MIS 3690 Web Technologies - Babson College
Exam – 2018 Spring

This is an open-book, open-notes, open-web examination. However, you cannot use email or IM, and you cannot communicate in any way with other people during the course of this exam. The exam is worth 100 points. You have 100 minutes to complete this examination.

How to start:
Please fork the base repository for this exam. Then add instructor (zli@babson.edu) as collaborator on GitHub for that repository. In your forked repository (https://github.com/<yourGithubId>/exam-2018fall), clone the repository to your computer and open the folder using VSCode.

How to turn in:

1. Commit and sync your completed code to GitHub repository.
2. Create a pull request to the upstream repository.
3. Zip all the files into a zip file, named *<yourbabsonID>_exam.zip*. Upload it to Blackboard. In the comment area on Blackboard, specify the URL of your exam GitHub repository.

The exam has four questions. The first question requires you to create a web page using HTML and CSS. The other three require you to create the specified functionality using JavaScript. The template for each question is provided to you with the names **index.htm**, **Q2.htm, Q3.htm, and Q4.htm. Please do not change the names.** Once you have tested the files and uploaded it, please write down the time-stamp on the repository below your signature. Do not do anything that might change/modify the time-stamp of this folder on the GitHub.

Honor Code:

I pledge my honor that I have neither received nor provided unauthorized assistance during the completion of this work.

Your Name: _____ Signature: _____

Time Stamp: _____

Question 1 – index.htm (50 points)

Q1a. (21 points): Please use the file **index.htm** to build a web page that looks like the one shown in figure 1 below. The following are the specifications to complete this question:

1. (4 points) Please hyperlink the following:
    a. The words "U.S. News & World Report" in the fourth paragraph must be hyperlinked to *https://www.usnews.com/best-graduate-schools/top-business-schools/entrepreneurship-rankings*
    b. In Basic Information, the words "www.babson.edu" must be hyperlinked to *http://www.babson.edu/Pages/default.aspx*
2. (6 points) Create the following lists using the text as described below:
    a. Convert the text under "Basic Information" into an **unordered** list (refer to figure 1 to see what it looks like).
    b. Convert the text under "Class of 2019 statistics" into an **ordered** list as shown in figure 1.
3. (4 points) Add the image "*logo.png*" to the right of h1. You may need to set the height to a proper value.
4. (2 points) Add the words "*Top of Page*" at the bottom of the page and hyperlink it to the first sub-heading "About Babson".
5. (5 points) Embed a google map for Babson College to the right of Basic Information. Set the width to "300" and height to "200".

Q1b. (29 points) the instructions for stylizing index.htm are as follows:

1. (2 point) The page must have zero margin.
2. (2 point) The background color of top part must be light grey.
3. (7 points) All of the elements must be set with the same margins/paddings as shown in figure 1.
4. (4 points) Italicize the acknowledgement paragraph. The font must be 12px in size, **navy** color. There must be no space between the heading and the acknowledgement paragraph (see figure).
5. (3 points) Each of the three sub-headings must have a light green background. The text must be 50px from the left edge of background and must not extend the width of the page – they must be significantly shorter than one-half the width of the page and all three must be the same width (as seen in figure).
6. (2 points) The unordered list must use square as the bullet; the ordered list must use upper-roman style.
7. (3 points) Pick any three occurrences of the word "*Babson*" under "About Babson" and set font color to red.
8. (2 points) When user mouses over any of the two links, add yellow background color for the link and remove the underline.
9. (4 points) The first list item must be dark-red color. For this requirement, you **cannot** use id or class. (hint: advanced CSS selector)

