

COMP 2131: Web Development II

Midterm

February 23rd, 2021

10:30 am - 12:30 pm

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Agreement and Commitment to act with integrity:

I affirm that I will not give or receive any unauthorized help on this examination, that all work will be my own, and that I will abide by BCIT policies and any special rules for conduct set out by the course instructor.

I understand that any violation of BCIT policies and rules set out by the course instructor will be investigated as a case of academic misconduct, and the consequences and penalties as set out in the BCIT Education Policy #5104 will apply. The rules that apply to this exam are as follows:

- **No communication with others** is allowed during the exam.
- This is an **open book exam**. Use of written notes/online resources are allowed during the exam.
- Students **must not record** (take pictures, screen capture, etc.) on any part of this examination including your answers.

Instructions:

1. Submit your answers in the Midterm assignment folder on the learning hub.
 - a. For Part A, submit your answers in a PDF or TXT file.
 - b. For Part B, zip your working directory, rename it to **<fullName>_<ID>.zip** and hand it in.

Section	Marks Obtained
Part A: Short Questions	/ 7
Part B: Lab	/ 13
Total Mark:	/ 20

of 7

PART A: Short Questions (7 points)

1. Briefly explain what element(s) are selected (5 points)

a. `$(".menu-item")`

It is going to grab all elements on a page with a class name of "menu-item"

b. `$("#menu")`

It is going to grab all elements on a page that have an id of "menu"

c. `$("div.card")`

It is going to grab all div elements of that contain the "card" class.

d. `$("ul li:first-child")`

It is going to grab the first li tag in every ul tag on the page

e. `$("#menu").next().children()`

It is going to grab the children of the parent class that is a sibling to the element that has an id of "menu"

2. Briefly explain what happens when the jQuery code below is executed (2 points)

```
function b(p) { return
    f2(p, "yellow");
}

function f2(h, v) {
    $(h).css("background-color",
v) return $(h).css("color"); }

$(document).ready(function(){
    $("button").on("click", function() {
        var k = b("#aside");
        $(".banner").css("color", k);
    });
});
```

Upon loading the DOM, and upon clicking the button, function f2 changes the background colour of the element provided to yellow. It will also return the text color attribute of the element provided. It also changes the color of the element with the "banner" class from what the function f2 returns. Given a red text in the element with id of aside, the color of the banner class is changed to red.

Hand in:

For part A, submit your answers in a PDF or TXT file, and hand it in to Learning Hub.

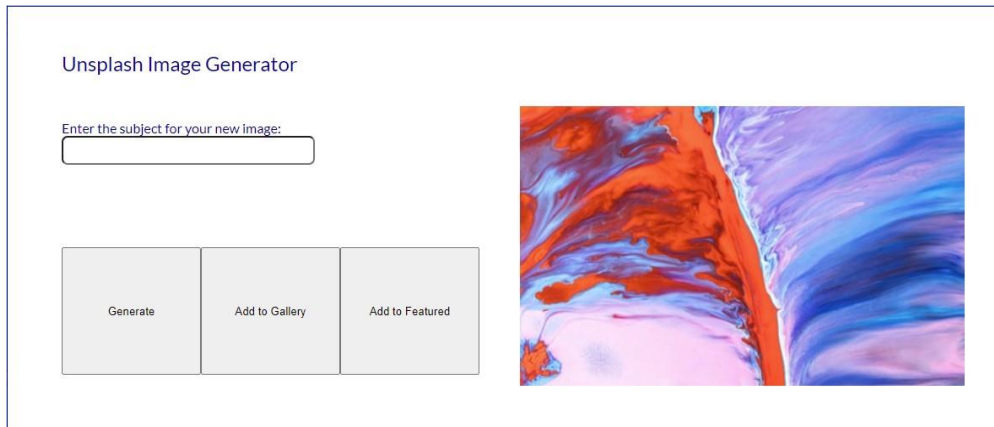
PART B: Lab (13 points)

Setup

- Download the starter files from the Midterm folder.
- HTML markup has been provided. You will write your styles in a file called **style.css**
- You will write your JavaScript code in a file called **generator.js**
- **There is a screenshot and demo video in the midterm folder that will show you what the site should look like when you're done.**
- **Note:** Write all your styles for the desktop. Designing a separate mobile layout is not required.

