

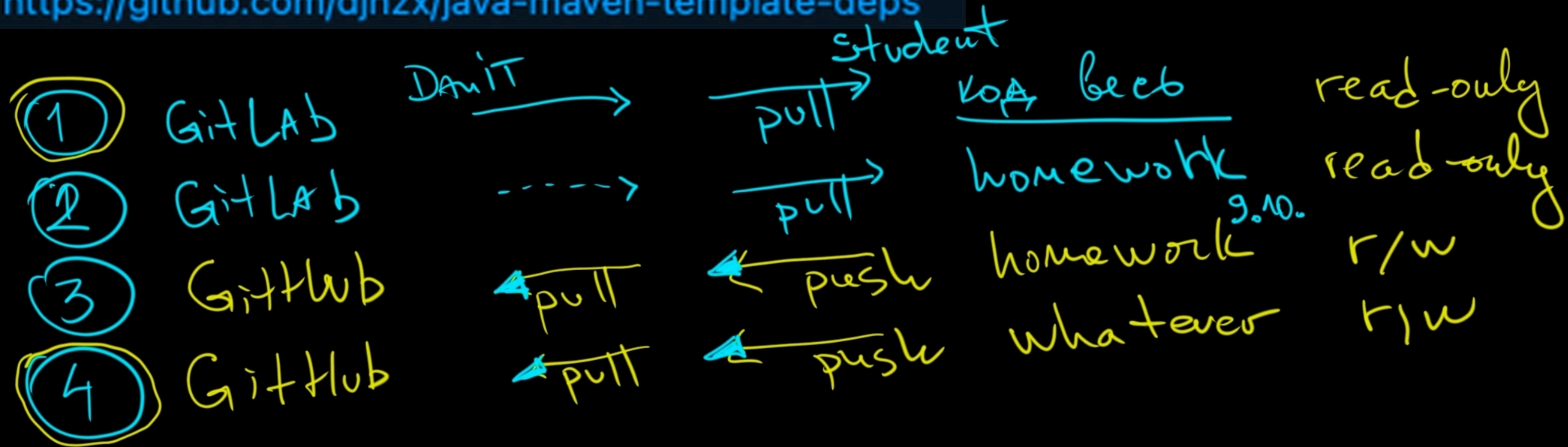
[https://gitlab.com/dan-it/groups/fs\\_10](https://gitlab.com/dan-it/groups/fs_10)  
[git@gitlab.com:dan-it/groups/fs\\_10.git](https://gitlab.com/dan-it/groups/fs_10)

①

<https://gitlab.com/dan-it/groups/java-homework-step>  
[git@gitlab.com:dan-it/groups/java-homework-step.git](https://gitlab.com/dan-it/groups/java-homework-step)

②

<https://github.com/djnzx/java-maven-template-deps>





```
fs_101 git:(main) cd ~/.ssh
```

```
ssh ls -al
```

```
total 128
```

```
drwx-----@ 17 alexr staff 544 Sep 17 19:39 .
drwxr-xr-x+ 70 alexr staff 2240 Sep 19 19:25 ..
-rw----- 1 alexr staff 464 Apr 1 17:26 alexr-bb-id_ed25519
-rw-r--r-- 1 alexr staff 106 Apr 1 17:26 alexr-bb-id_ed25519.pub
-rw----- 1 alexr staff 484 Apr 1 17:26 alexr-bb3-id_ed25519
-rw-r--r-- 1 alexr staff 123 Apr 1 17:26 alexr-bb3-id_ed25519.pub
-rw----- 1 alexr staff 464 Apr 1 17:26 alexr-id_ed25519
-rw----- 1 alexr staff 464 Apr 3 11:25 alexr-id_ed25519-2
-rw-r--r-- 1 alexr staff 109 Apr 3 11:25 alexr-id_ed25519-2.pub
-rw-r--r-- 1 alexr staff 109 Apr 1 17:26 alexr-id_ed25519.pub
-rw----- 1 alexr staff 1766 Apr 1 17:26 alexr-id_rsa
-rw-r--r-- 1 alexr staff 399 Apr 1 17:26 alexr-id_rsa.pub
-rw----- 1 alexr staff 1095 Apr 1 17:53 config
-rw----- 1 alexr staff 3454 Apr 1 17:26 danit-id_rsa
-rw-r--r-- 1 alexr staff 753 Apr 1 17:26 danit-id_rsa.pub
```

