Lab 2 blank

Instructions:

The following lab is due **10 minutes *before* the start of your next class with me. Please use your given name + preferred name if they are different:**

Your full name : _____

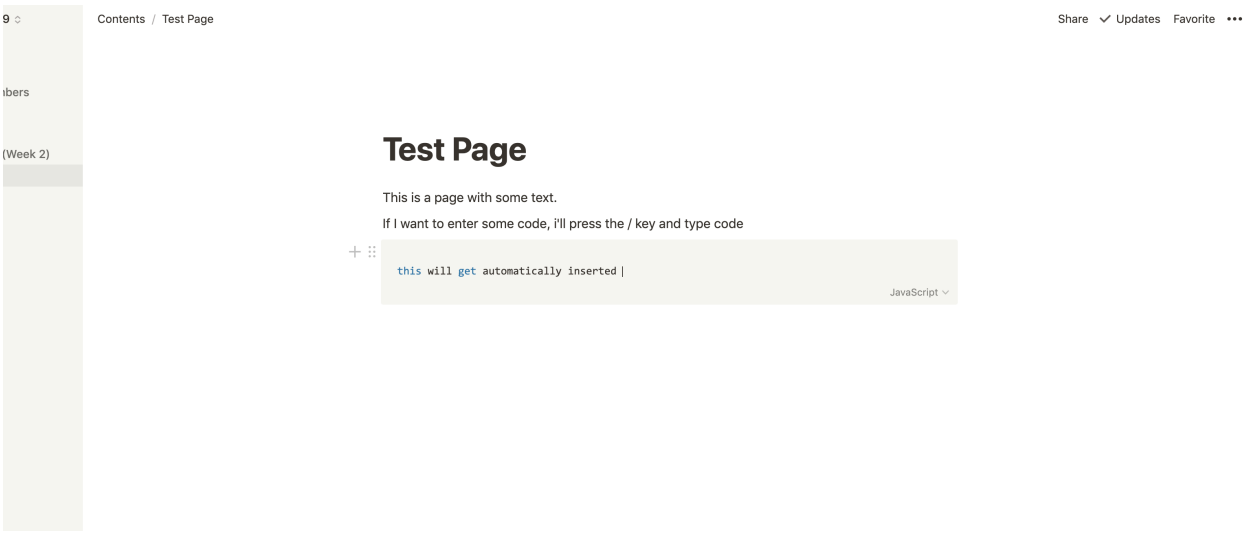
Your Student Number: _____

Submission Process:

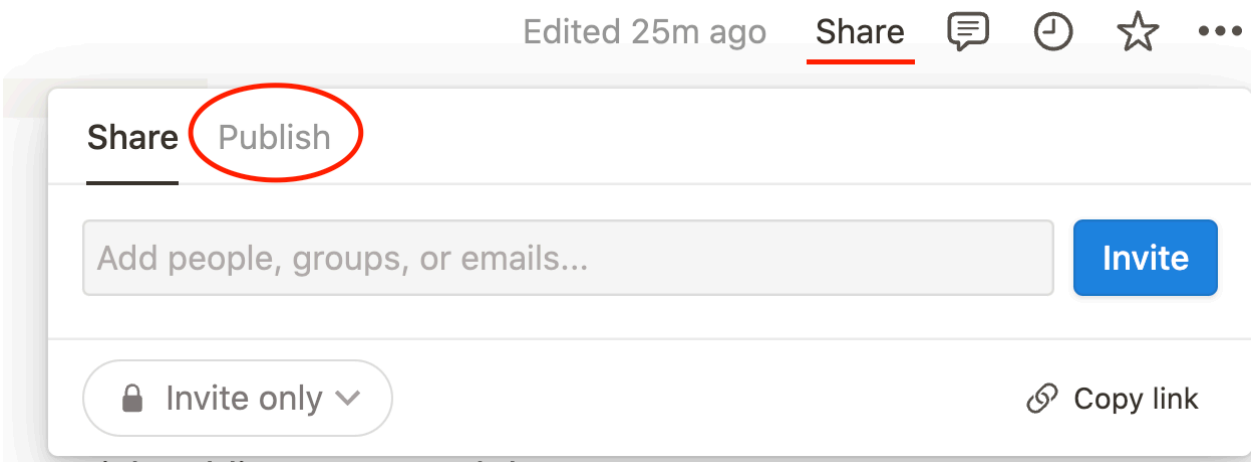
Notion is a tool which allows you to easily paste code and submit it to me. Go to https://www.notion.so/ to make an account, and then once logged into notion, create a page which you will use to answer the questions in this challenge.

