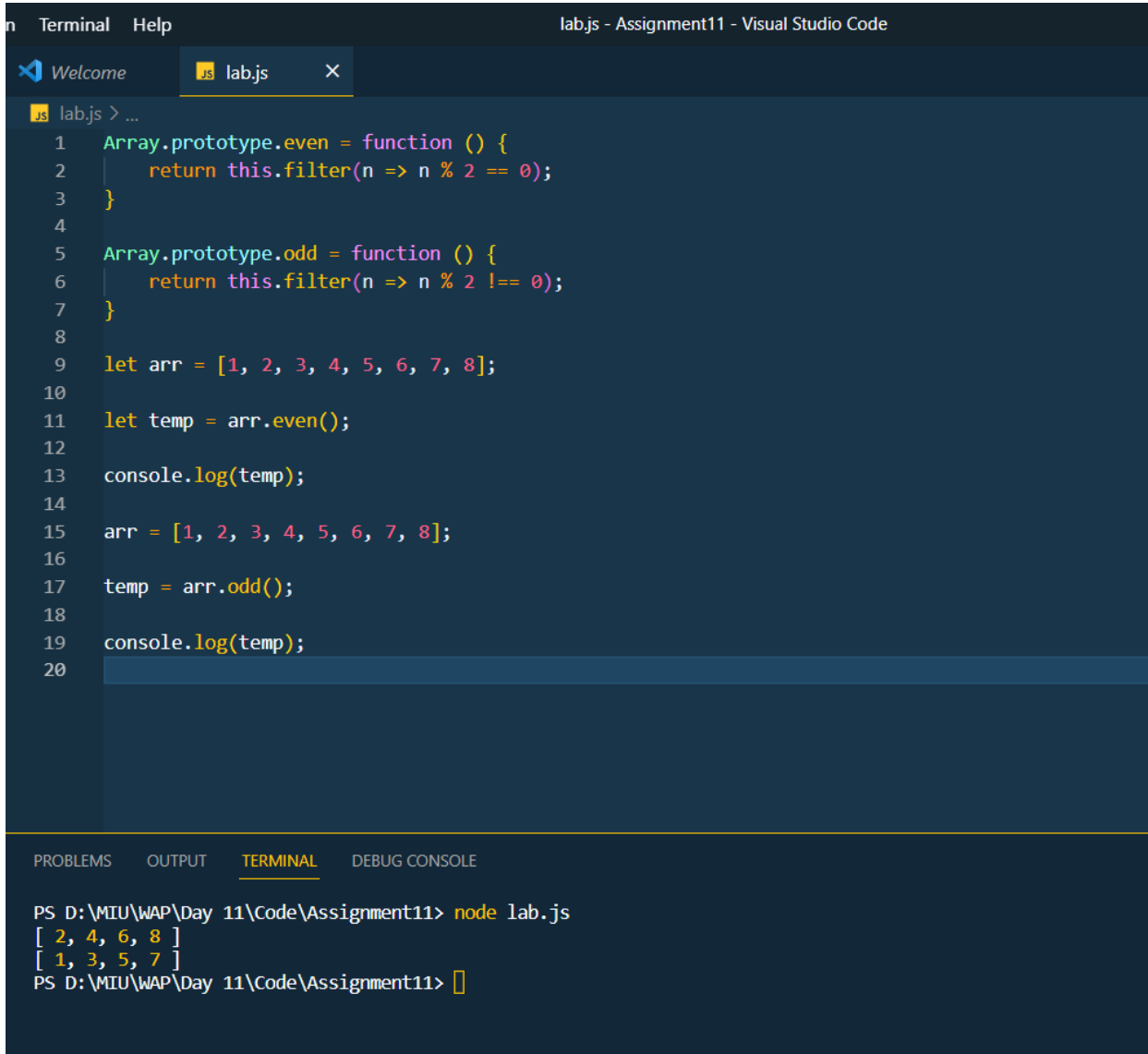


LAB 11.

Question 1



The image shows a Visual Studio Code editor window with a file named `lab.js` open. The code in the editor defines two methods, `even` and `odd`, on the `Array.prototype`. The `even` method filters an array to return only even numbers, and the `odd` method filters an array to return only odd numbers. The code then creates an array `arr` with values `[1, 2, 3, 4, 5, 6, 7, 8]`, calls `arr.even()` and logs the result, reassigns `arr` to `[1, 2, 3, 4, 5, 6, 7, 8]`, calls `arr.odd()` and logs the result.

```
1 Array.prototype.even = function () {  
2   return this.filter(n => n % 2 == 0);  
3 }  
4  
5 Array.prototype.odd = function () {  
6   return this.filter(n => n % 2 !== 0);  
7 }  
8  
9 let arr = [1, 2, 3, 4, 5, 6, 7, 8];  
10  
11 let temp = arr.even();  
12  
13 console.log(temp);  
14  
15 arr = [1, 2, 3, 4, 5, 6, 7, 8];  
16  
17 temp = arr.odd();  
18  
19 console.log(temp);  
20
```

The terminal at the bottom shows the command `node lab.js` being executed, with the output:

```
PS D:\MIU\WAP\Day 11\Code\Assignment11> node lab.js  
[ 2, 4, 6, 8 ]  
[ 1, 3, 5, 7 ]  
PS D:\MIU\WAP\Day 11\Code\Assignment11>
```

Question 2

1- setTimeout runs in the Timer phase, and setImmediate runs in the check phase. For example: If a case needs to run just before the close phase, we can use setImmediate.

```
var fs = require('fs'); var path = require('path');  
fs.readFile(path.join(__dirname, 'greet.txt'), 'utf8', function(err, data) {  
  setTimeout(() => { console.log('timeout'); }, 0);  
  setImmediate(() => { console.log('immediate'); });  
  process.nextTick(() => console.log('nexttick')); });
```

2- callback of process.nextTick gets executed multiple chances in one iteration - highest priority.
setImmediate only gets executed once in one cycle.

how many callbacks will be executed in one iteration? process.nextTick() - all of the callbacks in nextTick queue, drain out - Don't use while true loop on process.nextTick, will block the event loop. setImmediate - certain, the remaining for next iteration/tick
process.nextTick - API provided natively by Node.js setImmediate - provided by libuv

3- No.