← pvt

← pub

GitHub/GitLab

← pvt

← pub



```
Host *
  AddKeysToAgent yes
  UseKeychain yes
  IdentitiesOnly yes

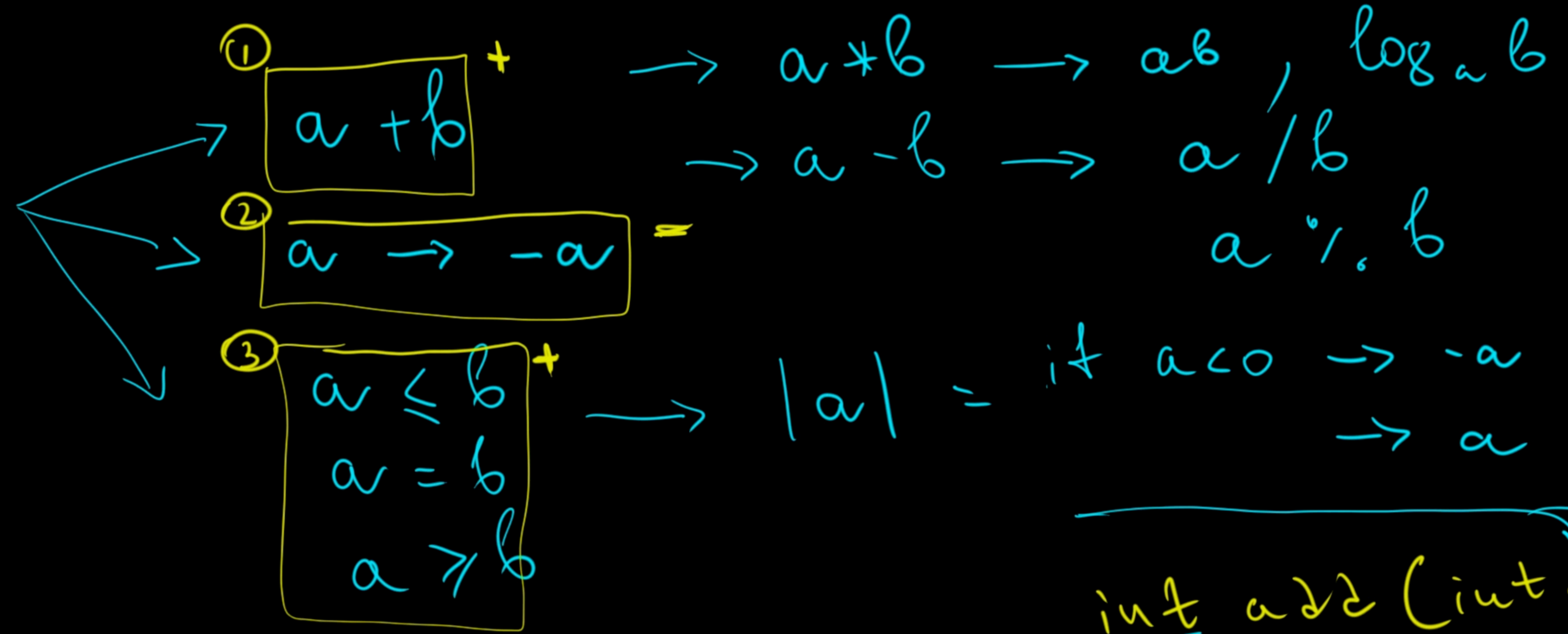
# my private key (github) 2023-05-15
Host github.com
  HostName ssh.github.com
  Port 443
  User git
  IdentityFile ~/.ssh/alexr-id_ed25519

# my old key, 2020
Host gitlab.com
  HostName altssh.gitlab.com
  Port 443
  User git
  IdentityFile ~/.ssh/alexr-id_rsa

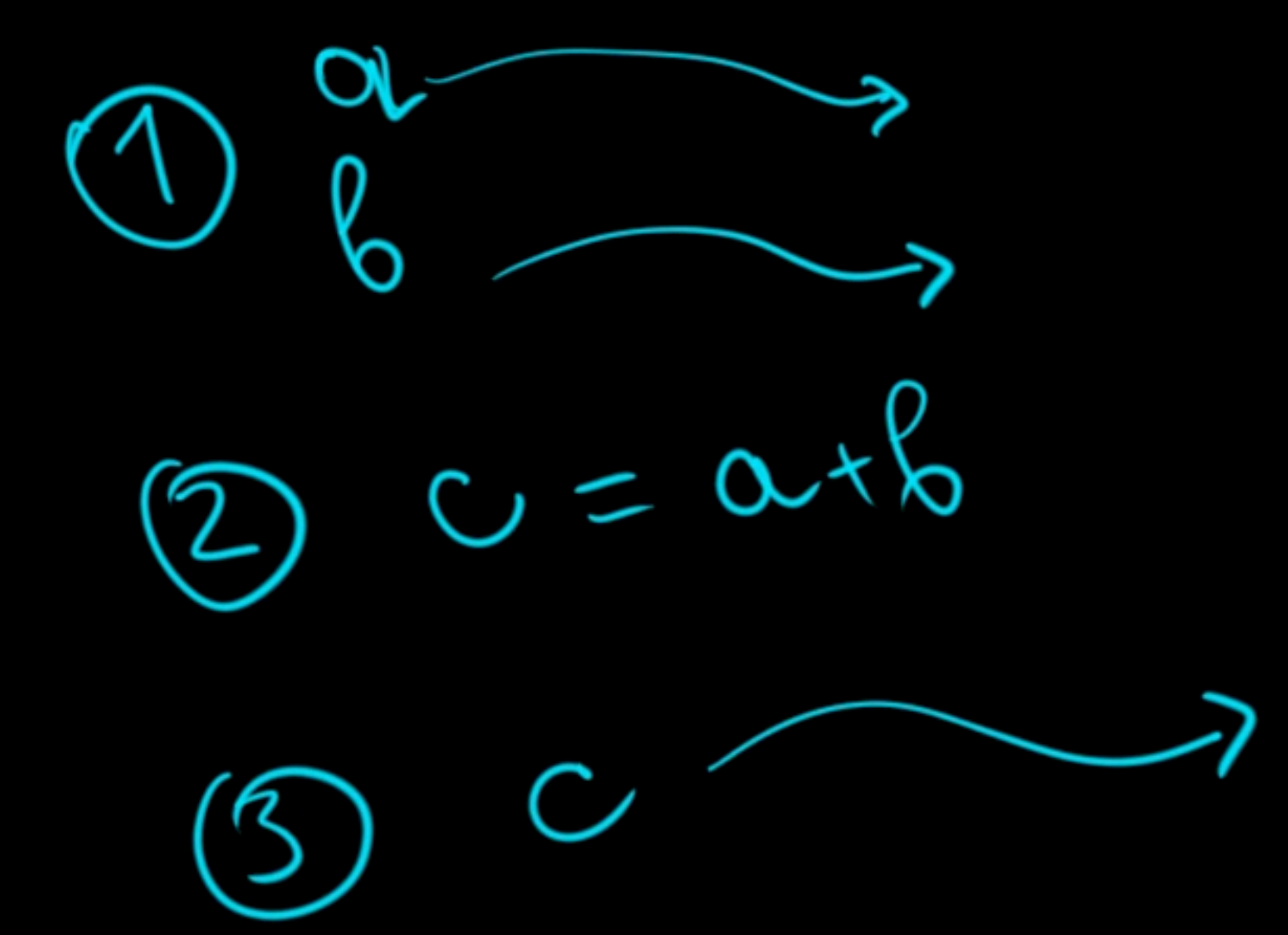
# dan-it snake servers, 2023-06-16
Host snake-6
  HostName 164.90.168.158
  User root
# IdentityFile ~/.ssh/alexr-id_rsa # also works
IdentityFile ~/.ssh/danit-id_rsa
```

