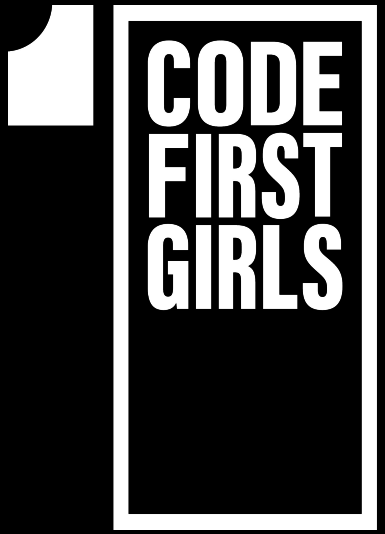
PRACTICE CODING

LESSON 16



NANODEGREE → ENGINEERING MODULE

AGENDA

01 Find 3 largest numbers - teams coding challenge

02 Team presentations

03 Project work in groups

FIND THREE LARGEST NUMBERS

CODE CHALLENGE DESCRIPTION

- Write a function that takes in some array of at least 3 integers and returns an array of the 3 largest integers in this input array.
- **Caveat:** implement this function **WITHOUT SORTING** the input array. You cannot sort, you can ONLY TRAVERSE.
- **Hint**: can you keep track of the three largest numbers in our array as you traverse the input array?
- This is a team challenge and each team will present their approach EVEN IF IT IS NOT READY.
- You have **45 min to solve this**.

IMPORTANT

The function **can return duplicate integers** if there are any.

For example, if your input array is: [11, 4, 8, 11, 15]

Result will be: [11, 11, 15]

FIND THREE LARGEST NUMBERS

EXAMPLES

```
# CASE 1
array = [141, 1, 17, -7, -17, -27, 18, 541, 8, 7, 7]
result = [18, 141, 541]


# CASE 2
array = [8, 8, 8, 8, 8, 8, 8, 8, 10, 8, 8, 8, 8, 8]
result = [8, 8, 10]


# CASE 3
array = [1, 1, 1, 1, 1, 1, 1, 1]
result = [1, 1, 1]
```

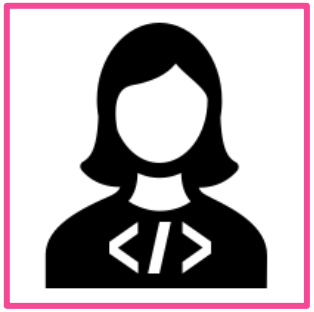
FIND THREE LARGEST NUMBERS

TEAM PRESENTATIONS

FIND THREE LARGEST NUMBERS

EXAMPLE SOLUTION

Your instructor will talk you through the approach and solution to this problem.



PROJECT WORK

- For the remaining time work in your designated groups on your projects

- Instructors are available to help if you have any questions or would like to bounce some ideas around with regards to implementation.

THANK YOU!