



JONAS.IO
SCHMEDTMANN

THE COMPLETE JAVASCRIPT COURSE

FROM ZERO TO EXPERT!



@JONASSCHMEDTMAN

SECTION

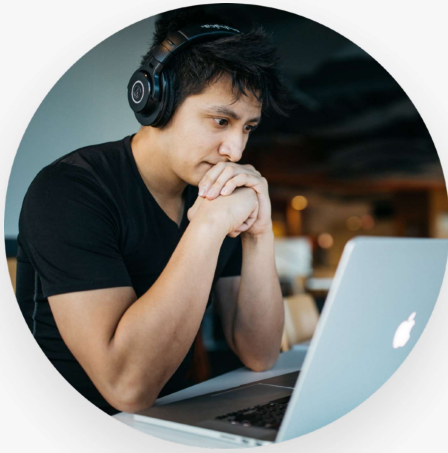
DEVELOPER SKILLS & EDITOR SETUP

LECTURE

HOW TO THINK LIKE A DEVELOPER:
BECOME A PROBLEM SOLVER!

JS

HOW TO FAIL 🤔 AT SOLVING PROBLEMS



John can
code now 😊

WHENEVER JOHN ENCOUNTERS A PROBLEM:

- 💣 He jumps at the problem **without much thinking**
- 💣 He implements his solution in an **unstructured way**
- 💣 He **gets stressed out** when things don't work
- 💣 He is **too proud to research** solutions

↓ **FIX**

- 👍 **Stay calm and slow down**, don't just jump at a problem without a plan
- 👍 Take a very **logical and rational approach** (programming is just logic, in the end...)
- 👍 Use my **4-step framework** to solve any problem

→
NEXT SLIDE

👉 **Example:** *In an array of GPS coordinates, find the two closest points*

4 STEPS TO SOLVE ANY PROBLEM

1

Make sure you 100% understand the problem. **Ask the right questions** to get a clear picture of the problem

EXAMPLE

💬 Project Manager: *"We need a function that reverses **whatever** we pass into it"*

1

- 👉 What does "whatever" even mean in this context? What should be reversed? **Answer:** Only strings, numbers, and arrays make sense to reverse...
- 👉 What to do if something else is passed in?
- 👉 What should be returned? Should it **always** be a string, or should the type be the same as passed in?
- 👉 How to recognize whether the argument is a number, a string, or an array?
- 👉 How to reverse a number, a string, and an array?

4 STEPS TO SOLVE ANY PROBLEM

1

Make sure you 100% understand the problem. **Ask the right questions** to get a clear picture of the problem



2

Divide and conquer: Break a big problem into smaller sub-problems.

EXAMPLE

💬 Project Manager: *"We need a function that reverses whatever we pass into it"*

2

SUB-PROBLEMS:

- 👉 Check if argument is a number, a string, or an array
- 👉 Implement reversing a number
- 👉 Implement reversing a string
- 👉 Implement reversing an array
- 👉 Return reversed value

Looks like a task list that we need to implement

4 STEPS TO SOLVE ANY PROBLEM



EXAMPLE

💬 Project Manager: *"We need a function that reverses whatever we pass into it"*

- 3**
- 👉 How to check if a value is a number in JavaScript?
 - 👉 How to check if a value is a string in JavaScript?
 - 👉 How to check if a value is an array in JavaScript?
 - 👉 How to reverse a number in JavaScript?
 - 👉 How to reverse a string in JavaScript?
 - 👉 How to reverse an array in JavaScript?



4 STEPS TO SOLVE ANY PROBLEM

1 Make sure you 100% understand the problem. **Ask the right questions** to get a clear picture of the problem



2 **Divide and conquer:** Break a big problem into smaller sub-problems.



3 Don't be afraid to do as much **research** as you have to



4 For bigger problems, **write pseudo-code** before writing the actual code

EXAMPLE

💬 Project Manager: *"We need a function that reverses whatever we pass into it"*

```
4 function reverse(value)
  if value type != string && != number && != array
    return value

  if value type == string
    reverse string
  if value type == number
    reverse number
  if value type == array
    reverse array

  return reversed value
```