test n3

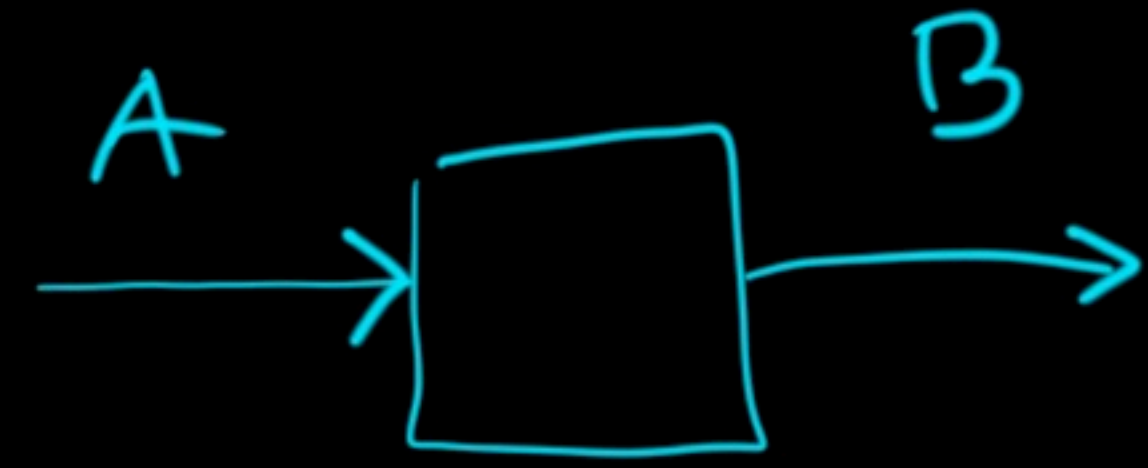




$c = a + b$



```
int add(int a, int b) {  
    return a + b;  
}
```



$A \equiv \text{int, int}$

100%



$f: A \rightarrow B$      $g: B \rightarrow C$

$g(f(a)) \rightarrow c$

$\text{add}(\text{int}, \text{int}) \rightarrow \text{int}$   
 $\text{add}(\text{int}, \text{int}): \text{int}$