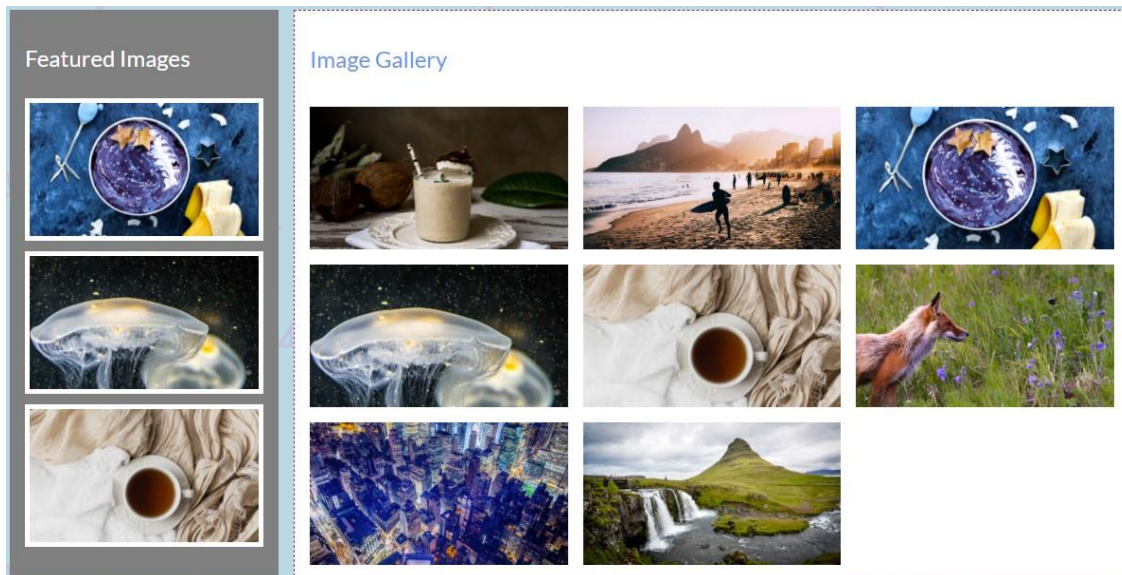
Task 1: Grid layout (4 points)

1. Using CSS Grid, complete the layout for the "image-generator" div.



- Add padding and/or margin where appropriate to make it look as close as possible to the mockup.

2. Currently the “featured” and “gallery” sections are taking up one column each. Change the **grid-template-columns** value to make it look like the mockup.



Task 2: Event Listeners, DOM Manipulation and jQuery effects (9 points)

An image generator has already been added to this page. Your task is to make the buttons to add the images to the gallery and featured sections work.

1. **Add to Gallery button:**
 - a. Write a jQuery event listener that listens for a click on the button and adds the image generated to the top of the section with class “gallery”.
 - b. As the image is added, the previous image at the start of the gallery section should be faded out. Hint: see jQuery’s [fadeOut\(\)](#) method.
2. **Add to Featured button:**
 - a. Write a jQuery event listener that listens for a click on the button and adds the image generated to the top of the section with class “featured”.
 - b. Similar to the Gallery section, as the image is added, the previous image at the start of the featured section should be faded out.

3. Theme Selector (includes 1 bonus point):

- a. Write a jQuery event listener that listens for a [change\(\)](#) event on the <select> with id “theme”.
- b. If the theme selected is “dark”,
 - i. the background color for the body should be black and
 - ii. the background image should move with constant speed to the *right*, and the animation should repeat indefinitely without any noticeable jumps.
- c. If the theme selected is “light”,
 - i. the background color for the body should be `rgb(182, 216, 228)` and
 - ii. the background image should move with constant speed to the *bottom*, and the animation should repeat indefinitely without any noticeable jumps.

Hint: Remember to pass the **event** as an argument in your callback function for your event listener. **event.target.value** will return if “dark” or “light” has been set.

Hand in:

For part B, rename the working folder to <fullName>_<ID>.zip, zip it, and hand it in to Learning Hub.

Check your Work:

Look at the mockup and demo video in the starter_files. Is there anything you’ve missed?

- **[4 points]** Task 1: CSS grid
- **[3.5 points]** Task 2: Add to Gallery button
- **[3.5 points]** Task 2: Add to Featured button
- **[2 points]** Task 2: Theme Selector (**includes 1 bonus point**)
- **[1 point]** Properly handed in

END OF EXAM