

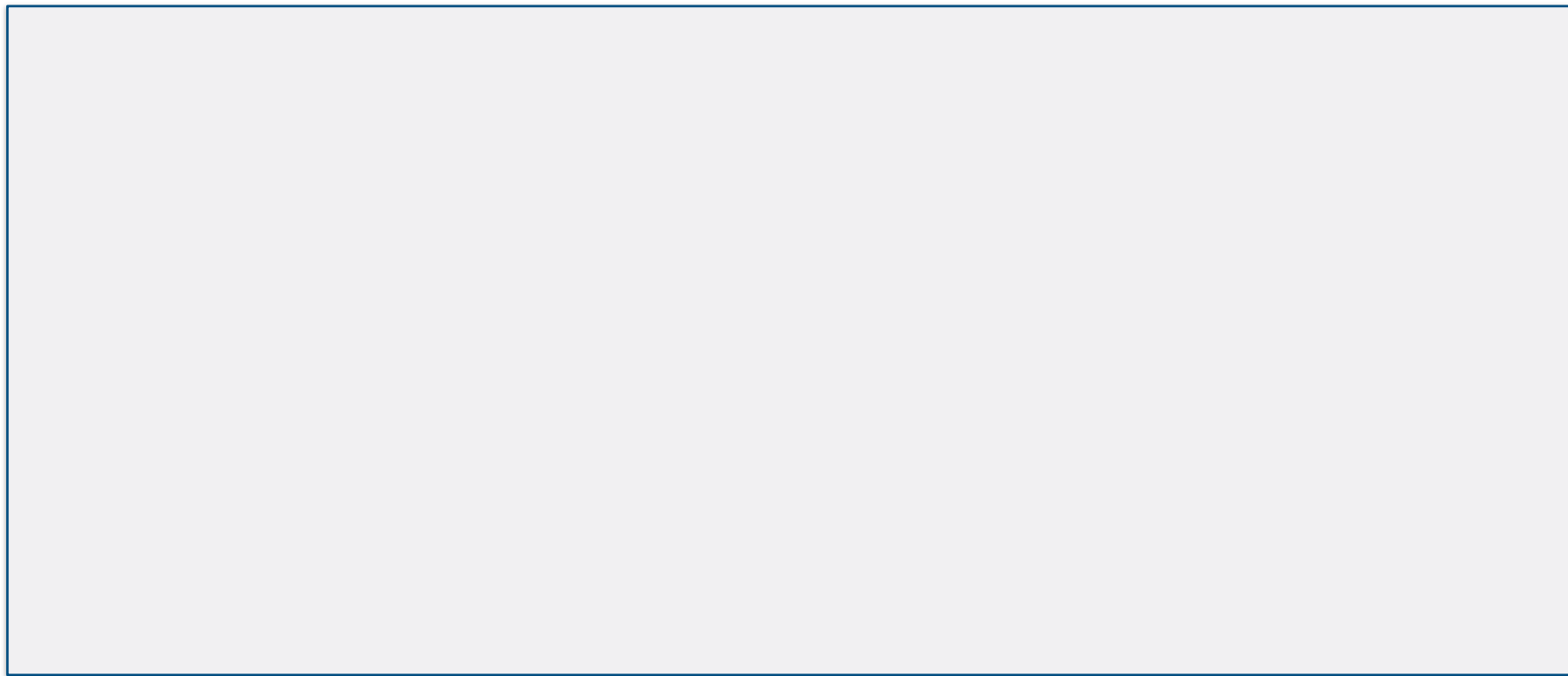
Tasking



What's the tasking?



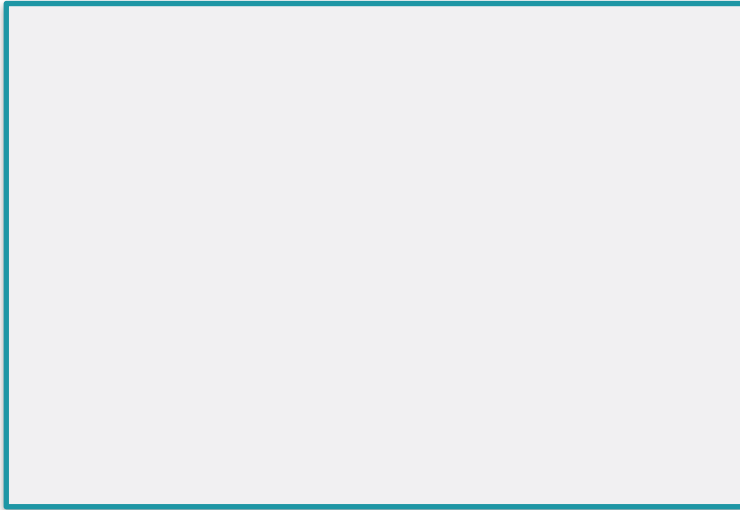
What's the tasking?



