

# Welcome to JS!

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Full-Stack Web Development

A top-down photograph of a dark-stained wooden desk. In the upper-left corner, a portion of a silver laptop is visible. Next to it is a small white ceramic plate with two cookies; one is whole and the other is broken. A single nut lies on the desk surface near the plate. The word "OBJECTIVES" is printed in large, white, sans-serif capital letters in the lower-left area of the image.

# OBJECTIVES

By the end of this class, you will be able to:

- ☐ Understand primitive types and arithmetic operators and be able to use flowcharts to design basic programs.
- ☐ Know the basic syntax of JavaScript and be able to write basic programs.
- ☐ Store data in variables.
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# Flowcharts and Fundamentals



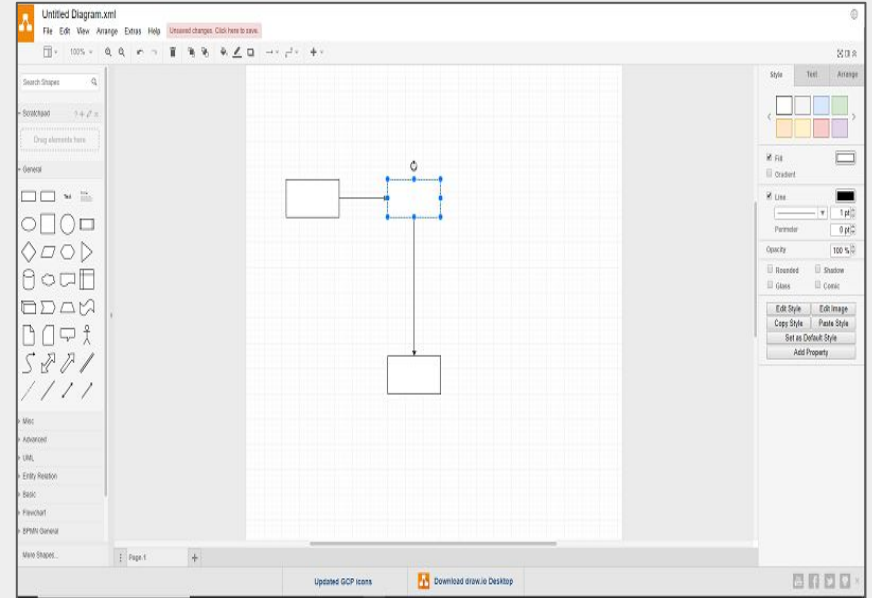
# What is “Flowcharting”?

Flowcharting is a way to visually represent the logic of a program.

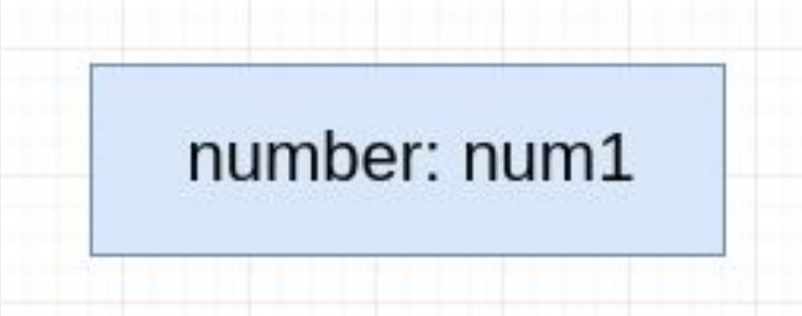
## Why should we Flowchart?

- Helps us to visualize the flow of the program.
- Useful for breaking down a program's logic into smaller, consumable chunks.
- Makes debugging easier!
- Allows for easier team collaboration.

