Problem:

Imagine you need to create a simple program that prompts the user for his name and age, and then displays back the message “Hello <name>, you are <age>!”

To read user’s input we will be using a “readline” module, which “provides an interface for reading data from a [Readable](https://nodejs.org/api/stream.html#stream_readable_streams) stream (such as [process.stdin](https://nodejs.org/api/process.html" \l "process_process_stdin)) one line at a time.”

<https://nodejs.org/api/readline.html>

To use this module we will add the following lines at the top of the Node.js file:

const readline = require('readline').createInterface({

input: process.stdin,

output: process.stdout

})

For this assignment we want to create two functions: GetUserName prompts user to enter their name, and GetUserAge prompts to enter the age.

Let’s imagine we don’t know anything about asynchronous calls, and just trying to do something simple like this (see provided wrong.js):

function GetUserName() {

readline.question("What is your name?", (name) => {

return name;

})

}

function GetUserAge() {

readline.question("How old are you?", (age) => {

return age;

})

}

var username = GetUserName();

var age = GetUserAge();

console.log("Hello " + username + ", you are " + age + "!");

readline.close();

Running this code we are getting the following result:



It never waits for the user to enter their inputs, just prints out the messages and closes the execution.

Of course that happens because “readline.question” is an asynchronous call, which makes our functions GetUserName and GetUserAge also asynchronous.

To make this work properly we need to run the commands in a proper order. We need to wait for the name to be entered by the user before prompting for the age, and then wait for the age to be entered before displaying the message.

In other words, we could do something like this (see provided right.js):

function GetUserName() {

readline.question("What's your name?", (name) => {

GetUserAge(name);

})

}

function GetUserAge(username) {

readline.question("How old are you?", (age) => {

console.log("Hello " + username + ", you are " + age + "!");

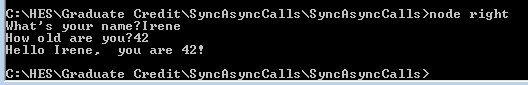
readline.close();

})

}

GetUserName();

This works as expected:



Assignment:

Please, re-write this program in 3 ways:

1. Pass the callback functions into GetUserName and GetUserAge.
2. GetUseName and GetUserAge should both return promises.
3. Use async\await to execute GetUserName and GetUserAge in the proper order.