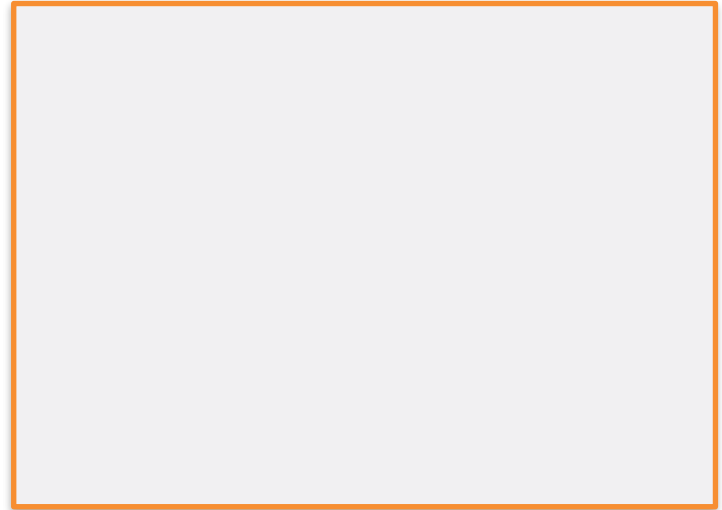
Does tasking only mean breaking things into several steps?