# draw.io



# Variable Declaration



```
number: num1
```

# Basic Arithmetic Operators

- + Addition
- - Subtraction
- \* Multiplication
- / Division
  
- = Assignment



number: num1 = 4

number: num1 = 4



number: num2 = 6

number: num1 = 4



number: num2 = 6



number: sum = num1 + num2

number: num1 = 4



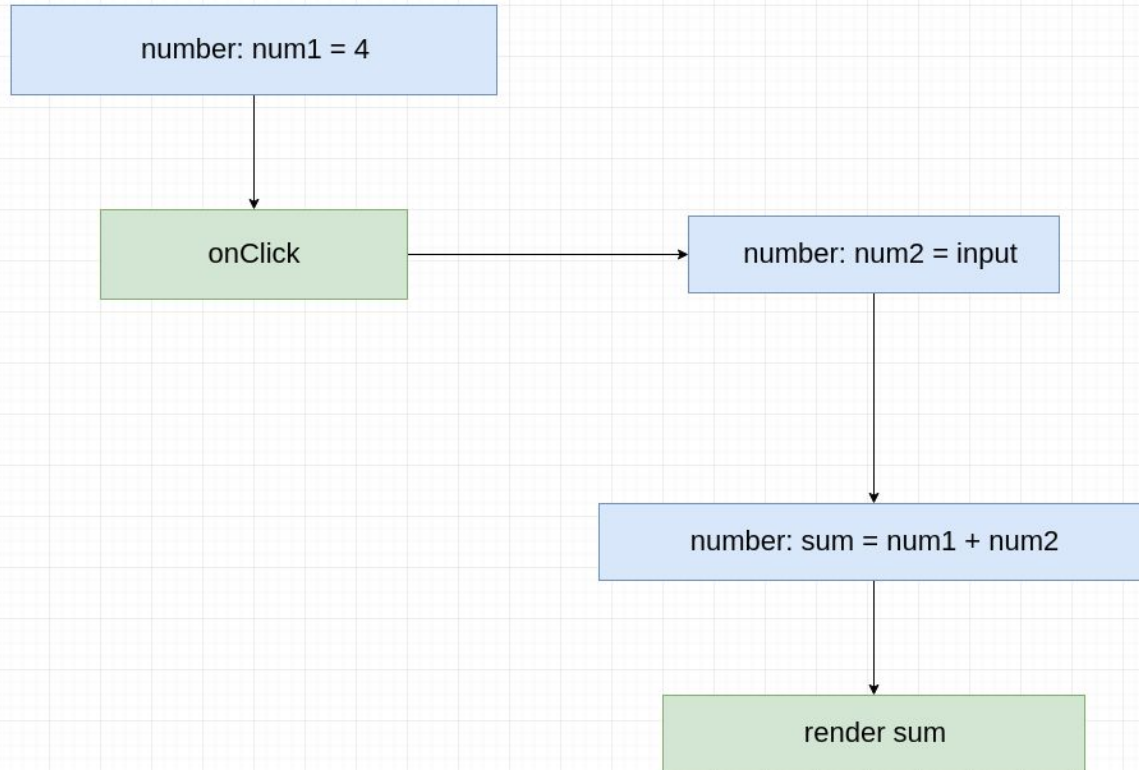
number: num2 = 6



number: sum = num1 + num2



render sum



A woman and a man are looking at a laptop screen in a classroom setting. The woman is pointing at the screen with her right hand. The man is wearing glasses and looking at the screen. The background shows other students at desks with laptops.

PARTNER DO

## Flowcharts and Fundamentals

onClick

number: num = input

number: product = num \* 2

render product

```
graph TD; A[onClick] --> B[number: num = input]; B --> C[number: product = num * 2]; C --> D[render product];
```

