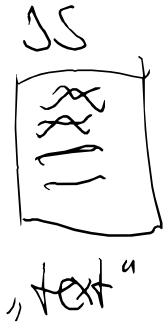


Scribbles for HCS L2C

2024-03-06

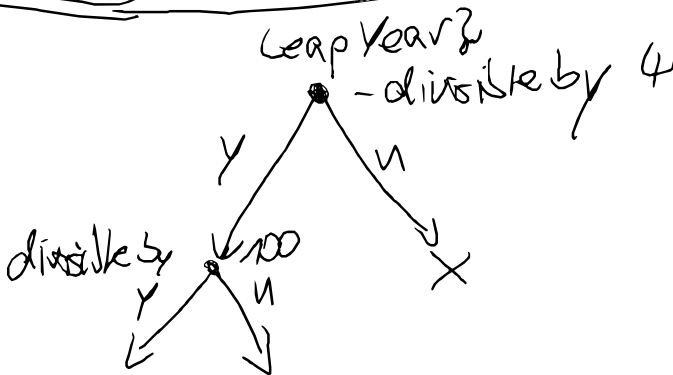


node.js

alternatively "program"

Browser

Chrome
Firefox
Edge



Math.floor(6.5) ↖ Parameter

↳ 6 (round it down)

Math.random()

↳ 0.1121

I get a value

977h3872

use the
value
as parameter

Math.floor ()

"Hello" + "World!"

Concatenated:
"Hello World!"

"Length is: " + 6

Exercise: „Dice Throw“

Solution

1. Get a random number
between 0... 1
2. Get a random number between
0... 5
3. Make it an Integer between
1 and 6.

2024-03-08

data types

- numbers

(JS doesn't differentiate
fractional and "whole" numbers)

↳ floating

↳ integers

- strings (text)

- boolean (true/false)

- undefined & null

↳ "Empty"

- complex data types: Array^(list) & Object^(key-value pair)

- functions

node

"a program
to run / execute
JavaScript"

↳ Interpreter

Terminal / Shell

→ part of your operating system

→ this can run other programs

↳ eg node

↳ pwd | print working directory

↳ ls | list files

↳ cd | change directory

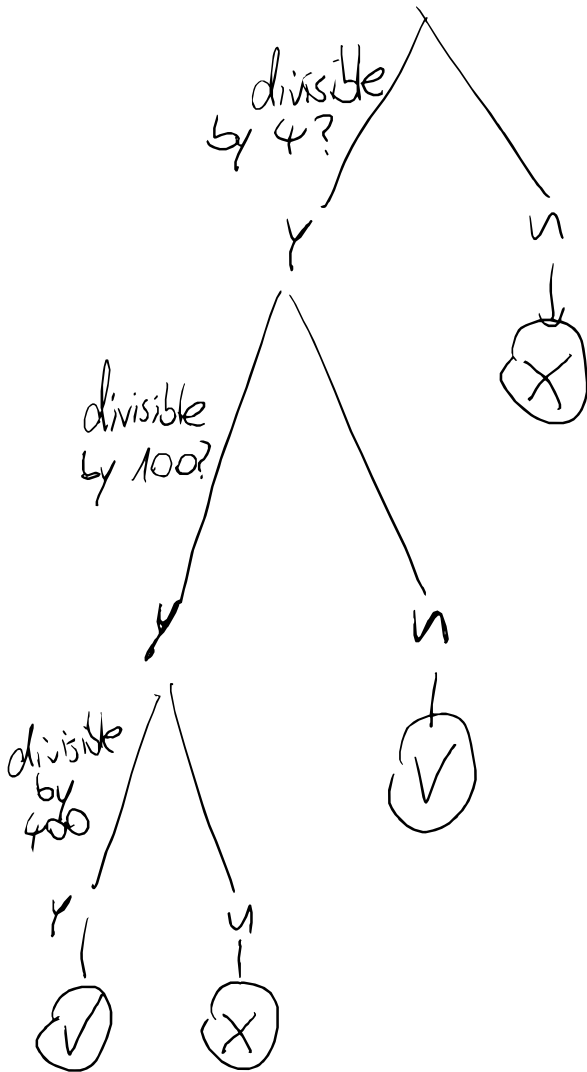
⇒ For now, ~~always~~ use
"Open in integrated Terminal"
when you're stuck.