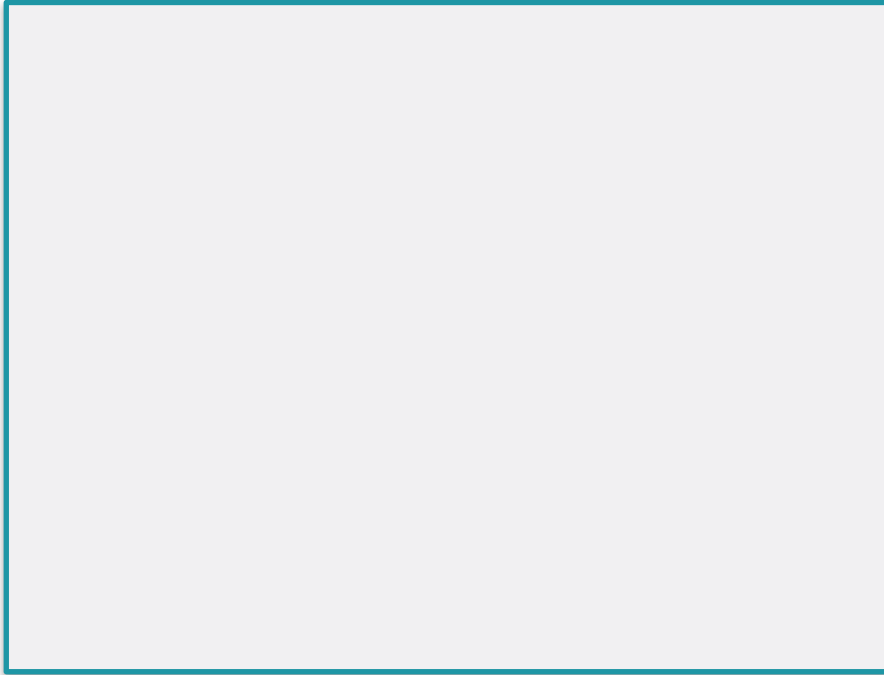
Yes

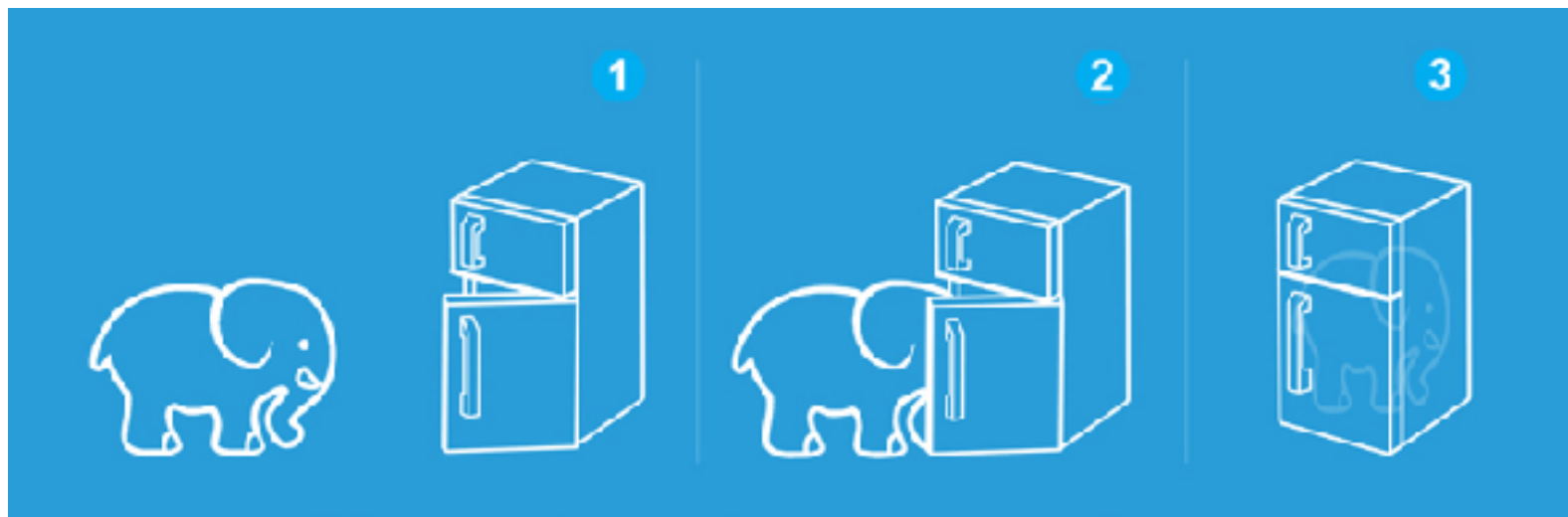


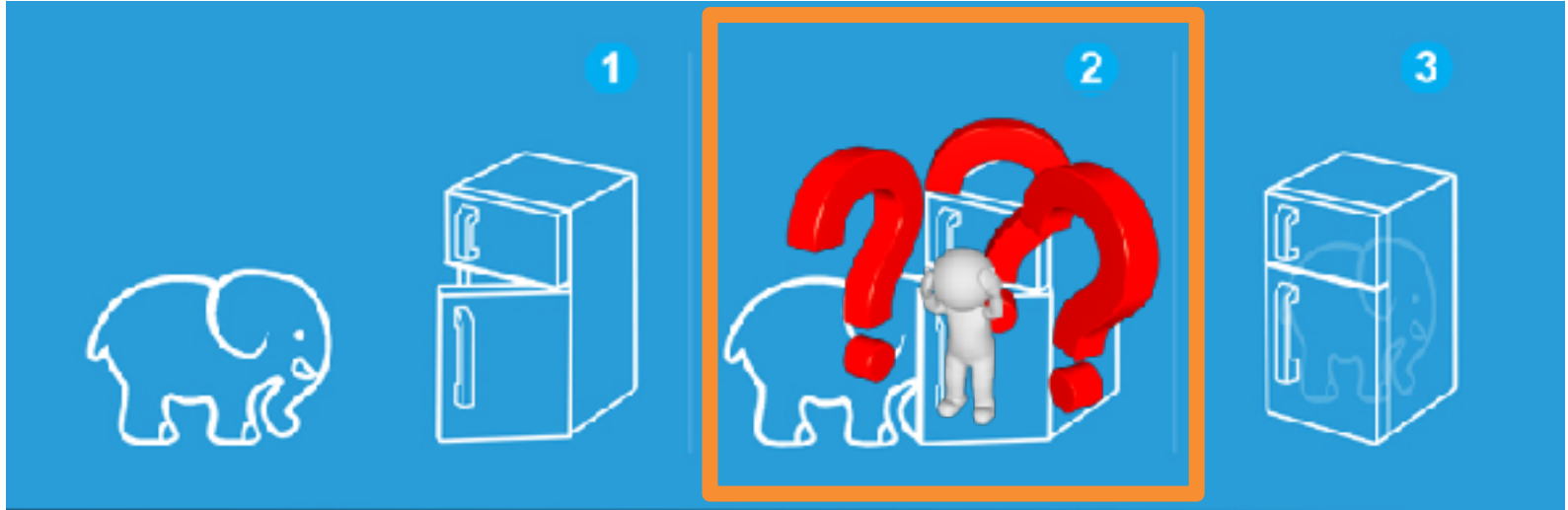
No



How many steps to put an elephant in the fridge?









Small light

Does tasking mean breaking things into several steps?

1. Open the fridge door
2. Put the elephant in the fridge
3. Close the fridge door

Does tasking mean breaking things into several steps?

1. Open the fridge door
2. Put the elephant in the fridge
3. Close the fridge door

Does tasking mean breaking things into several steps?

1. Open the fridge door
2. Put the elephant in the fridge

2.1 Shrink

2.2 Put the small elephant into the fridge

3. Close the fridge door

Does tasking mean breaking things into several steps?

1. Open the fridge door
2. Put the elephant in the fridge

2.1 Shrink elephant

2.2 Put the small elephant into the fridge

3. Close the fridge door

Does tasking mean breaking things into several steps?

1. Open the fridge door
2. Put the elephant in the fridge
 - 2.1 Find Doraemon
 - 2.2 Shrink elephant
 - 2.2 Put the small elephant into the fridge
3. Close the fridge door

What have we done in the process?

1. Splitting complex problem to simple tasks (can be done in 15 mins)
2. Check and make sure tasks are independent
3. Check and make sure tasks are executable

Tasking in Software Development



Find the "Cute number" in the set and check if it is greater than 10.