onClick

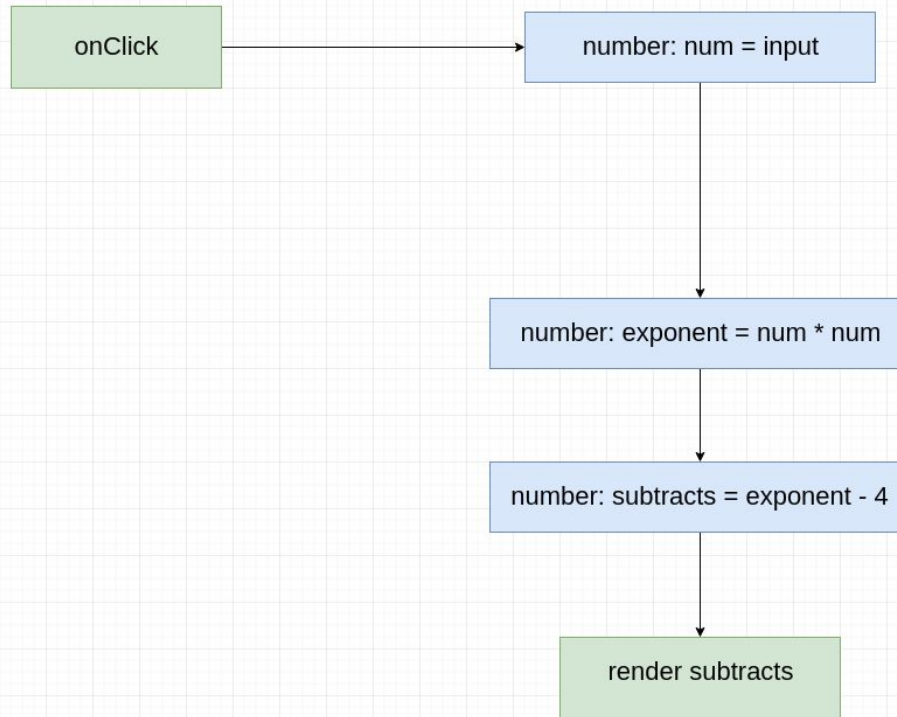
number: num = 4

number: quotient = num / 2

render quotient

```
graph TD; A[onClick] --> B[number: num = 4]; B --> C[number: quotient = num / 2]; C --> D[render quotient];
```







INSTRUCTOR DO

## Flowcharts II

string: greeting = 'Hey'



string: name = 'Casey'