You will see an area in the top right corner that says "Duplicate". Click this.

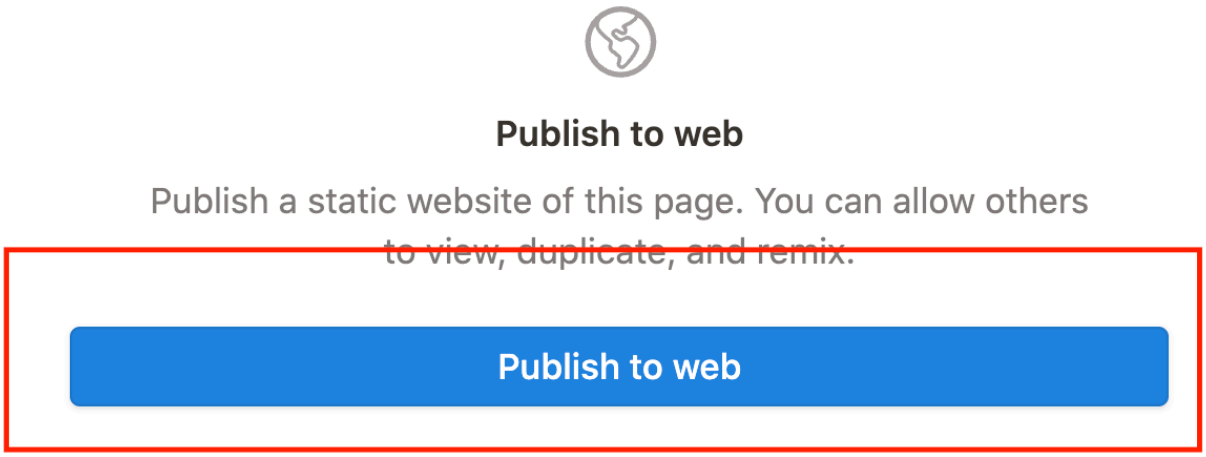
You will now have a copy of the Lab instructions within your Notion account. Fill in the answers to the questions.



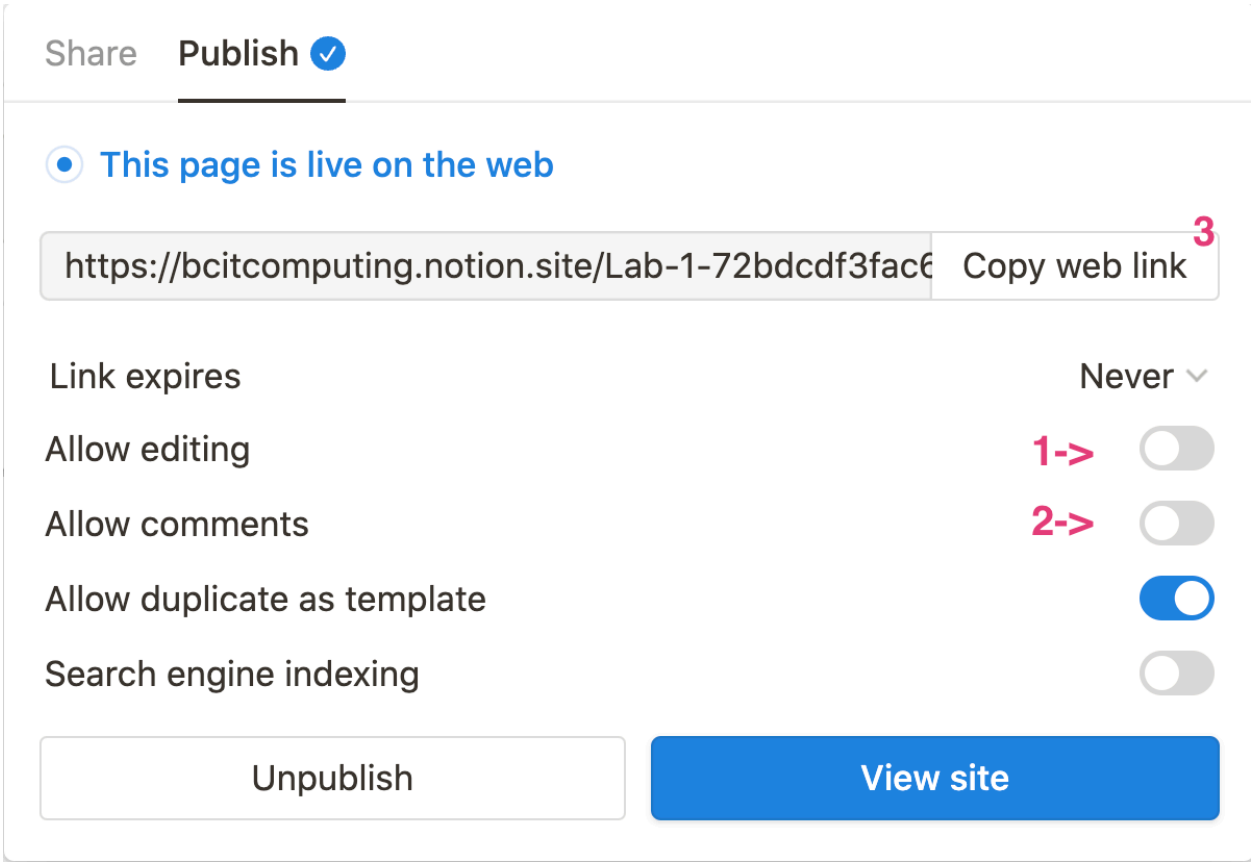
After you are ready, click the "share" button in the top right corner. Change tabs to the Publish Tab.