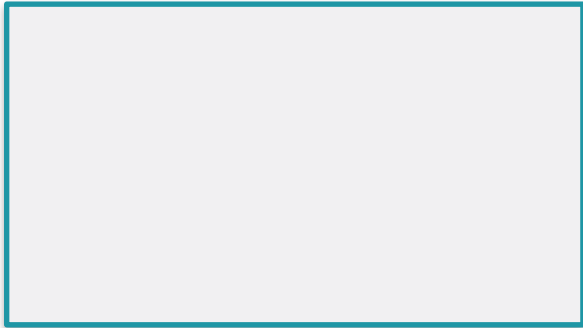
Find the "largest even number" in the set and check if it is greater than 10.

Find the "largest even number" in the set and check if it is greater than 10.

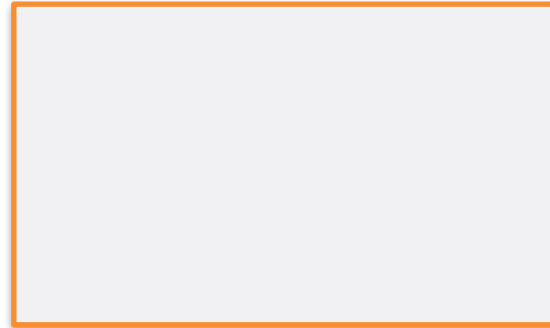
1. Find all even numbers
2. Find the largest number
3. Check number if it is greater than 10



Yes



No



Find the "largest even number" in the set and check if it is greater than 10.

1. Find all even numbers

- Input: numbers:[]
- Output: evenNumbers: []

2. Find the largest number

- Input: numbers:[]
- Output: number: int

3. Check if it is greater than 10

- Input: number: int
- Output: isGreaterThan10: boolean

What is tasking?

What have we done in the process?

1. Splitting complex problem to simple tasks (can be done in 15 mins)
2. Check and make sure tasks are independent
3. Check and make sure tasks are executable and verifiable

Find the "largest even number" in the set and check if it is greater than 10.

1. Find all even numbers

- Input: numbers:[]
- Output: evenNumbers: []

