

Observation Report

Javascript Algorithm 2

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Date: January 6, 2023

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WD37

Level 2 Activity 1 – This level and activity introduce the use of array. In this picture it will print The value of x in array [1,2,4]

The screenshot shows the Coding Dojo website interface. The top navigation bar includes the Coding Dojo logo, progress indicators for Lessons (8%), Challenges (0%), and Assessment, and the user's name Rodney Giray. The main content area is titled "Level 2 Challenge 1" and contains a code editor with the following code:

```
1 var x = [1,2,4];  
   x has a value of array which is [1,2,4]  
2 console.log(x);  
   print the value of x, x=[1,2,4]
```

Below the code editor, the user has entered the output "[1,2,4]" and clicked the "SUBMIT" button. A green message box appears, stating "Hey, you got it right! Wanna see how we did it?". To the right of the code editor is a "T Diagram" table:

Variable	Values
x	1,2,4
x	[1,2,4]
a,b,c	1,2,3

The left sidebar shows a list of activities, with "Activity 1" selected and a timer of 01:59. The bottom right corner has a "Report a Mistake?" link.

Level 2 Activity 2 – In this image, I noticed the array index is starting to 0 which is x[0] as per the image below

The screenshot shows the Coding Dojo interface for Level 2, Challenge 2. The left sidebar lists activities, with Activity 2 selected. The main area displays the challenge instructions and a T Diagram.

Challenge 2 Instructions:

```
1 var x = [1,3,5];  
   x array has a value of [1,3,5]  
  
2 console.log(x[0]);  
   print the value of x[0] which is {
```

T Diagram:

Variable	Values
x	[1,3,5]
x	1
a,b,c	1,2,3

At the bottom, there is a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 3 – In this image same as the activity to but, this time the index of array is x[1]. That it will print the index of 4.

The screenshot shows the Coding Dojo interface for Level 2, Challenge 3. The left sidebar lists activities, with Activity 3 selected. The main area displays the challenge instructions and a T Diagram.

Challenge 3 Instructions:

```
1 var x = [2,4,6];  
   the x array has a value of [2,4,6]  
  
2 console.log(x[1]);  
   print the value of x[1] which is {
```

T Diagram:

Variable	Values
x	[2,4,6]
x	4
a,b,c	1,2,3

At the bottom, there is a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 3 – In this image same as the activity no.3 too but, this time the index of array is `x[1]`. That it will print the index of 4.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 3. The left sidebar lists activities, with Activity 3 highlighted. The main area contains the following code:

```
1 var x = [2,4,6];  
   the x array has a value of [2,4,6]  
2 console.log(x[1]);  
   print the value of x[1] which is 4
```

The T Diagram on the right shows the following values:

Variable	Values
x	[2,4,6]
x	4
a,b,c	1,2,3

The user has entered the answer 4 in the input field. The interface includes a 'SUBMIT' button and a 'NEXT ACTIVITY' button. A feedback message at the bottom says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 4 – In this image, it will print the value of `x[2]` which is 5.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 4. The left sidebar lists activities, with Activity 4 highlighted. The main area contains the following code:

```
1 var x = [1,3,5];  
   x has a value of array [0]=1, [1]=3, [2]=5  
2 console.log(x[2]);  
   print the array value of array of x[2] = 5
```

The T Diagram on the right shows the following values:

Variable	Values
x	1,3,5
x	5
a,b,c	1,2,3

The user has entered the answer 5 in the input field. The interface includes a 'SUBMIT' button and a 'NEXT ACTIVITY' button. A feedback message at the bottom says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 5 – I noticed if the array has a value of decimal like showing in this image it will select the value.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 5. The left sidebar lists activities 1 through 9, with Activity 5 highlighted. The main area displays the challenge instructions: "Predict the output of the following code:". The code is as follows:

```
1 var x = [1.3];  
   the x has a value of array [0] = 1.3  
2 console.log(x[0]);  
   print the value of x[0] = 1.3
```

The T Diagram on the right shows the variable 'x' with the value '[1.3]' and the array 'a,b,c' with the value '1,2,3'. The user has entered '1.3' in the input field and clicked the 'SUBMIT' button. The feedback message says: "Hey, you got it right! Wanna see how we did it?".

Level 2 Activity 6 – In this activity I noticed that you can change the value of array by getting the value of another array. In addition, the reading of codes will start to right to left. In that case the x[0] will get the value of x[1]

The screenshot shows the Coding Dojo interface for Level 2 Challenge 6. The left sidebar lists activities 1 through 11, with Activity 6 highlighted. The main area displays the challenge instructions: "Predict the output of the following code:". The code is as follows:

```
1 var x = [1,2,4];  
   the x has a value of array [1,2,4]  
2 x[0] = x[1];  
   get the value of x[1] for x[0] which is x[0]2  
3 console.log(x);  
   print the new value of array of x[2,2,4]
```

The T Diagram on the right shows the variable 'x' with the value '[1,2,4]' and the array 'a,b,c' with the value '1,2,3'. The user has entered '[2,2,4]' in the input field and clicked the 'SUBMIT' button. The feedback message says: "Hey, you got it right! Wanna see how we did it?".

Level 2 Activity 7 – This activity 7 I realized that by using `.length` will count the index of array

The screenshot shows the Coding Dojo interface for Level 2 Challenge 7. The left sidebar lists activities, with Activity 7 highlighted. The main area contains the challenge instructions and a T Diagram.

Challenge 7 Instructions:

```
1 var x = [1,3,5];  
   x has a value of [1,3,5]  
  
2 var y = x.length;  
   variable y will be the length of array of x which is 3  
  
3 console.log(y);  
   print the value of y which is 3
```

T Diagram:

Variable	Values
x	[1,3,5]
y	3
a,b,c	1,2,3

The interface includes a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message at the bottom says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 8 – in this image it gives an idea that the length of array can apply an arithmetic operation.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 8. The left sidebar lists activities, with Activity 8 highlighted. The main area contains the challenge instructions and a T Diagram.

