# Assignment 7: Conditional Statements

## Objectives

* Create websites which take in input via **prompt** and put that information back out to the screen in various ways.

## Instructions

### Part 0: The Setup.

Create a folder on your hard disk, name the folder lastname\_firstname\_assignmentNo. You must replace “No” with the assignment number. Save all the files from this assignment in this folder.

There are several parts to this assignment. Create the following subfolders (in the folder lastname\_firstname\_assignmentNo (No is your assignment number)): q1, q2, q3. As a result, you should have the following folder (directory) structure for this assignment: (-2 points if wrong)

* lastname\_firstname\_assignmentNo\q1\
* lastname\_firstname\_assignmentNo\q2\
* lastname\_firstname\_assignmentNo\q3\

Each question in this assignment require you to write a website that behaves as an application. The style for each page will be the same, but the HTML and the JavaScript will be different. The focus of this assignment isn’t CSS. In fact, you can use the same CSS code that you wrote from a previous assignment. It is important that each of your pages have a style to them. Bland websites won’t work. Also important: no two students should have the same CSS code.

Each page should have the following components:

* A header section in which you announce the name of your application.
* A main which contains your application.
* A footer in which you present your name and the copyright year. This should be the same for every question.

These specifications are detailed enough for you to complete each questions. However, you’ll need to use your best judgment on how to code many of the details. To do that, write the code in the way that you think is best, based on the skills that were presented in the materials. Any time I refer to the title of a page, that should include the title bar and the content of the header section.

### Question 1. 30 points.

Your English professor wants you to write a 2000-word essay. Once you get that essay done, you can enjoy your free time. Write a program that says one of the following:

* Good job on getting your homework done. Take a break!
* Sorry. You must write more on your essay.

This program should be titled “(Your name)’s Essay Completion Tool”. The program should ask the user how many words they’ve written on their essay and display one of the two phrases. Be sure to test your application with 1999 words and 2000 words. The grader will check these values.

### Question 2. 30 points.

APSU’s Price Per Credit Hour for in-state students (at the time of writing) is $284 per hour if you take 12 or fewer hours (the part-time rate) and $229 per hour if you take 13 or more (the full-time rate).

* Write a program with the title “(Your name)’s APSU In-State Credit Hour Calculator”.
* Ask the user, presumably an in-state student, for the number of credit hours they are taking.
  + If the user reports a negative number, say that there is an error with the user’s input.
  + If the user types a number from 0 to 12, report the total price for that many hours times the part-time rate per hour.
  + If the user types a number that is 13 or more, report the total price for that many hours times the full-time rate per hour.

## Question 3. 40 points.

Two people are in a race to see who can run 100 meters fastest. Of course, in a race like this, the fastest (i.e. the smallest) time wins the race. Your job is to determine who wins the race between two racers. You should also report the margin of victory (i.e. the slower time minus the faster time).

* Write a program titled “(Your name)’s Race Victory Checker”.
* In the main part of the program, ask for the first racer’s name, the first racer’s time (in seconds), the second racer’s name, and the second racer’s time.
* Report the name of the person who won the race because they had the smaller time.
* Report the margin of victory. The margin of victory should always be a positive number, so if you subtract the two times and check to see if the margin is negative, multiply the margin by -1 to make it positive. (You can also make any number positive by using the “Math.abs” function. Either approach is fine.)
  + If the race is a tie, report that the race is a tie.

For example.

* Alice runs 100m in 15 seconds. Bob runs 100m in 18 seconds. Alice wins. Your program should report “Alice wins the race by 3 seconds.”
* Claire runs 100m in 17 seconds. David runs 100m in 15 seconds. David wins. Your program should report “David wins the race by 2 seconds.”
* Elizabeth runs 100m in 16 seconds. Frank runs 100m in 16 seconds. The race is a tie. Your program should report that the race ends in a tie.

In each of these examples, it should not matter the order in which the racers are entered. The output should be the same.

## Turn it in

* I will deduct 20 points for every error and 2 points for every warning when validating your files.
* **Important**: Part of web design is that your websites must be readable. If anything on your page is not 100% readable, I will be deducting points. For example, if there is text on a background and the background makes the text unreadable, I will deduct points. If text flow is obstructed by an image, I will deduct points. If anything about your page makes it difficult to read the content, I will deduct points. If something about the interface (either input prompts or output) is not obvious to someone running your code, I will deduct points.
* There are several critical parts of this assignment that (if missing) will automatically fail the assignment:
  + The page titles don’t contain your name.
  + You fail to put your name in the document comments for the first HTML file.
* **Zip up your folder** containing your HTML, CSS, and image files (if applicable) into a single ZIP file and upload it.