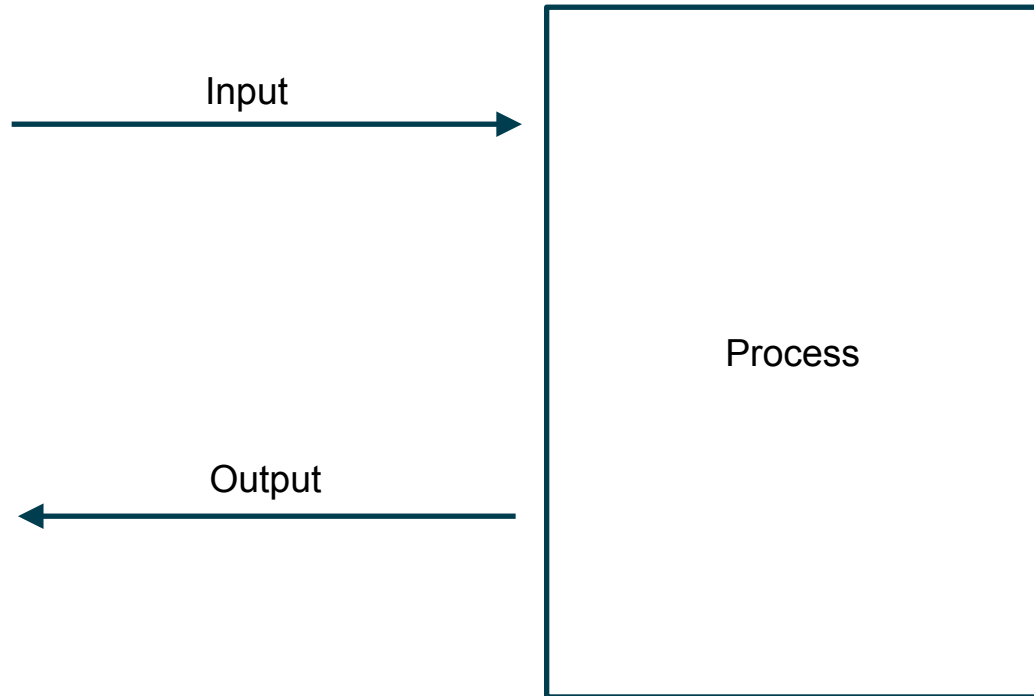
2. Find the largest number

- Input: numbers:[]
- Output: number: int

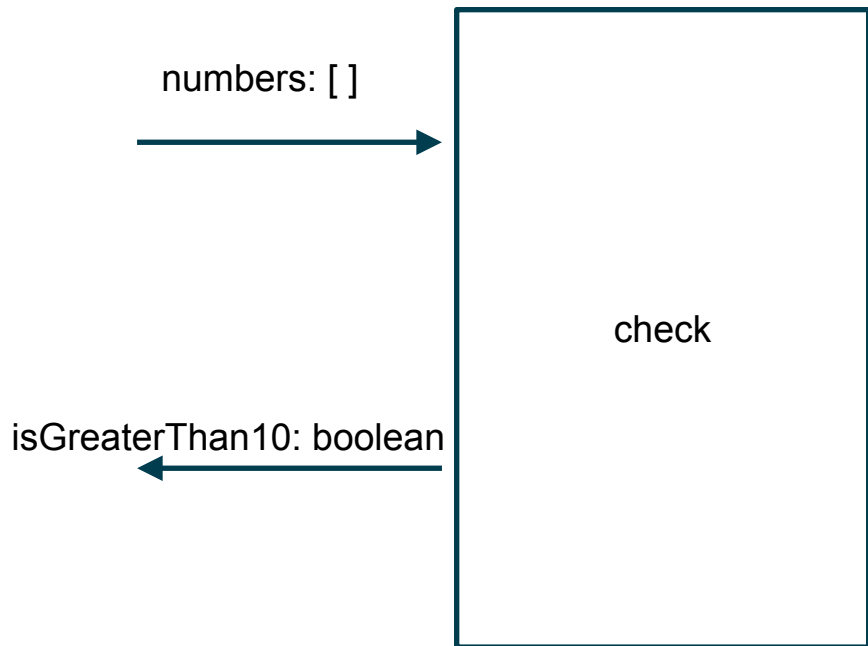
3. Check if it is greater than 10

- Input: number: int
- Output: isGreaterThan10: boolean

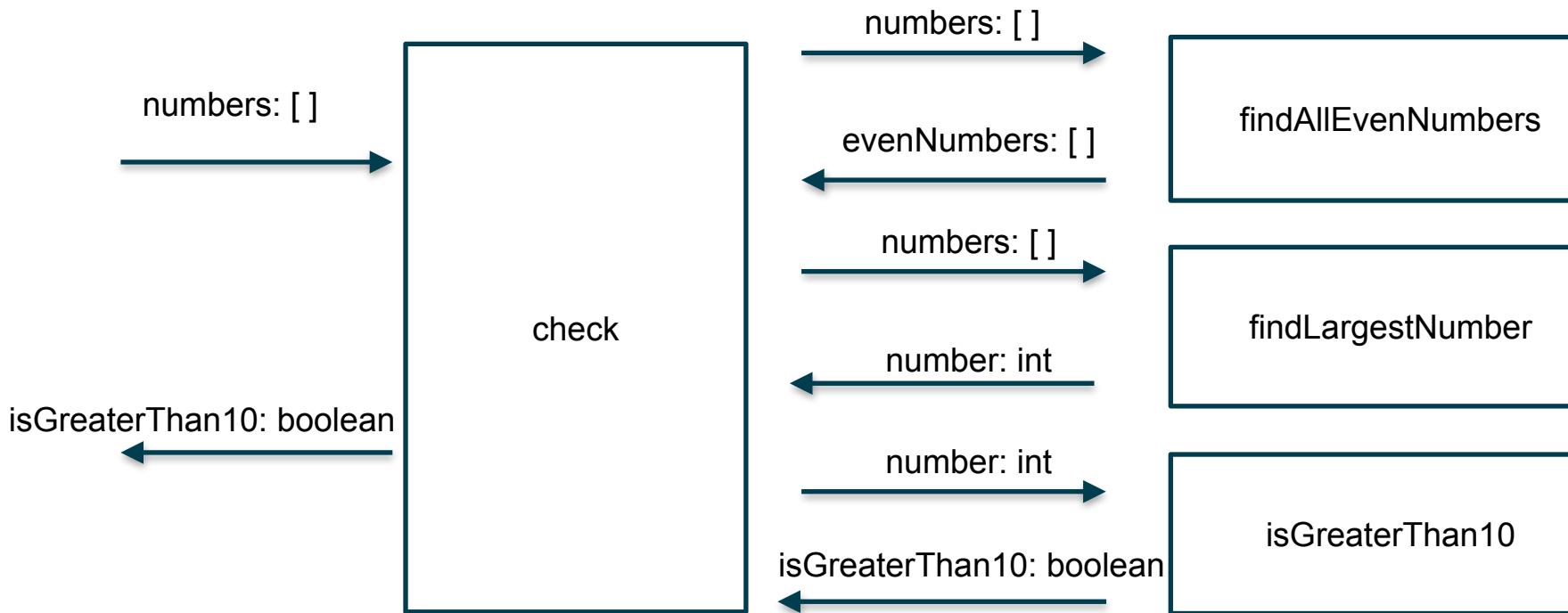
Context Map



Cute Number Context Map



Cute Number Context Map



Cute Number - What we did just now

