



## Intro to JavaScript Week 6 Coding Assignment

**Points possible:** 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

**Instructions:** In Visual Studio Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

### Coding Steps:

For the final project you will be creating an automated version of the classic card game *WAR*. You do not need to accept any user input, when you run your code, the entire game should play out instantly without any user input.

There are many versions of the game *WAR*, but in this version there are only 2 players and you don't need to do anything special when there is a tie on a round.

Think about how you would build this project and write your plan down. Consider classes such as Card, Deck, and Player and what fields and methods they might each have. You can implement the game however you'd like (i.e. printing to the console, using alert, or some other way). The completed project should, when run, do the following:

- Deal 26 Cards to two Players from a Deck.
- Iterate through the turns where each Player plays a Card



# PROMINEO TECH

- The Player who played the higher card is awarded a point
  - o Ties result in zero points for both Players
- After all cards have been played, display the score and declare the winner.

Write a Unit Test using Mocha and Chai for at least one of the functions you write.

**Screenshots of Code:**



# PROMINEO TECH

```
1
2 //code to create deck
3
4 const deck = [];
5
6 function newDeck() {
7   for(i = 1; i < 14; i++) {
8     for(j = 1 ;j < 5; j++) {
9       deck.push(i);
10    }
11  }
12 }
13
14 newDeck();
15 console.log(deck);
16
17 // code to shuffle deck
18
19 function shuffle(array) {
20   for (let i = array.length - 1; i > 0; i--) {
21     const j = Math.floor(Math.random() * (i + 1));
22     const temp = array[i];
23     array[i] = array[j];
24     array[j] = temp;
25   }
26 }
27
28 shuffle(deck);
29 console.log(deck);
```



# PROMINEO TECH

```
31 // code to deal two 2 players
32
33 var playerOne = [];
34 var playerTwo = [];
35 var middleIndex = 0;
36
37 function deal(array) {
38     middleIndex = Math.ceil(array.length/2);
39     playerOne = array.splice(0,middleIndex);
40     playerTwo = array.splice(-middleIndex);
41 }
42
43 deal(deck);
44 console.log(playerOne);
45 console.log(playerTwo);
46
```



# PROMINEO TECH

```
48 // code to run the game
49
50 var playerOneScore = 0;
51 var playerTwoScore = 0;
52
53 function playGame() {
54     for(i=0; i < playerOne.length; i++) {
55         if(playerOne[i] > playerTwo[i]) {
56             playerOneScore++;
57         }
58         else if (playerOne[i] < playerTwo[i]) {
59             playerTwoScore++;
60         }
61     }
62 }
63
64
65
66 playGame();
67
68 var winner;
69
70 if(playerOneScore > playerTwoScore){
71     winner = "Player One is the Winner!!!";
72 }
73 else {
74     winner = "Player Two is the Winner!!!";
75 }
76
77 console.log("Player 1's score is " + playerOneScore);
78 console.log("Player 2's score is " + playerTwoScore);
79 console.log(winner);
80
```

**Screenshots of Running Application:**



# PROMINEO TECH

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE JUPYTER

Windows PowerShell

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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\ austi> cd desktop

PS C:\Users\ austi\desktop> node week6code.js

```
[
  1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3,
  3, 4, 4, 4, 4, 5, 5, 5, 5, 6, 6,
  6, 6, 7, 7, 7, 7, 8, 8, 8, 8, 9,
  9, 9, 9, 10, 10, 10, 10, 11, 11, 11, 11,
  12, 12, 12, 12, 13, 13, 13, 13
]
```

```
[
  5, 2, 10, 6, 9, 10, 3, 2, 6, 5, 10,
  6, 13, 1, 12, 4, 13, 3, 1, 2, 2, 1,
  8, 13, 7, 11, 4, 10, 5, 11, 3, 13, 1,
  5, 3, 8, 12, 9, 7, 9, 8, 7, 6, 8,
  4, 12, 11, 4, 12, 7, 9, 11
]
```

```
[
  5, 2, 10, 6, 9, 10, 3, 2,
  6, 5, 10, 6, 13, 1, 12, 4,
  13, 3, 1, 2, 2, 1, 8, 13,
  7, 11
]
```

```
[
  4, 10, 5, 11, 3, 13, 1, 5,
  3, 8, 12, 9, 7, 9, 8, 7,
  6, 8, 4, 12, 11, 4, 12, 7,
  9, 11
]
```

Player 1's score is 9

Player 2's score is 16

Player Two is the Winner!!!

PS C:\Users\ austi\desktop>

**URL to GitHub Repository:**

<https://github.com/alexlaurencarey/week-6-coding-assignment>