Basic Concepts of Programming

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I write code by hand 🖐, but dream of managing coders by head 💆‍♂️

What is an algorithm?

Grandma's dolma recipe. Actually, I prefer Harissa 👨🏻‍🍳

— a process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer

Pseudocode

Whatacode?

- If student's grade is greater than or equal to 60
  - Print "passed"
  - Else
    - Print "failed"

- Cucumber

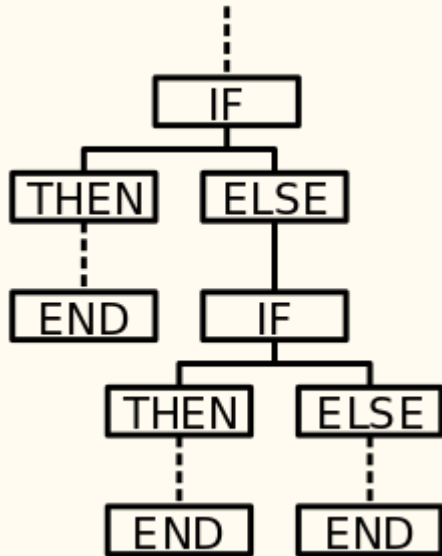- Diagrams

Syntax

- Sequence of commands
  - The right commands in the right order
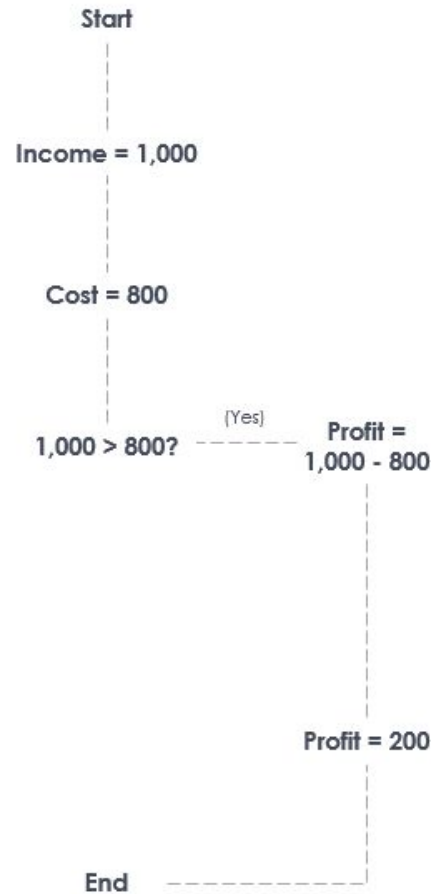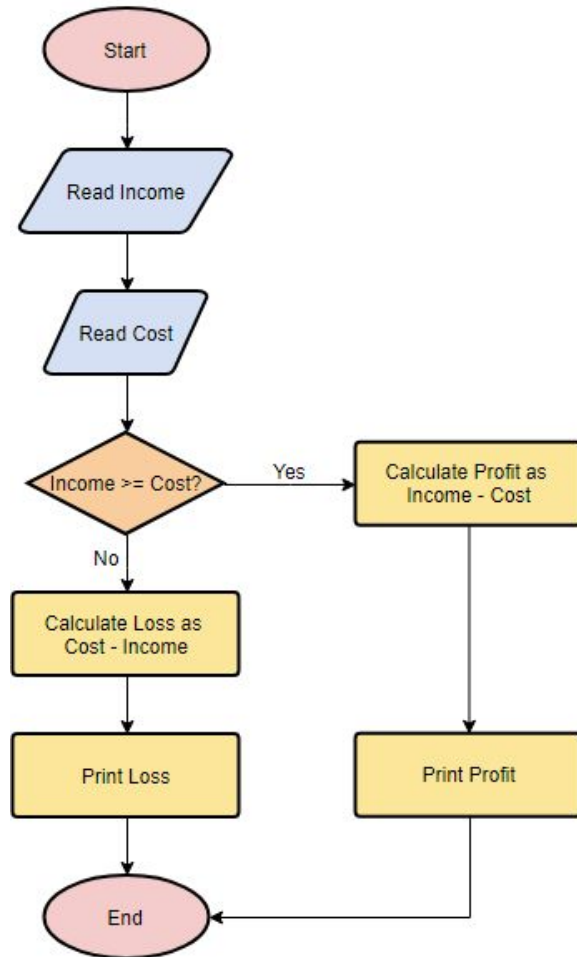
- Keywords

Variables

- Variables
  - Constants

- Types
  - Integer (Math operations)
  - String
  - Boolean (on/off)
  - Arrays and Objects

Conditions

- Conditional Structures
  - if . . . then . . . else

Start

Read Income

Read Cost

Income >= Cost?