Cute Number - What we did just now

1. Clarify
2. List Tasks
3. Define Input & Output
4. Draw Context Map

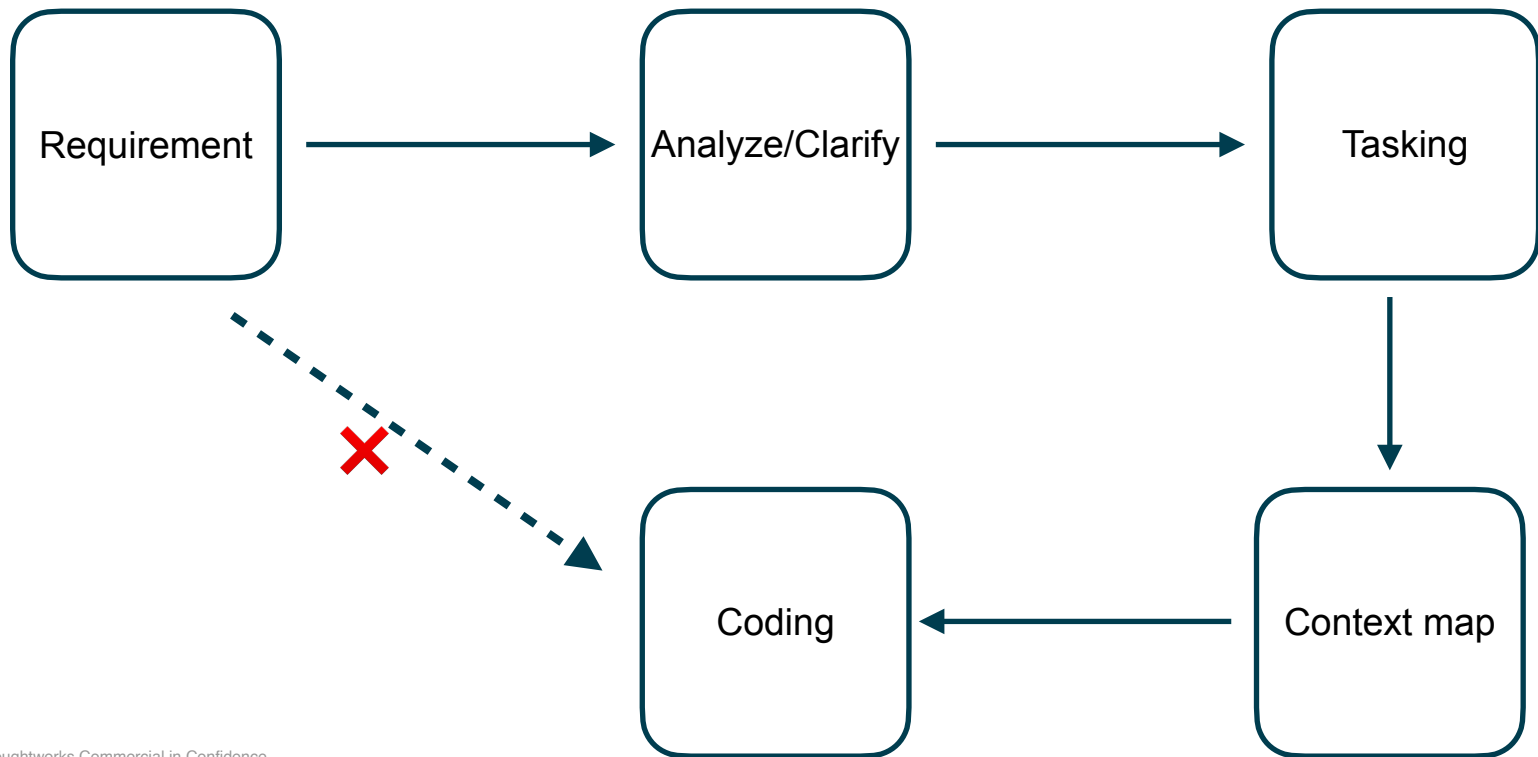
Coding Demo: Cute Number



Summary



Summary



Tasking Summary



Simple Task

Easy to read and understand



Independent

Division of labor
& Independent testing



Verifiable

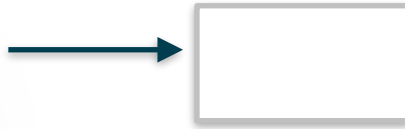
Input & Output