Variables

to define a variable
there are three keywords:

- let
 - const
 - var
-

Leap Year Calculation Revised.



Two Numbers Comparison

$$(11) < (102)$$

$$\begin{array}{c} \downarrow \\ \textcircled{1}1 \end{array} < \begin{array}{c} \downarrow \\ \textcircled{1}2 \end{array}$$

$$\textcircled{\text{Simon}} < 1$$

↓

Simon

Fili

Sven

⇒

Simon

Zhona

Sven

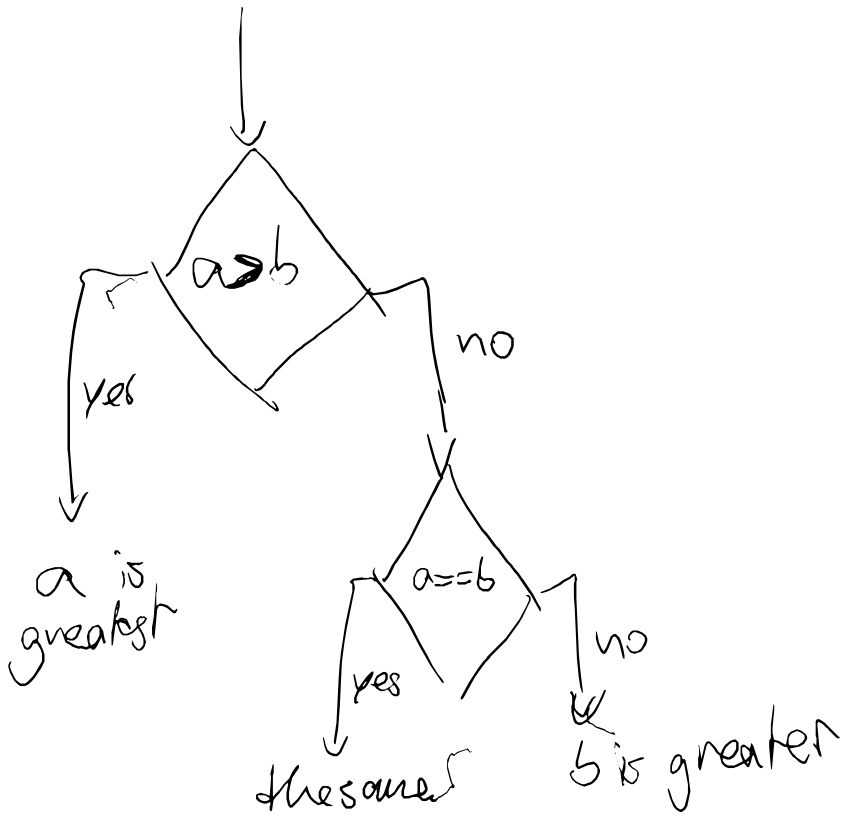
Fili

Zhona

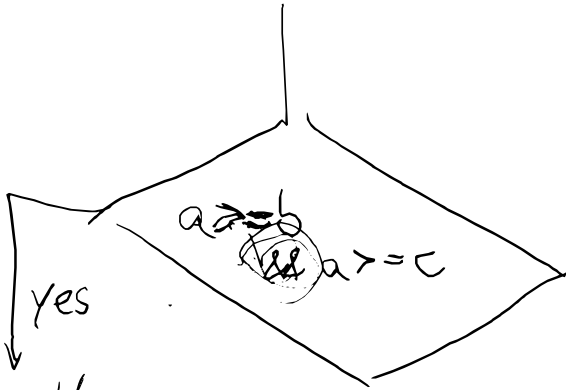
Compare two numbers

"Control Flow" (if / else)