string: message = concat greeting and name

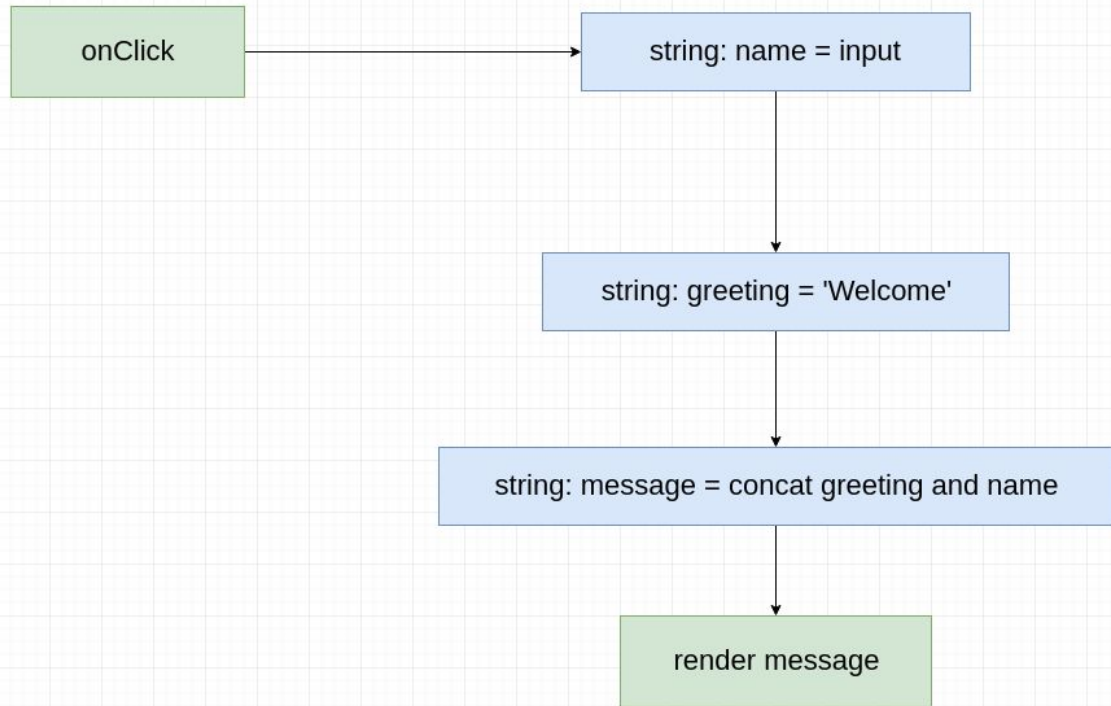


render message

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## Flowcharts and Fundamentals II





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# **BREAK TIME**



# Intro to JavaScript





A woman and a man are looking at a laptop screen in a coding environment. The woman is pointing at the screen, and the man is looking at it. The background shows other people working at desks with laptops.

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**Intro the JS**

A group of people are sitting at a wooden table in a cafe or office setting, working on laptops. The scene is dimly lit, with warm tones. In the foreground, a person with long dark hair is seen from the back, typing on a laptop. To their right, another person is also working on a laptop. In the background, a man in a grey t-shirt is looking towards the right. A water bottle and a glass are on the table. A white rectangular box with a thin blue line is overlaid in the center, containing the text 'WE DO' and 'Intro to JS II'.

WE DO

## **Intro to JS II**



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# Questions?



# **BREAK TIME**





# Variables and Prompt/Alert





INSTRUCTOR DO

## **Variables**

A photograph of a group of people sitting around a wooden table in a cafe or office setting, working on laptops. The scene is dimly lit with warm tones. In the foreground, a person with long dark hair is seen from the back, typing on a laptop. To their right, another person is partially visible, also working. In the background, a man in a grey t-shirt is looking towards the right. A water bottle and a glass are on the table. A white rectangular box with a thin blue line is overlaid in the center, containing the text 'WE DO' and 'Variables'.