Yes → Calculate Profit as Income - Cost

No → Calculate Loss as Cost - Income

Print Loss

Print Profit

End

Find the profit/loss when
income = 1,000, cost = 800

Start

Income = 1,000

Cost = 800

1,000 > 800?   (Yes)   Profit = 1,000 - 800
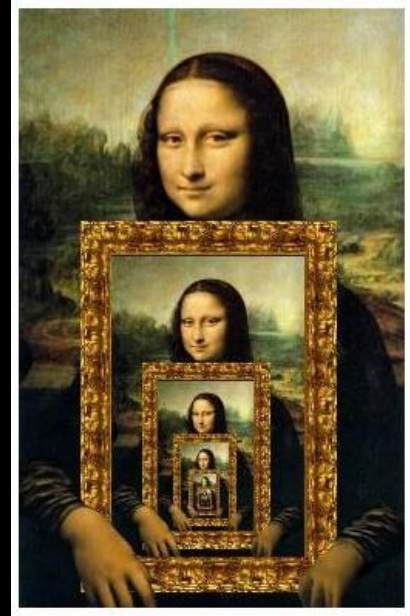
Profit = 200

End

7

Loops

- Looping structures
  - Eat
  - Code
  - Sleep
  - Repeat
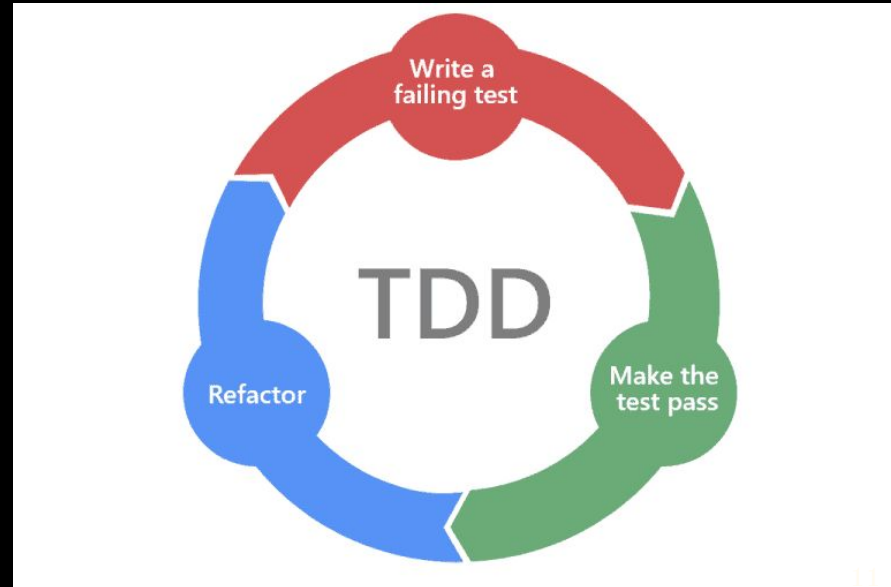
Recursion and why devs hate it

Functions and Procedures

- What the function is and why we need them?

  - Creating Abstractions

  - Avoiding duplication

- Procedures vs Functions

➔ Unit

➔ Integration

➔ End-to-end

TDD (Test Driven Development)

Testing

"Talk is cheap. Show me the code."

\- Linus Torvalds, founder of Linux

Version Control Systems

- Git

  - History of creating by Linus Torvalds

- Github / Gitlab / Bitbucket

- Opensource

Q & A

I prepared for this. Hopefully, you didn't ‼️