Context Map Summary



Box with name

____ name



Arrow pointing to box -
Input

____ parameters



Arrow pointing away
from the box - Output

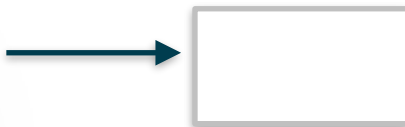
____ value

Context Map Summary



Box with name

Function name



Arrow pointing to box -
Input

Input parameters



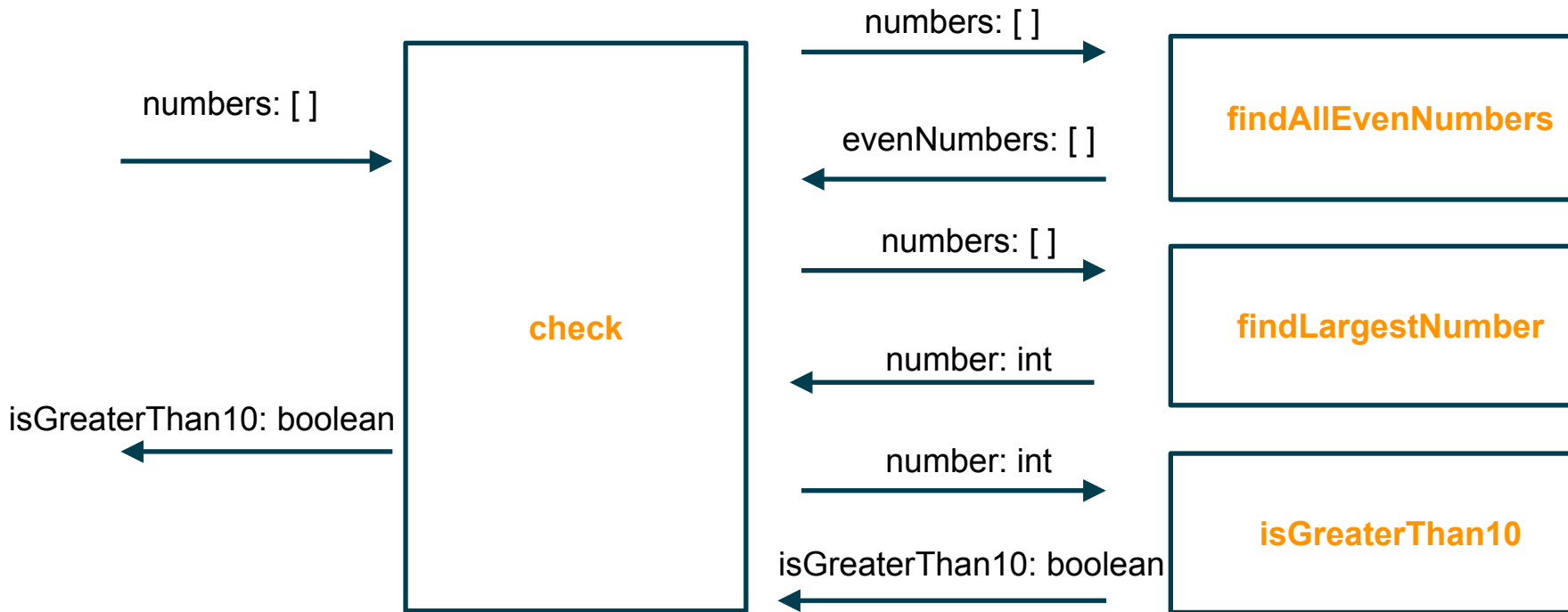
Arrow pointing away
from the box - Output