WE DO

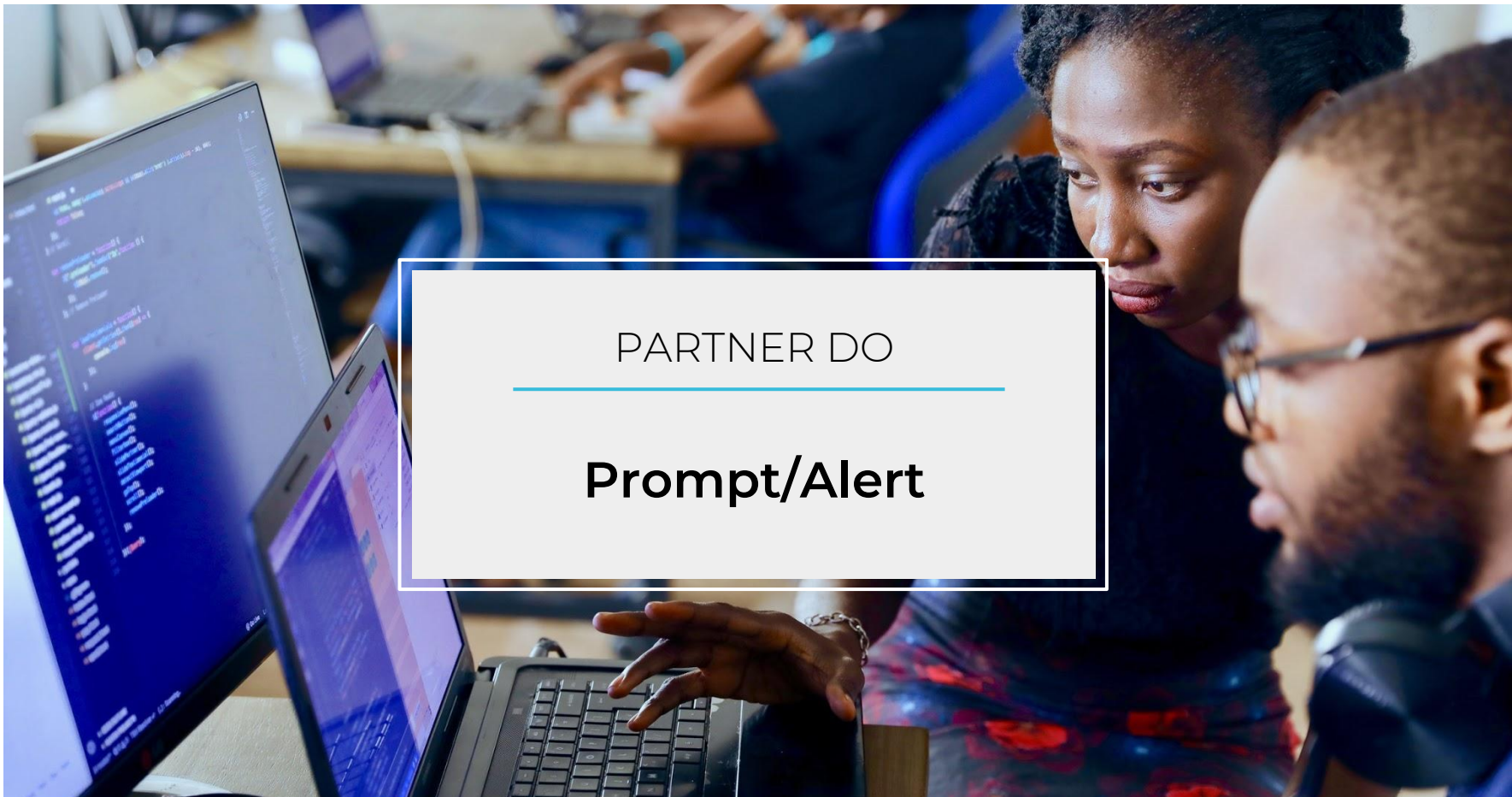
**Variables**





INSTRUCTOR DO

**Prompt/Alert**



PARTNER DO

**Prompt/Alert**



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# **BREAK TIME**





# Lists and Loops



```
array: studentList = [ 'Jan', 'Maryam', 'Tisha', 'Winson' ]
```

# Arrays

- Complex variable
- Contains a list of items

```
array: studentList = [ 'Jan', 'Maryam', 'Tisha', 'Winson' ]
```



