suite to validate your changes.
5. Once all the tests are passing, **npm test** output will appear similar to:

```
p@ps-MacBook-Pro hw1 % npm test

> y@1.0.0 test
> jest

PASS ./hw1.test.js
  ✓ add 1+2 to equal 3 (1 ms)
  ✓ instantiate Circle class
  ✓ validate Circle calcArea method
  ✓ instantiate Student class (1 ms)
  ✓ instantiate Product class
  ✓ calls Product.inStock() method, passing a
  ✓ calls Product.halfOff() method, passing a
  ✓ calls Product.printProducts() method, pass

Test Suites: 1 passed, 1 total
Tests:      8 passed, 8 total
Snapshots:  0 total
Time:       0.159 s, estimated 1 s
Ran all test suites.
```

Submission

1. Initialize a Git repository in your project directory.
2. Create a commit and push it to a new repository on Github.
3. Create a .txt file named "homework1.txt", paste a link to your Github repository in the file and upload it to the "Homework 1" D2L dropbox.

Late Submission

Late submissions will be accepted up to two weeks after the original due date. There will be a 10% grade deduction per week late.