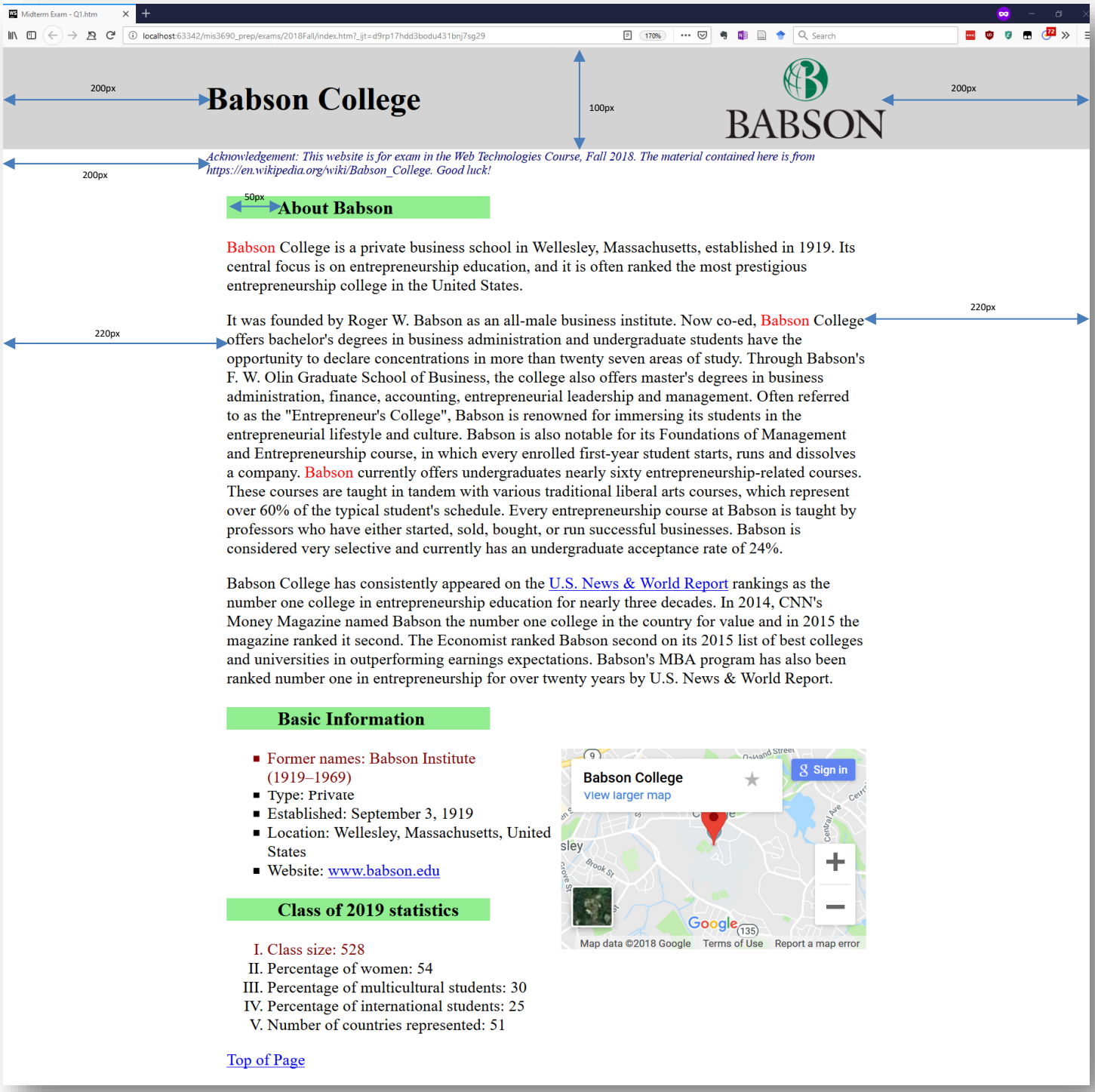

Figure 1. Demo page for index.htm

Please refer to the instructions in the Q2.htm (20 points), Q3.htm (15 points) and Q5.htm (15 points) for answering the next three questions.

Web Tech Exam - Q2 (20 points)

There are two images shown below along with two text strings. Create the functionality whereby if you click on the Smiley.jpg image, the text string "Web Tech Rocks" is shown in red font, size 2em, using Lucida Handwriting with a yellow background. If you click on frown.jpg image, the string "Web Tech Sucks" is shown in green font, bold, size 2em, with a blue background and using Arial font. When one text string is shown, the other should not be displayed. For full credit, write this as a single function. For 15 points, write it using as many functions as necessary.

Web Tech Rocks!

Web Tech Sucks!

Web Tech Exam - Q3

Please create the following functionality using the form given below. The user will enter two integers (the first number must greater than 0) in the two text inputs. When Calculate button is clicked, the **product** of **all** the integers between these two numbers (inclusive) will be calculated and displayed. (10 points) For full points, you need to validate the inputs properly. (5 points)

Web Tech Exam - Q4 (15 points)

In the game of monopoly, pieces move around a board that has 40 squares. In Q4.htm, the names of these squares are stored in an array called `squares`. When the button is clicked, two six-sided dice are rolled (HINT: The roll of a die is a random number from 0 to 5 plus 1). The page should be updated replacing the zeros to show the roll of each die (5 pts). Use the state variable called `loc`, which I have already created for you, to keep track of the location of the piece. Modify `loc` to add the roll of the dice (4 pts). For example, if I was on square 10 and I rolled a 3 and a 4, I would be on square 17. If loc is greater than 39, subtract 40 from loc and pop up an alert that says you have passed Go (3 pts). Replace the word Go on the webpage to display the name of the square where the piece is now located (3 pts).

Make sure the exam folder has the following files:

1. index.htm
2. Q2.htm
3. Q3.htm
4. Q4.htm
5. logo.png
6. smiley.jpg
7. frown.jpg