

Assignment 1

For this assignment, you are a programmer for the UAT Space Program. It is your duty to create the launch sequence for takeoff. To do this, you will need to create an HTML file. Then using JavaScript in the HTML file, display a count from 10 to 0 in 1 second increments then print out a message that says "Blastoff" when the timer says zero!

Do not use an alert message, just print to the screen.

There are many ways to do this, one way is using JavaScript code like the following:

```
document.getElementById("DisplayCountdown").innerHTML =  
countdown;
```

- You will need to create the variable initialize it to 10.
- You will decrement currTme by 1.
- Then you will repeat this 10 times (cut and paste). Later we'll use loops so you don't have to cut and paste.
- After the countdown reaches zero, print Blastoff!
- Have at least 1 creative element – images, fonts, background color, etc.
- Create a nice look and feel for the user.
- Comment above almost every line of your code
- Put a comment at the top of your HTML file with your name in it.

Objectives

- Use a library function
- Create Variables
- Output variables

Requirements

Write a .html with JavaScript code that:

- counts down from 10 to 0 using a variable
- decrements the variable
- outputs Blastoff when the countdown time = 0

Deliverables

Submit a .html to this assignment.

Assignment 2

Use Mission Control, We have Blastoff! for reference for this assignment, then implement the loops

Objective

- Implement Loops

Requirements

- Implement a loop to display the current time repeatedly.
- Insure the program works properly.
- Take a print screen of your program running.

Deliverable

- Submit your .html, .css, and .js files for this assignment and any other source files or images used.
- Submit a print screen of your program running.

Assignment 3

Objectives

- Understand the role of JavaScript Functions
- Write Functions
- Comment Functions
- Comment code to show your understanding of it.
- Understand Inline JavaScript
- Understand External JavaScript

Requirements

- In a separate code.js page, write the following function which our main .html page will depend on later.
- Comment the function to describe what it does.
- Comment almost every line of HTML and JavaScript code demonstrating you know what it does.
- Link the code.js file to the main HTML file.
- Test the program and print screen the output.
- Add a great User Experience, Turn this into Quarks Casino or another famous Sci-Fi Casino.
- Write a title and paragraph about your place for the user.

Below is an example of the previously used program, which has been modified to include a function.

```
function play() {  
var die1 = 5  
var die2 = 2  
  
var sum = die1+die2  
document.write("Die 1 = " + die1)  
document.write("<br/>")  
document.write("Die 2 = " + die2)
```

```
document.write("<br/>")
document.write("Sum = " + sum)
document.write("<br/>")
if (sum == 7 || sum == 11)
{ document.write("CRAPS - you lose")
document.write("<br/>")
}
else if (die1== die2 && die1%2 == 0)
{
document.write("DOUBLES - you win")
document.write("<br/>")
}

}
document.write("Simple Craps")
document.write("<br/>")
play()
```

Deliverables

- Submit your .html file
- Submit your .js file
- Submit a print screen of your application running.
- Do not zip your files.

Assignment 4

Change Order Request from the Fleet Admiral

The Fleet Admiral has reviewed your program. He likes what you have done so far but has requested a change order. His request

is to add a conditional (if statement) that if the countdown is less than 5 seconds, the message should read “**Warning Less than ½ way to launch, time left = *insert variable here***”.

Otherwise, use the same message you had in the previous program. Good luck on your mission to improve the UAT Space Program!

Objectives

- Implement conditionals

Requirements

- Add and if/else statement as specified above
- Display messages as specified above!
- Have at least 1 creative element – images, fonts, background color, etc.
- Create a nice look and feel for the user and make a great user experience!
- Comment above almost every line of your code, both HTML and JavaScript!
- Put a comment at the top of your HTML file with your name in it.

Deliverable

- Submit a .html file for this assignment.
- Submit and .js source files or images that your application requires.
- Submit a print screen of your HTML page running.
- github submission

Assignment 5

Assignment: Mission Control Operator Login

Security of the system is critical for the UAT Space Program. A new request has been made by the Director of Security and Safety to have the User enter their first and last name before the program begins. You need to take the first and last name as input, then display this on the screen as a concatenation of first and last names. Make sure there is a space between the names.

You can do this by adding a string with a space to the first name or by a double concatenation. The maximum number of characters for the concatenated name cannot be more than 20. If it is more than 20, the user should be given a warning to re-enter. The program should not move on until this condition is met (*hint – loop*).

Next, the user must enter their badge number. This should be a number with 3 or less digits. You are required to validate that it is a number and has 3 or less digits (*hint <1000*). The program should not move on until this condition is met (*hint – loop*).

Objectives:

- String manipulations
- User input validation

Requirements:

- Inputs for User first and last name
- Check if the string is great than >20 characters and give a warning – but do not continue the program if invalid
- Inputs for User badge number

- Check if badge number is valid and 3 digits– but do not continue the program if invalid
- Have at least 1 creative element – images, fonts, background color, etc.
- Create a nice look and feel for the user and make a great user experience!
- Comment above almost every line of your code, both HTML and JavaScript!
- Put a comment at the top of your HTML file with your name in it.
- Take one or more screen prints of your application running.

PRO TIPS:

- Put all input boxes and buttons inside the one form tag.
- On the form, you should have all your input boxes, but only one submit button so the user will submit all the input boxes all at once. Your JavaScript should start validating them all at once when the user presses submit.

Deliverable:

Upload to github and turn in your github repo address..

