W3D4 Homework

This homework has 4 assignments and starts with demo code (below). The following code uses event driven programming (non-blocking) to ask the user's name, and print it on the screen. If you save it as hello.js you should be able to run it on the command-line with:

```
$ node hello.js
```

```
const readline = require('readline').createInterface({
  input: process.stdin,
  output: process.stdout,
});

readline.question('What is your name? ', name => {
  console.log(`Welcome ${name}`);
  readline.close();
});
```

Assignments:

1. Modify the provided code to create a program that asks the user for his name, and after printing "Welcome ${name}" asks the user for his age. If the age < 16 it should output "You're not allowed to drive in Iowa" otherwise it should output "You're allowed to get a drivers license in Iowa".

2. Write a Node.js program that uses readline to keep on asking the user for a number until they enter "stop". The program should then output the sum of all the numbers that the user has entered.

   Hint: using a loop with non-blocking code will cause it to run wild (infinite loop)! You need to write a "**`getNumber()`**" function and call that after the user has given his answer (recursion).

3. Write a module called **`my_math.js`**. Your module should expose the following functions and constant:

   add(x, y)
   subtract(x, y)
   multiply(x, y)
   divide(x, y)
   pi // constant set to 3.14

   If you've implemented it correctly you should be able to put the code shown on the next page into a file called **`use_my_math.js`** and run it without errors.

Contents of use_my_math.js:

```
const math = require('./my_math');

console.log("3 + 5 = " + math.add(3, 5));
console.log("3 - 5 = " + math.subtract(3, 5));
console.log("3 * 5 = " + math.multiply(3, 5));
console.log("3 / 5 = " + math.divide(3, 5));
console.log("PI = " + math.pi);
```

4. Create a my_car module by copy / pasting on the code shown below. Then create a use_car_module.js file that uses the my_car module. The purpose of this exercise is for you to practice using modules.

```
module.exports.drive = function() {
console.log("The car moves forward");
}
module.exports.turn = function(degrees) {
console.log(`The car turns ${degrees}`);
}
module.exports.break = function() {
console.log("the car stops");
}
```