Output value

Exercise: Naming

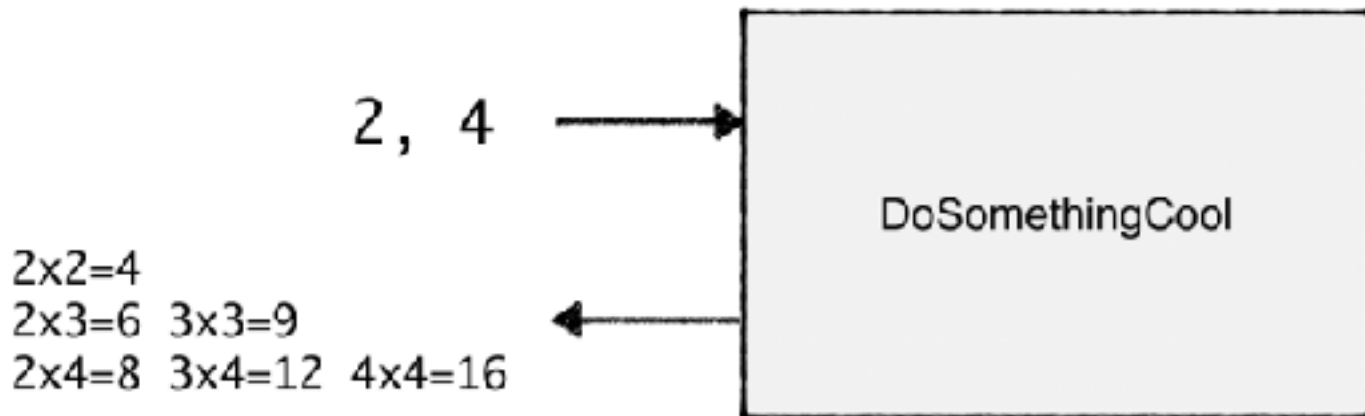


Meaningful Name



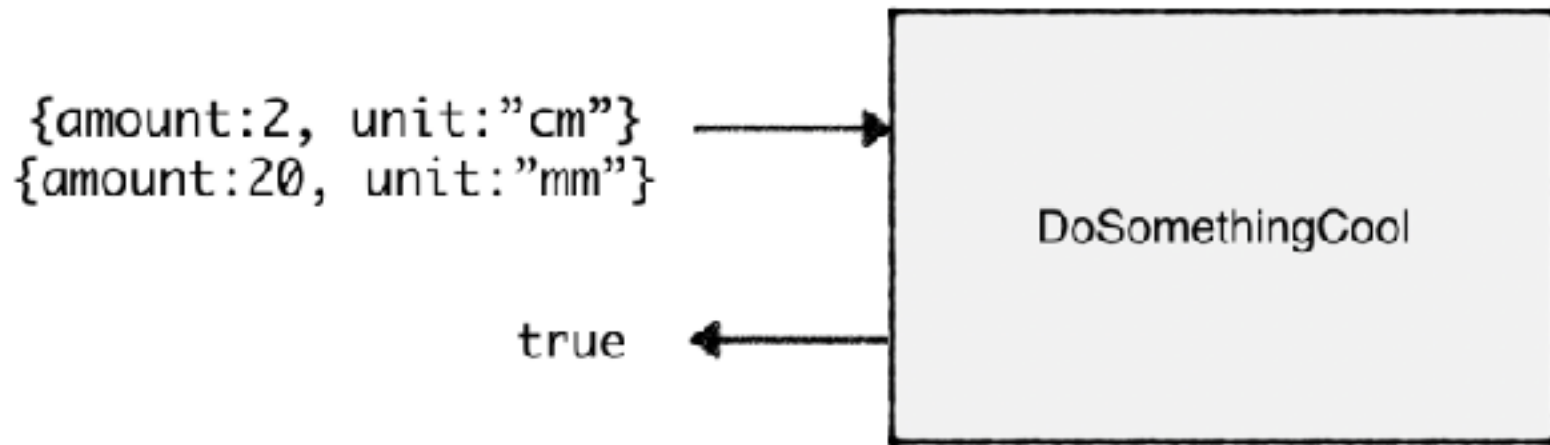
Naming Exercise 1

Please review the diagram and rename the function



Naming Exercise 2

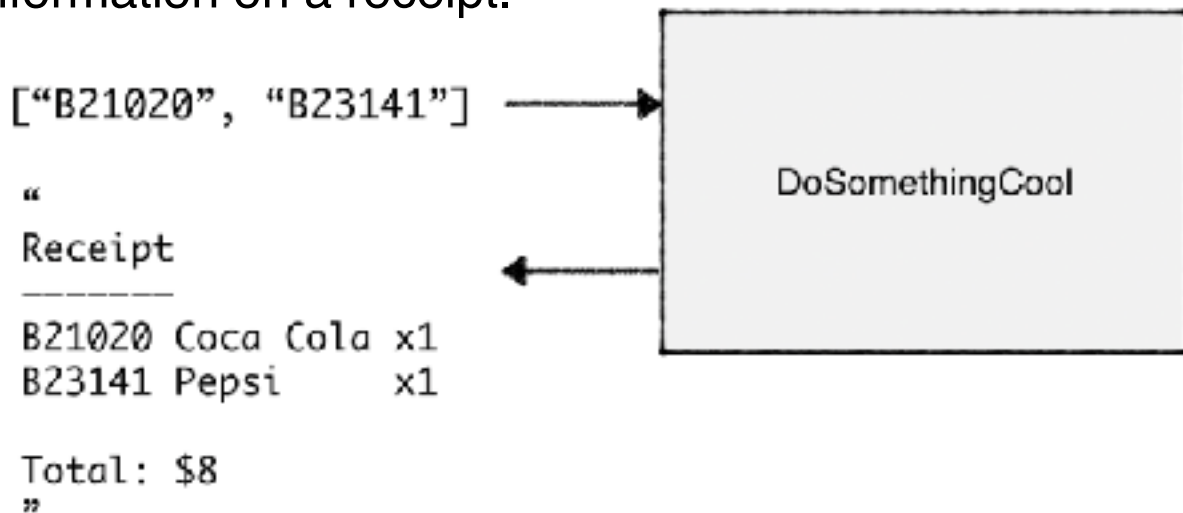
Please review the diagram and rename the function



Naming Exercise 3

Please review the diagram and rename the function

A pos-machine will collect all the barcodes on the items and print all the information on a receipt.



Naming Summary

- **Reveal intention** (e.g. receipt vs printReceiptFromBarcodes)
- **Avoid** incomprehensible **abbreviations** (e.g. a vs anchor, n vs number, tmp vs temporary)
- Name the business term with **business expression** (e.g. Receipt vs ItemAndPricePair)
- **Use consistent format** (function name convention: verb + noun, e.g. generateReceipt)