Assignment 6



UAT Space Program

Data Type	Reading
Time elapsed:	15 seconds
Latitude:	0
Longitude:	0
GPS Altitude:	0
BMP Sensor Altitude:	30383.04
BMP Sensor Pressure:	2.34
BMP Sensor Temperature:	0
Digital Sensor Temperature:	24.12
CSS Sensor Temperature:	25
CSS Sensor eCO2:	400
CSS Sensor TVOC:	0
UV:	0
Accel X:	-0.87
Accel Y:	-0.02
Accel Z:	9.61
Magnetic X:	0.13
Magnetic Y:	0.57
Magnetic Z:	-0.24
Gyro X:	4.66
Gyro Y:	0.01
Gyro Z:	-0.4

Start

Stop

NOTE: Above is sample output from a working version of the space project. You can and should make a better GUI than the one above.

Create at least all these elements you see above on the page including building the exact table and using these exact numbers displayed to display on your page.

Here is the UAT Space Logo Graphic: [UATspaceLogo.jpg](#)

Objectives

- Write code to create buttons
- Code those buttons to trigger Events in JavaScript
- Apply Event Driven programming
- User Acceptance Test the Events

Requirements

- Write HTML code to create the Start button.
- Write HTML code to create the Stop button.
- Create a JavaScript function to enable/disable the Start button.
- Create a JavaScript function to enable/disable the Stop button.
- Wire the Start button using the onClick to JavaScript Functions to disable the start button and Enable the opposite button clicked.
- Wire the Stop button using the onClick to JavaScript Functions to disable the stop button and Enable the opposite button clicked.
- Test the buttons.
- Have at least 1 creative element – images, fonts, background color, etc.
- Create a nice look and feel for the user and make a great user experience!
- Comment above almost every line of your code, both HTML and JavaScript!
- Put a comment at the top of your HTML file with your name in it.
- Take one or more screen prints of your application running.

Deliverables

Zip your screen print(s), your HTML and any .js, image, or supporting files you used or created.

Assignment 7

UAT Space Program - We Have SOUND!

[us-lab-background.mp3](#)

The noise you are hearing is from the US space station lab. While this may not be a very exciting or pleasant sound, it is sound nonetheless.

The Director of Mission Control is getting tired of no sounds so you have been tasked to create a background sound for your UAT Space Program Project. The Director did not specify any specific sound, so the choice is up to you!

Objectives

- Implement sound in your program

Requirements

- Implement background sound in your UAT Space Program project using HTML or JavaScript.
- Have at least 3 creative elements – images, fonts, background color, etc.
- Create unique a nice look and feel for the user and make a great user experience beyond what you see above!
- Comment above almost every line of your code, both HTML and JavaScript!
- Put a comment at the top of your HTML file with your name in it.
- Take one or more screen prints of your application running.

Deliverable

Upload to github

Assignment 8

Overview

Now that we have spent all semester creating a web page, we want to create the web presence so parents, friends, family and anyone else on the internet can view your handiwork.

Guidelines and Expectations

We will be creating a minimum of three pages for this assignment:

1. A landing page (so when anyone goes to your github webpage, this is the first page they see)
2. Your UAT space page
3. Your Boards Objectives page
4. *Any other pages you desire

Your landing page and new pages need a navigation menu so the users can drive around relatively easily. The Boards Objectives page needs your objectives from your major listed in the UAT catalog. This webpage will follow you for the rest of your time at UAT and possibly, for the rest of your life, so make it great!

Deliverables


How to create the pages:

1. in github, create a repo called *yourUserName.github.io* (*yourUserName* is the user name for your github account).
2. Create a html file called index.html, this file will be your landing page (the first page a user will go to when on your website) and upload it to the repo with and needed ancillary files (like .css or .js files). Be sure to have a navigation section listing all the pages on your site with links to those pages.

3. Add the other pages by first create them (if needed) and then adding them to the repo. As a best practice, create a folder for each of the other pages, besides the landing page, and place the materials for the specific pages in the specific folders. Try to have navigation on those pages as well.
4. When complete, be sure to commit the changes.

When complete, you will now have a web presence at yourUserName.github.io that anyone can view! To submit, submit your website url.

Assignment 9

**UAT Space Program**

Data Type	Reading
Time elapsed:	15 seconds
Latitude:	0
Longitude:	0
GPS Altitude:	0
BMP Sensor Altitude:	30383.04
BMP Sensor Pressure:	2.34
BMP Sensor Temperature:	0
Digital Sensor Temperature:	24.12
CSS Sensor Temperature:	25
CSS Sensor eCO2:	400
CSS Sensor TVOC:	0
UV:	0
Accel X:	-0.87
Accel Y:	-0.02
Accel Z:	9.61
Magnetic X:	0.13
Magnetic Y:	0.57
Magnetic Z:	-0.24
Gyro X:	4.66
Gyro Y:	0.01
Gyro Z:	-0.4

NOTE: Above is a sample output from a working version of the space project. The important parts are the title and identifying where the body of the html tag would be located. The numbers

are not relevant to this assignment. You can use any numbers you want, you don't have to copy these.

The data file for UAT Space: [dataLoader-1.js](#)

Objectives

- Use CSS to make your web application look and feel professional.
- Understand Inline vs Internal vs External CSS
- Use Tables to structure your web page
- Use Tables to display your data.

Requirements

Using the graphic above:

- Write a table to format your page to match the image of the page above.
- Write inline CSS to make your page look like the page above.
- Write the table to format your code to make your page look like the image of the page above.
- Write the table above and hard code the data in it to mock it up.
- Have at least 3 creative elements – images, fonts, background color, etc.
- Create unique a nice look and feel for the user and make a great user experience beyond what you see above!
- Comment above almost every line of your code, both HTML and JavaScript!
- Put a comment at the top of your HTML file with your name in it.
- Take one or more screen prints of your application running.

Deliverables

Zip your screen print(s), your HTML and any css, .js, image, or supporting files you used or created.