0



1



2

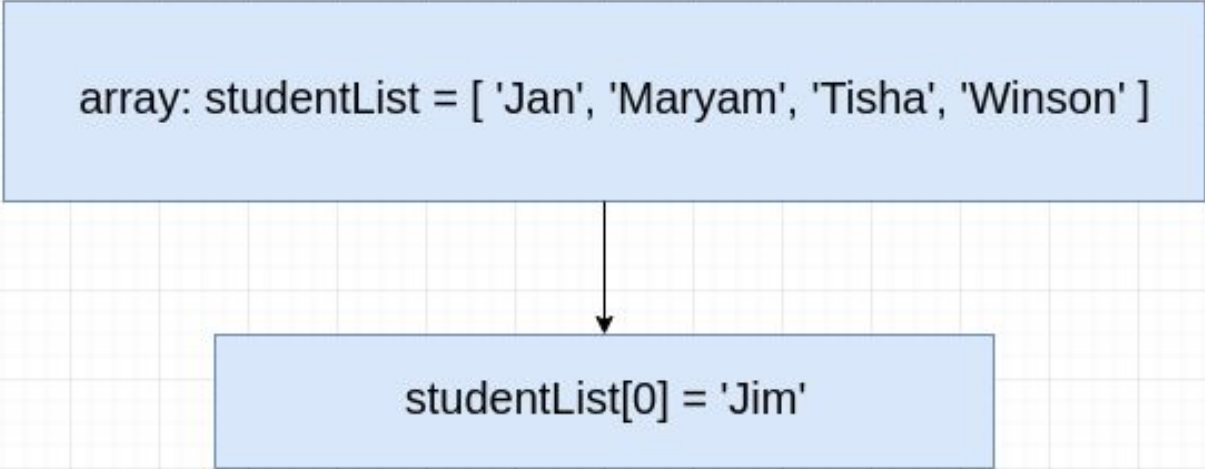


3

## Array Index

- Starts at 0
- Access using [ ]

```
array: studentList = [ 'Jan', 'Maryam', 'Tisha', 'Winson' ]
```



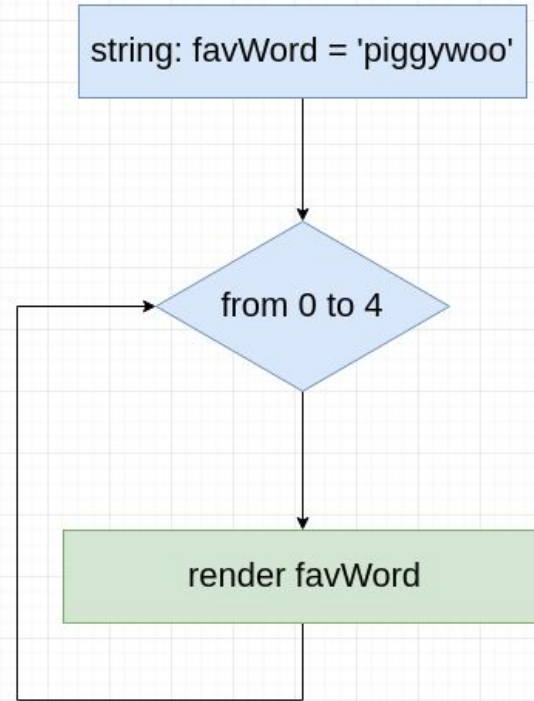
```
graph TD; A["array: studentList = [ 'Jan', 'Maryam', 'Tisha', 'Winson' ]"] --> B["studentList[0] = 'Jim'"]
```

```
studentList[0] = 'Jim'
```



# Loops

- Performs same action multiple times
- Often used with arrays



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WE DO

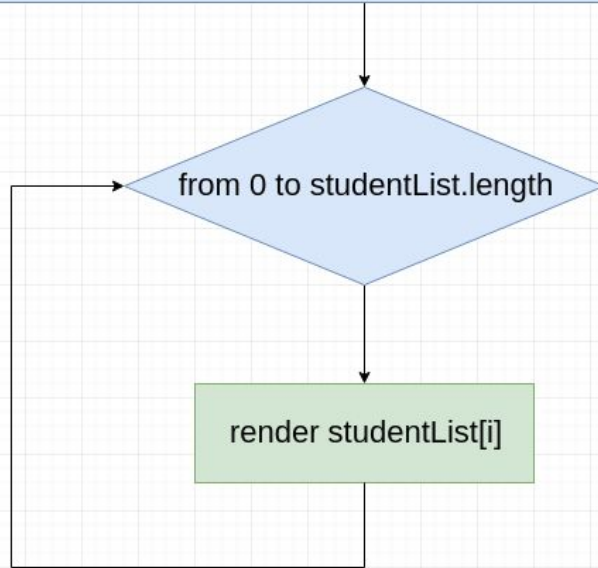
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## Lists and Loops

array: studenList = [ 'Jan', 'Maryam', 'Tisha', 'Winson']