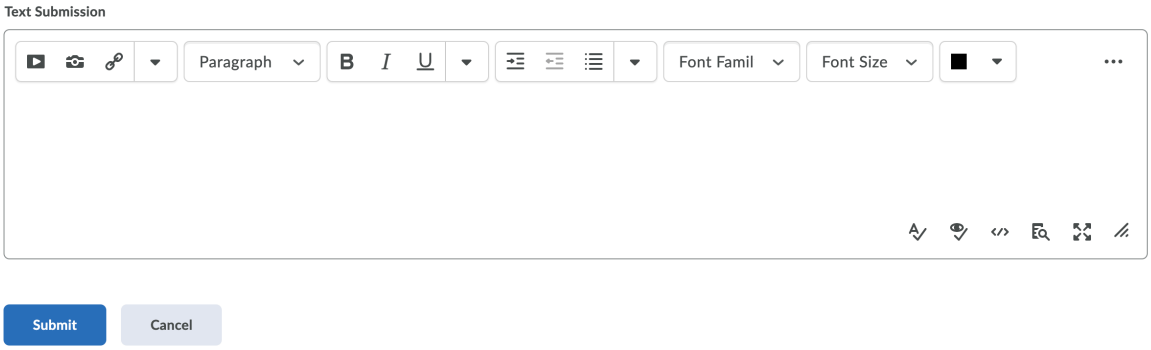
Click the **Publish to web** button.



Next, turn on **Allow editing & Allow comments. Then click Copy web link**:



Lastly, go to the **Activities > Assignments** section of learning hub, click the assignment, and then paste the notion link you copied into the text box. Click Submit.



Failing to follow these instructions will result in no credit being awarded for the lab.

Question 1:

Observe the following formula. It allows you to find the distance between two points (x1, y1) and (x2, y2).

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Do the following:

```
node main.js 10 5 2 3
```

1. Your program will be run like you see in the box above. The format is: x1 y1 ×2 y2
2. Have a file called **mathHelpers.js** which contains a squareRoot function, a square function, and a distance function which uses internally your

squareRoot and square function to calculate distance. Export your distance function from this file.

3. Have a file called main.js which uses process.argv to get the arguments passed in from the command prompt (terminal). Import your mathHelpers.js distance function into this file.
4. Inside your main.js, you should have a function called **processInput**, passing to it what the user typed in (5 4 3 2). **processInput** should take the userInput and *write it to a file* called points.txt. points.txt should be saved in a folder named dataPoints. The dataPoints folder does not exist so you will need to create it using the fs.mkdir function in Node. After having written to the file, show a message in the console stating: "Content saved" through console.
5. After showing the "Content saved" message, you should use fs.appendFile to add the distance calculation to the end of your file. You must add the following message to the end of the file:

```
The distance between your two points: (10,5), (2,3) is <distance here>
```

Of course, <distance here> will be replaced with the number you get back from your distance function. Also, (10,5), (2,3) are the numbers that correspond to what you entered. If you entered into the terminal:

```
node main.js 10 10 2 3
```

then the message would be:

```
The distance between your two points: (10,10), (2,3) is <distance here>
```

Paste your **main.js** file contents in this box

```
```

Paste your **mathHelpers.js** file contents in this box

⚠️ You ***MUST*** use asynchronous callbacks for this Lab. You don't need to use callbacks for synchronous code (ex - in the Math helpers)