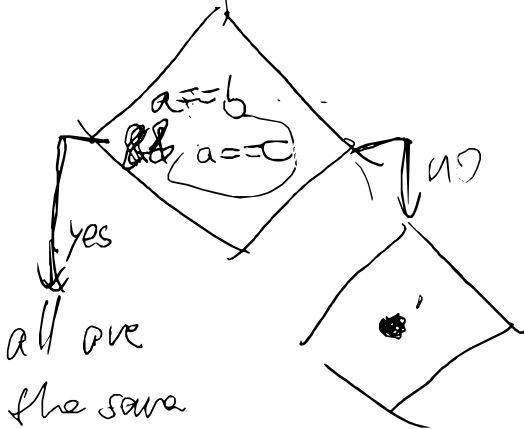
⇒ Control Flow Diagram



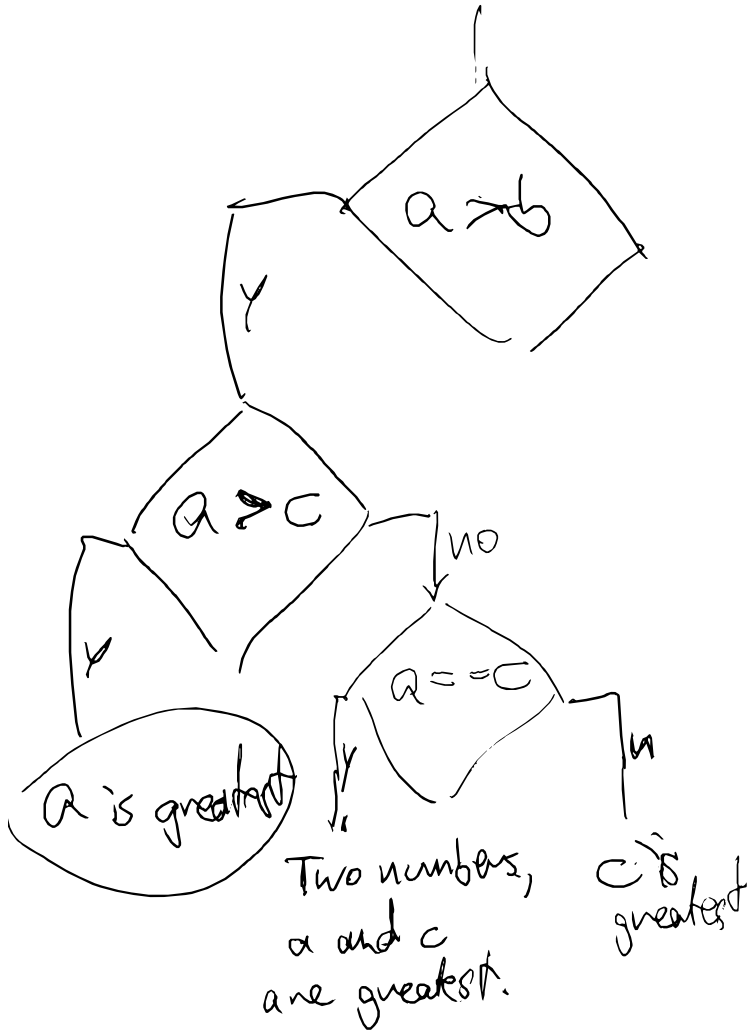
\vec{f}	\vec{s}	\vec{k}
a	b	c

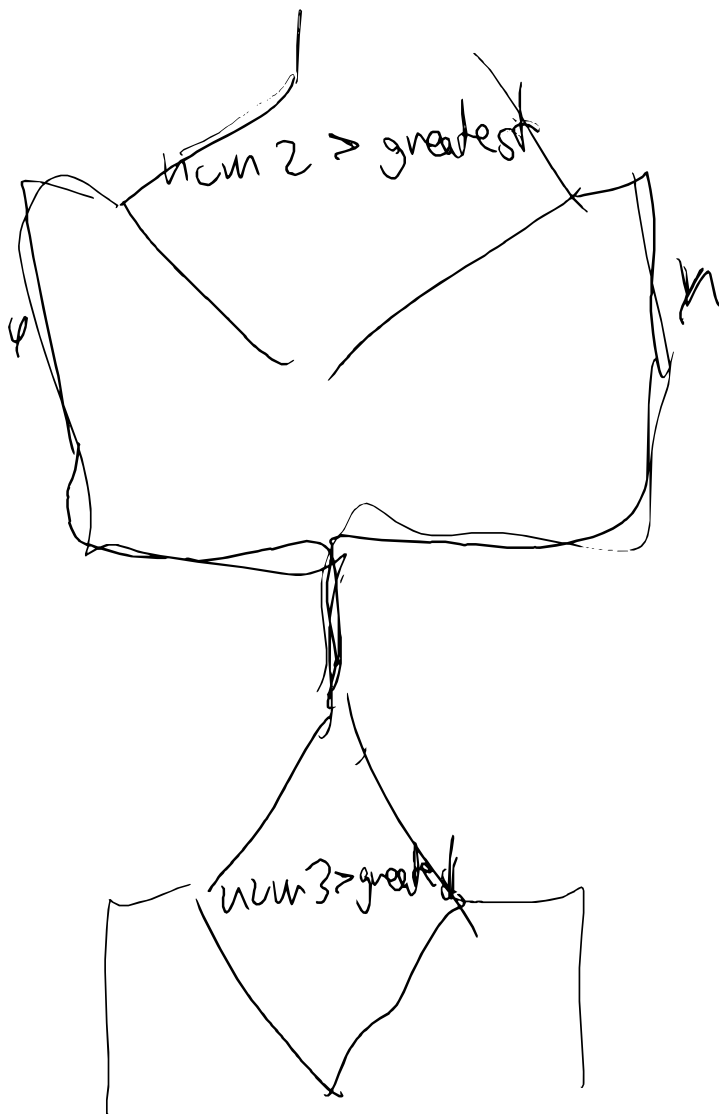


// now, they can
be the same
or a is greatest



a b c







Exercise 9

- ask for a number

↳ where to store it?

⇒ variable

(let $n = \dots$

e.g. 10

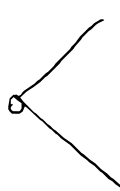
$$55 + (1 + 2 + 3 + 4) + 5 + 6 + 7 + 8 + 9 + 10$$

Hobbies

- Drumming
- Cooking
- Rowing
- ...

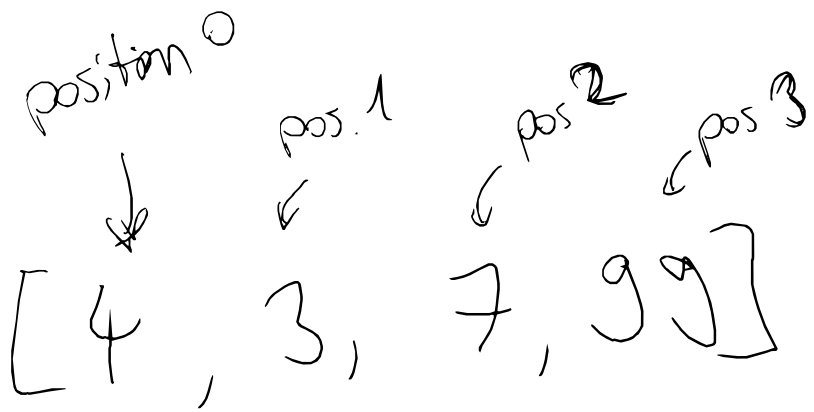
"A list of unspecified number of Elements"

(A set)

 a set: something where order doesn't matter

a list: ordered elements

Arrays $\overset{\text{synonym}}{=}$ List



a position inside
the list is called
