

Assignment 2 – due Feb 14 (midnight)

Create a webpage:

JavaScript

Create an HTML file called **users.html** that contains a form with a button tag (you should not use a submit input here as we are not sending anything to the server). The HTML file should contain a form asking for the following inputs:

- Name (type: textbox)
- Email (type: email)
- Age: (type: number)

Each time the user clicks on the button, the new user should be added to the HTML file (you do not need a database here, you may simply add to the DOM). The average age of the current users should also be displayed. For example, after entering three users, something like this should be displayed on your page (you may also use a table):

USERS:

1. Name: Jane Doe, Email: jdoe@domain.ca, Age: 32
2. Name: Joe Smith, Email: joesmith@domain.ca, Age: 35
3. Name: Steve Smith, Email: smith@domain.ca, Age: 25

The average age of all users is 30.667.

In addition, add three buttons that will allow the user to display the users in sorted order of each of the inputs described earlier. For example, clicking on the “SORT by AGE” will now display the names as:

USERS:

1. Name: Joe Smith, Email: joesmith@domain.ca, Age: 35
2. Name: Jane Doe, Email: jdoe@domain.ca, Age: 32
3. Name: Steve Smith, Email: smith@domain.ca, Age: 25

The average age of all users is 30.667.

They could also be sorted from smallest to largest. **Please write your own JavaScript sort function.**

Finally, add one more interesting feature that you feel would benefit this application. Part of your grade will be based on this feature. Please be creative 😊

CSS

Include a CSS style that changes the default look of the browser. In this assignment, you are free to play around with CSS frameworks that will make the application look more consistent and more responsive to user input.

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Create a Web Server

The purpose of this part of the assignment is to create a Windows Server 2016 virtual machine on the Google Cloud, install IIS, and to set up and test your JavaScript file.

Log into the Google Cloud Platform Console

1. Go to <https://console.cloud.google.com/>
2. Log in and click on **Go to Console**.
3. Create a new project and name it [your_firstname_lastname][student_number]. For example, **bobbychan30025555**.

Create and Connect to a New Virtual Machine Instance

1. Take a look at the How-to-Guides (<https://cloud.google.com/compute/docs/how-to>) on Creating VM instances and Connecting to Instances.
2. Create a new virtual machine called **win2016-asn2** on **Compute Engine** with the following characteristics:
 - 2 vCPUs (7.5 GB memory)
 - Windows Server 2016 (DataCenter)
 - Use a new 50GB standard persistent disk
 - Allow HTTP traffic
3. Connect to your instance using Remote Desktop Protocol (RDP). You will need to use a RDP client (including Windows Remote Desktop Connection, available on Windows and MacOSX), click the RDP button's overflow menu and download the RDP file. Open the RDP file with your client.

Running and Connecting to IIS on your Virtual Machine

1. Click on **Add Roles and Features** under the Server Manager Window. Under Server Roles, make sure **Web Server (IIS)** is selected to be installed.
2. In your Server Manager, click on **Tools → Internet Information Services (IIS) Manager**. This should bring up our familiar web server manager.
3. Make sure that the default page is running by going to your external IP (i.e. <http://35.229.117.56>).

Set up Your Own Pages

1. Take a look at the How-to-Guides (<https://cloud.google.com/compute/docs/instances/transfer-files#gcstransfer>) under Transferring Files to Instances. Transfer the HTML and JavaScript files you created in the previous section to your server into a folder called *users* (found under C:\inetpub\wwwroot\); make this folder your default folder for your site. Then, add users.html as a default file for that folder. You should be able to see your file by navigating to [http://\[your_external_IP\]/](http://[your_external_IP]/). For example, <http://35.229.117.56/>

Add us to your project

1. You must now add the TA and I as Owners of your project so that we can start up your instance and do the appropriate marking (I am still actively trying to find a better way but for now...). Go to IAM&admin→IAM section of your project.
2. Click on the ADD button



3. Add the following emails as Owners of your project:

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- bobbyctchab@gmail.com

Shutting Down Your Virtual Machine

1. In your VM Instances page on GCP, click on the three vertical dots on the right side of your machine and select **STOP**. Make sure that the icon on the left side is no longer green:
2. You can also restart your virtual machine here at any time. Please make sure your virtual machine is turned **OFF (STOPPED)** at the due date, otherwise you will not receive marks :(

Submission and Marking

Submit a text file to coursys (courses.cs.sfu.ca) with the following information:

- Your google ID
- What extra feature did you implement?

Marking Scheme:

(15 Marks) – working JavaScript component

(5 Marks) – CSS / Creativity and Effort

(6 Marks) – proper configuration of server

(-5 Marks) – improper submission