

Home Assignment. Recursion & Array Methods

You need to submit this task for review.

Watch the video lessons to complete this task. If you have any questions, you may ask your mentor's help via Discord.

After you submit the completed task, mentors will review it. Don't worry if your work is not approved: you can always retake the assignment, and it won't affect your final grade.

Hint

Use Visual Studio Code to complete the tasks. The instructions on how to do that are in the video "Set Up Local Development Environment."

Hint

This is a step-by-step process. You can't proceed to the next task if you haven't completed the previous one.

Task 1. Find the most used item on the array

You have an array with some repeated elements. For example, the element "Web Developer" is repeated 3 times below.

```
const arr = [
  "Web Developer",
  "Refocus",
  "Web Developer",
  "Web Developer",
  "Refocus",
  "Awesome",
];
```

Create an algorithm that counts the number of times each element is repeated and shows the result using the console.

Hint

The result should look like this object:

```
{ 'Web Developer': 3, Refocus: 2, Awesome: 1 }
```

Task 2. Reverse the array of invoices

You work as a Web Developer at a big company. The invoicing department is having a hard time sorting their documents using the "first in, first out" method. The "first in, first out" method means that the invoices that came the earliest must be also paid earlier than the others.

- Use array methods to create two recursive functions:
- insertToBottom, which adds invoices at the bottom of the list
 - reverseStack, which reverses the order of the invoices

Hint

The result of calling the first function should look like this string:

```
Invoice 008 Invoice 007 Invoice 006 Invoice 005 Invoice 004 Invoice 003
Invoice 002 Invoice 001
```

Hint

The result of calling the second function should look like this string:

```
Invoice 008 Invoice 007 Invoice 006 Invoice 005 Invoice 004 Invoice 003
Invoice 002 Invoice 001
```

Hint

Complete the code below to solve the case.

```
let InvoiceList = [
  "Invoice 008",
  "Invoice 007",
  "Invoice 006",
  "Invoice 005"];

function insertToBottom() {
  ...
}

function reverseList() {
  ...
}

InvoiceList.push("Invoice 004");
InvoiceList.push("Invoice 003");
InvoiceList.push("Invoice 002");
InvoiceList.push("Invoice 001");

console.log(InvoiceList.join(" "));
reverseList();
console.log(InvoiceList.join(" "));
```

How to upload completed tasks

- There are 2 ways to upload the assignment:
- 1 The best way is to write your code in Visual Studio Code, save the file with the ".js" extension, make a ".zip" archive, and upload the file here. This option is preferred.
 - 2 If this is easier for you, you can also copy your code from the Google Chrome console, paste it into a Word document, and upload the Word document here.
- ⊗ Keep in mind that we won't be able to download files with the ".js" extension right away. These assignments will be automatically rejected, so you will need to reupload them in ".docx" or ".zip".