index.

Arrays start with index 0.

Attempts: 1111

54 → too low

78 → too high

65 → too low

71 → too low

73 → too low

76 → too low

(12)

Binary Search

- Ask user for a guess
- We need a fixed number
using `Math.random()`
~~or a fixed hardcoded~~
↳ only during development
- Some loop (while)
to give the user 7 attempts

Hangman

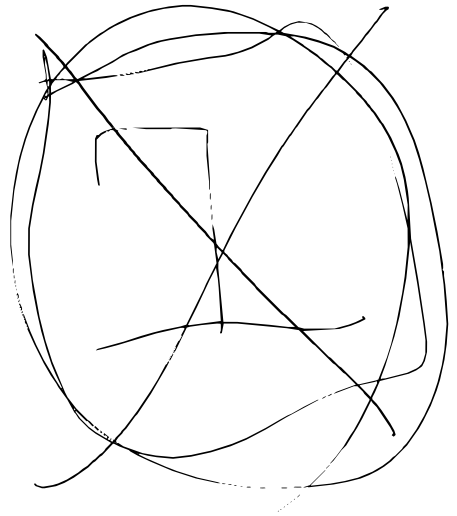
c o d i n g

- keep track of attempts
- user guess
- a secret word
- a board
↳ update

Steps to create
your program:

- play / think it through
- extract elements
- start coding

~~a~~ ~~d~~ ~~r~~ ~~e~~
~~an~~ ~~er~~



EILBEK

E _ _ _ E _

→ iterating over the letters

programmer-speak for
"look at each letter individually."