from 0 to studenList.length

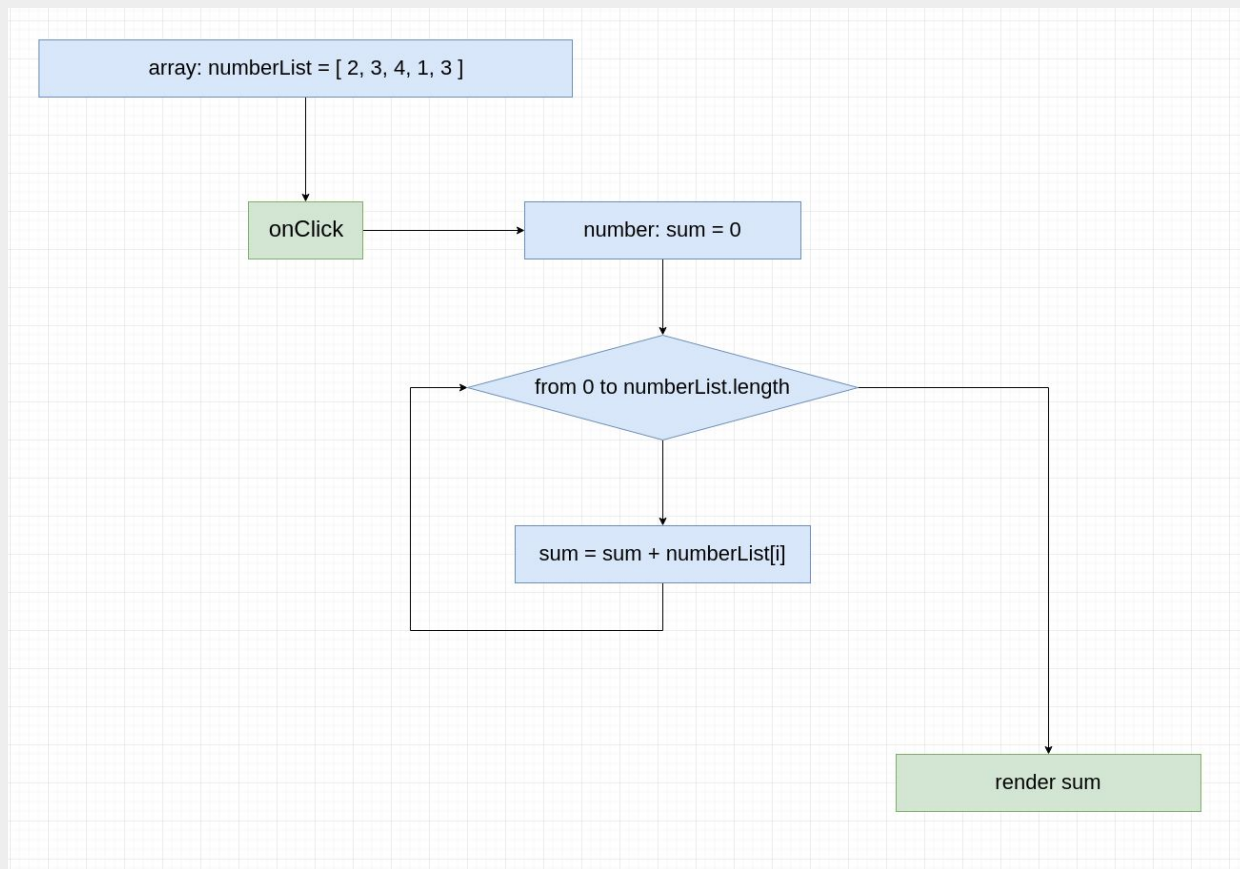
render studenList[i]



A woman and a man are looking at a laptop screen in a classroom setting. The woman is pointing at the screen with her right hand. The laptop screen displays a code editor with Python code. The background shows other students at their desks.

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## Lists and Loops







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