

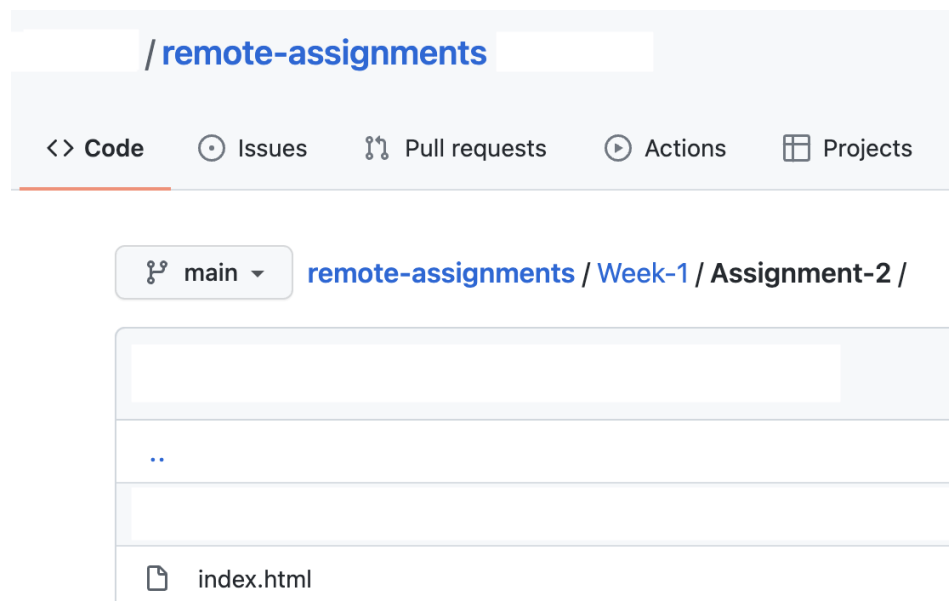
**Campus Program #2**  
Remote Learning Assignment - Week 1

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## Assignment 1: Git and GitHub Page

Follow this [document](#) to host your own website on Github Page and take the steps below to hand in your assignments:

1. Create a new repository named remote-assignments in your GitHub account.
2. Create folders in this repository for assignments of each week.
  - a. Create folder Week-n for week N. (N is an integer)
  - b. Under folder Week-n, create folder Assignment-M for all the files you like to submit in assignment M (M is an integer)
3. Manage and submit your work to GitHub by any Git tool.
4. For an example of Week-1, Assignment-2:
  - a. Your **Github Page link** should look like this:  
<https://username.github.io/remote-assignments/Week-1/Assignment-2/>
  - b. Your **Github repository** should look like this:



**Reminder:** this assignment is very important for coming tasks in these two weeks. You have to complete it anyway!

**Campus Program #2**  
Remote Learning Assignment - Week 1

---

## Assignment 2: Javascript Basic

Your job is to complete the following two functions.

1. **countAandB**: count how many 'a' and 'b' letters are in the given input and return the total number.
2. **toNumber**: convert English letter to number, let 'a' to be 1, 'b' to be 2, and so on.

```
function countAandB(input) {  
  // your code here  
}  
  
function toNumber(input) {  
  // your code here  
}  
  
let input1 = ['a', 'b', 'c', 'a', 'c', 'a', 'c'];  
console.log(countAandB(input1)); // should print 4 (3 'a' letters  
and 1 'b' letter)  
console.log(toNumber(input1)); // should print [1, 2, 3, 1, 3, 1,  
3]  
  
let input2 = ['e', 'd', 'c', 'd', 'e'];  
console.log(countAandB(input2)); // should print 0  
console.log(toNumber(input2)); // should print [5, 4, 3, 4, 5]
```

In both questions, you will only get 'a', 'b', 'c', 'd', or 'e' in the input array.

**Campus Program #2**  
Remote Learning Assignment - Week 1

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### Assignment 3: Function and Array

1. **max**: find the max value of an array of numbers
2. **findPosition**: find the first position of the target number inside an array of numbers.  
The position should be counted starting from 0, if you can't find the target, please return -1

**Reminder:** you cannot use those built-in functions like `Math.max()` and `Array.prototype.findIndex()` to complete this assignment, please implement it by yourself.

```
function max(numbers) {  
  // your code here, for-loop method preferred  
}  
  
function findPosition(numbers, target) {  
  // your code here, for-loop method preferred  
}  
  
console.log(max([1, 2, 4, 5])); // should print 5  
console.log(max([5, 2, 7, 1, 6])); // should print 7  
  
console.log(findPosition([5, 2, 7, 1, 6], 5)); // should print 0  
console.log(findPosition([5, 2, 7, 1, 6], 7)); // should print 2  
console.log(findPosition([5, 2, 7, 7, 7, 1, 6], 7)); // should  
print 2 (the first position)  
console.log(findPosition([5, 2, 7, 1, 6], 8)); // should print -1
```

**Campus Program #2**  
Remote Learning Assignment - Week 1

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## Assignment 4: Function, Array, and Object

Complete the function below to calculate the average price of all the products.

```
function avg(data) {  
  // your code here  
}  
  
console.log(  
  avg(  
    {  
      size: 3,  
      products: [  
        {  
          name: 'Product 1',  
          price: 100,  
        },  
        {  
          name: 'Product 2',  
          price: 700,  
        },  
        {  
          name: 'Product 3',  
          price: 250,  
        },  
      ],  
    })  
); // should print the average price of all products
```

**Campus Program #2**  
Remote Learning Assignment - Week 1

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## Assignment 5: Data Manipulation

1. **count**: return an object which shows the count of each character.
2. **groupByKey**: return an object which shows the summed up value of each key.

This time, you may get letters from 'a' to 'z', try to avoid using 'if' or 'switch' to split each letter into different cases (e.g. *if(letter == 'a') {...} else if (letter == 'b') {...}*), otherwise, your code will be very long.

Note:

1. The input format is different for these two functions.
2. In the second function, the input may have the same key but different values, the output should have each key only once.

```
function count(input) {
  // your code here
}

let input1 = ["a", "b", "c", "a", "c", "a", "x"];
console.log(count(input1));
// should print {a:3, b:1, c:2, x:1}

function groupByKey(input) {
  // your code here
}

let input2 = [
  { key: "a", value: 3 },
  { key: "b", value: 1 },
  { key: "c", value: 2 },
  { key: "a", value: 3 },
  { key: "c", value: 5 },
];

console.log(groupByKey(input2));
```

**Campus Program #2**  
Remote Learning Assignment - Week 1

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## Assignment 6: Page Layout in pure HTML/CSS

Apply any HTML, CSS techniques without Bootstrap, JQuery, or other libraries to accomplish the following page layout requests. You can find a lot of elegant icons in Iconfinder (<https://www.iconfinder.com/>).

**Basic Principle:** You can use [Chrome Device Mode](#) to get quick layout tests in different screen widths.

### Key Points:

1. Website Title / Logo in the navigator should align to the left.
2. Menu Items in the navigator should align to the right.
3. Total width of content boxes should be fixed in 1200px when screen width > 1200px.



Hint: Using flexbox for layout will help you a lot.