

CSCI-215
Website Programming
Department of Computer Science
College of Charleston

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Office Hours	MWF 130-230pm Or by Appointment	Class Time	MWF 2:30 AM –3:20 AM
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Assignment 3 – due 10/3 before class

The purpose of this assignment is for you to get practice doing “generic” programming activities using JavaScript. Each problem is worth 20% of the grade. You need to:

- Create separate .html files for each of the following JavaScript programming problems below.
- **SUBMISSION:** Upload one file to the dropbox system in OAKS: a single .zip (it needs to be exactly “.zip”) that contains all of the below html/picture files

randompic.html

- Randomly display 1 of 5 images on the screen when the page is loaded. Use whatever (PG) images you’d like. Be sure to put these in the .zip when you submit your assignment.

processtext.html

- Create a webpage that has an input <div>, an output <div>, and a button that when clicked it processes the text in the input <div> and places the results in the output <div>.
 - o Processing means: List all occurrences of each word along with their count. Matching is case-insensitive. For example (ordering of output is not important):

Input <DIV>

```
The cat ate the bird.  
The Bird ate the Dog.  
The dog ate the cat.
```

Output <DIV>

```
THE 6  
CAT 2  
ATE 3  
BIRD 2  
DOG 2
```

mathfun.html

- Create a JavaScript program that calculates the maximum, minimum, mean, and median values of a set of numbers as well as the number of even numbers, odd numbers, prime numbers, and power-of-2 numbers.
- Using prompt pop-up box, ask a user to enter positive numbers one at a time.
 - o Also tell them at if they enter a -1 that means they are finished.
- Display the result in a nicely formatted table in the body of the website.

morsecode.html

- Create a webpage that has an input <div>, an output <div>, and a button that when clicked it processes the text in the input <div> and places the results in the output <div>.
 - o Processing means: converting the Morse Code in the input <div> to English in the output div.
- Morse code represents characters of an alphabet as sequences of dits (short key closures) and dahs (longer key closures). If we let a period (.) represent a dit and a dash (-) represent a dah, then the Morse code version of the English alphabet is

A	.-	G	--.	M	--	S	...	Y	-.--
B	-...	H	N	-.	T	-	Z	---..
C	-.-.	I	..	O	---	U	..-		
D	-..	J	.---	P	.--.	V	...-		
E	.	K	-.-	Q	----	W	.-.		
F	...-	L	.-..	R	.-.	X	-..-		

- One blank space is used to separate letters and three blanks are used to separate words. Here is an example:

Input <div>

Output <div>

emailverify.html

- Create a webpage that has an input <div>, an output <div>, and a button that when clicked it processes the text in the input <div> and places the results in the output <div>.
 - o Processing means: check to see if the input <div> contains a valid email address, which means:
 - One or more characters followed by an @ followed by one or more characters followed by a dot (.) followed by one or more characters.
 - o If the email address is valid display a smiley face pic in the output <div>.
 - o If the email address is not valid display a frowny face pic in the output <div>

THIS IS INDIVIDUAL WORK ONLY. IF I SUSPECT THE CODE IS NOT YOURS, YOU WILL NEED TO COME TO MY OFFICE TO TAKE A VERBAL TEST ON THE CODE YOU SUBMITTED.