CSC 436: Web Applications
Homework 1
DUE DATE: SEPTEMBER 21, 11:59PM

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 Bootstraps CSS and JavaScript files.

Part 1: HTML Using Bootstrap

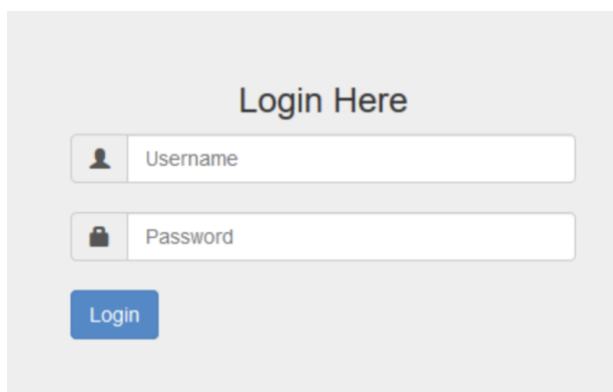**Goal:** Create a simple HTML login form using Bootstrap.

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.

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. The form need not match the below screenshot exactly, but should be similar.

Reference the following Bootstrap docs for assistance: Containers, Grid, Columns, Forms, and Navbar. You may also find the examples helpful.

See next page for Part 2 and submissions steps.

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. Create a .zip file containing the package.json file, your HTML login page, and the updated hw1.js file.

2. Name the .zip file **FIRSTNAME_LASTNAME_HW1.zip**

3. Upload the .zip file to the D2L dropbox for hw1.

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.