Challenge 8 Instructions:

```
1 x has an array value of [2,4,6,3,7]  
  
2 var y = x.length - 2;  
   y equivalent to 5 - 2 resulting to y = 3  
  
3 console.log(x[y]);  
   print the new value of y by using printing the x[y]
```

T Diagram:

Variable	Values
x	[2,4,6,3,7]
y	5 - 2 = 3
x	3
a,b,c	1,2,3

The interface includes a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message at the bottom says: "Hey, you got it right! Wanna see how we did it?"

Level 2 Activity 9 – This activity it helps me to understand that it can perform arithmetic inside of console.log.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 9. The left sidebar lists lessons, with Level 2 (9/13) selected. The main area displays the challenge code and a T Diagram.

Challenge 9

Predict the output of the following code:

```
1 var x = [2,4,6,3,7];
2 var y = x.length;
3 console.log(x[y-1]);
```

set the new value of y by getting the array length of x which is 5

minus the length array of x to 1, and print and get the value of x array x[4]

T Diagram

Variable	Values
x	[2,4,6,3,7]
y	5
x	5-1 --> 4
x	7
a,b,c	1,2,3

7 **SUBMIT** **NEXT ACTIVITY**

Hey, you got it right! Wanna see how we did it?

Report a Mistake?

Level 2 Activity 10 – in this activity it will set the value for x[0] after reducing the length of array to 2 and set the new value for x.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 10. The left sidebar lists lessons, with Level 2 (10/13) selected. The main area displays the challenge code and a T Diagram.

Challenge 10

Predict the output of the following code:

```
1 the x has a value of array [1,3,5,7]
2 x[0] = x[x.length-2];
3 console.log(x);
```

set the new value of x[0] by minus the x.length to 2 and that result to x[2]

print the new value of x [5,3,5,7]

T Diagram

Variable	Values
x	[1,3,5,7]
x[0]	x[4-2] --> x[2]
x	5,3,5,7
a,b,c	1,2,3

[5,3,5,7] **SUBMIT** **NEXT ACTIVITY**

Hey, you got it right! Wanna see how we did it?

Report a Mistake?

Level 2 Activity 11 – in this activity image I observed it getting complicated but if you really understand the array you can solve it.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 11. The left sidebar lists activities 6 through 13, with Activity 11 selected. The main area displays the challenge code and a T Diagram.

Challenge 11 Code:

```
1 var x = [1,3,5,7];  
   the x has a value array of [1,3,5,7]  
  
2 x[x.length-3] = x[x.length/2+x.length/4];  
   the x array set to a new value of x[1] = 7  
   x[4-3] = x[4/2 + 4/4] -> x[1] = x[3]  
   x[1] = 7  
  
3 console.log(x);  
   print the new value of x which is [1,7,5,7]
```

T Diagram:

Variable	Values
x	[1,3,5,7]
x[1]	x[3]
x[1]	7
x	[1,7,5,7]
a,b,c	1,2,3

The interface includes a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message says: "Hey, you got it right! Wanna see how we did it?".

Level 2 Activity 12 – in this activity the x and y has an array value, the x[2] will set a new value of 4 after performing arithmetic operation for y variable.

The screenshot shows the Coding Dojo interface for Level 2 Challenge 12. The left sidebar lists activities 1 through 13, with Activity 12 selected. The main area displays the challenge code and a T Diagram.

Challenge 12 Code:

```
1 var x = [1,3,5,7];  
   the array x has a value of [1,3,5,7]  
  
2 var y = [2,4,6];  
   the y array has a value of [2,4,6]  
  
3 x[2] = y[x.length-3];  
   the x[2] will get the value of y[1]  
   x[2] = y[1]  
   x[2] = 4  
  
4 console.log(x);  
   print the new value of array x [1,3,4,7]
```

T Diagram:

Variable	Values
x	[1,3,5,7]
y	[2,4,6]
x[2]	y[1] -> 4
x	[1,3,4,7]
a,b,c	1,2,3

The interface includes a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message says: "Hey, you got it right! Wanna see how we did it?".

Level 2 Activity 13 – For this last activity of level 2 is same too activity 12, it is more complicated compare to the previous activities. The variable y will get the value after solving the arithmetic operation and it will set the value of x[2].

The screenshot shows the Coding Dojo web application interface. The top navigation bar includes the Coding Dojo logo, progress indicators for Lessons (16%), Challenges (0%), and Assessment, and the user's name, Rodney Gray. The main content area is titled "Level 2 Challenge 13" and contains a code editor with the following code:

```
2 var y = [2,4,6];  
   the y has a value of [2,4,6]  
  
3 x[2] = y[x.length-3] + x[ x[0] + y[0] ];  
   x[2] will get the value the result for y[x.length-3] + x[0] + y[0]  
   x[2] = y[1] + x[3]  
   y[1] = 4+7 --> 11  
  
4 console.log(x);  
   print the new value of array x [1,3,11,7]
```

Below the code editor, the predicted output is shown as `[1,3,11,7]`. To the right of the code editor is a "T Diagram" table:

Variable	Values
x	[1,3,5,7]
y	[2,4,6]
x[2]	y[1]+x[3]
x[2]	4+7
x[2]	11
a,b,c	1,2,3

At the bottom of the challenge area, there is a "SUBMIT" button and a "NEXT ACTIVITY" button. A feedback message at the bottom states: "Hey, you got it right! Wanna see how we did it?". A "Report a Mistake?" link is also present.