$f: A \rightarrow B$

$\text{inc } x \rightarrow x+1$

$\text{id } x \rightarrow x$

$a=1$   
 $b=f(a)$   
 $c=g(b)$



$$\begin{array}{r} 0 \quad 1 \\ \hline \end{array}$$

$$0 < 1 \quad ?$$

$$0 = 1 \quad ?$$

$$0 > 1 \quad ?$$

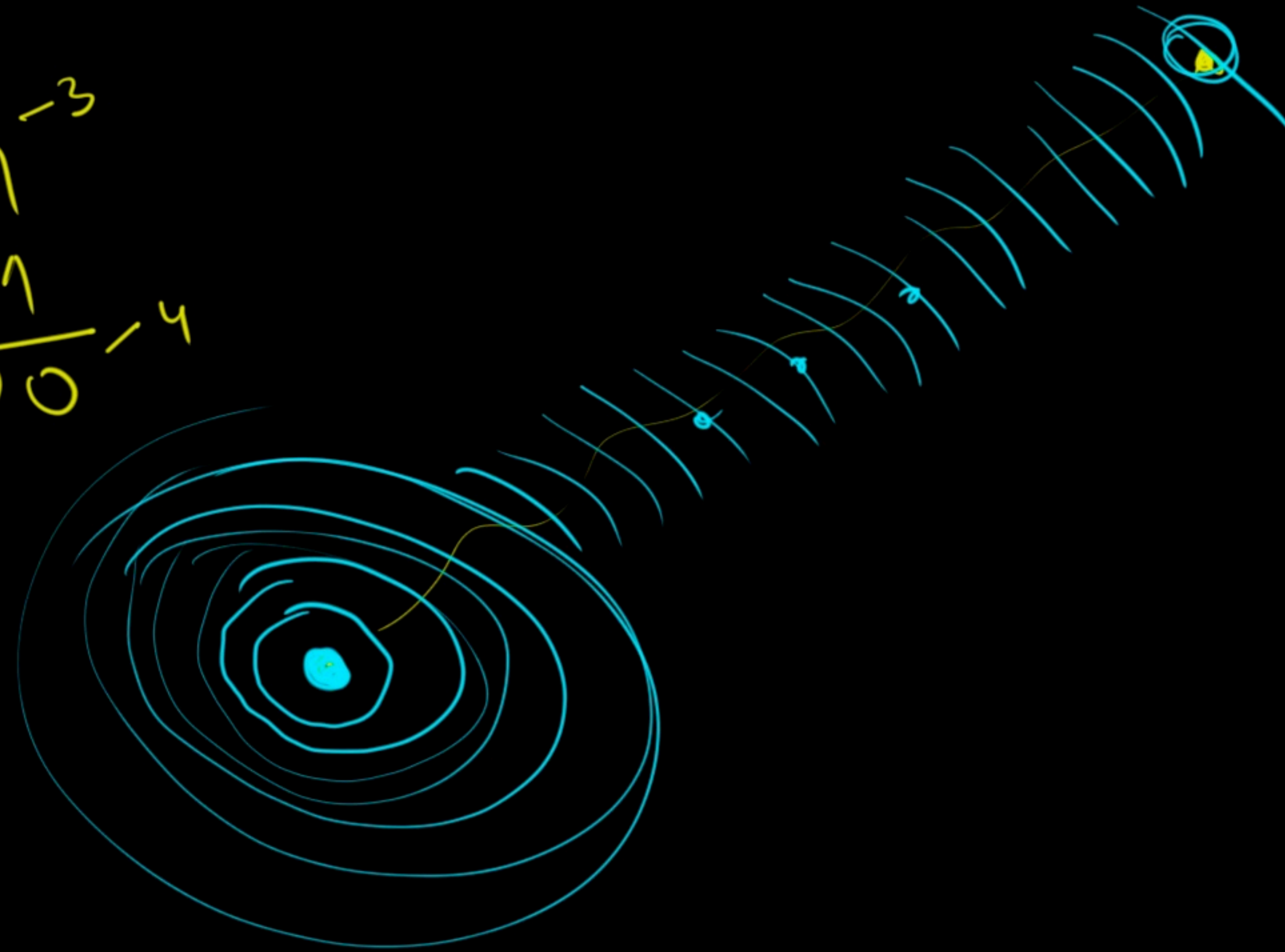
$$3+5$$

$$\begin{array}{r} + \quad \textcircled{1} \\ \quad \textcircled{1} \\ \hline 10 \end{array}$$

$$\begin{array}{r} \leftarrow 9 \\ + \quad 1 \\ \hline 10 \end{array}$$

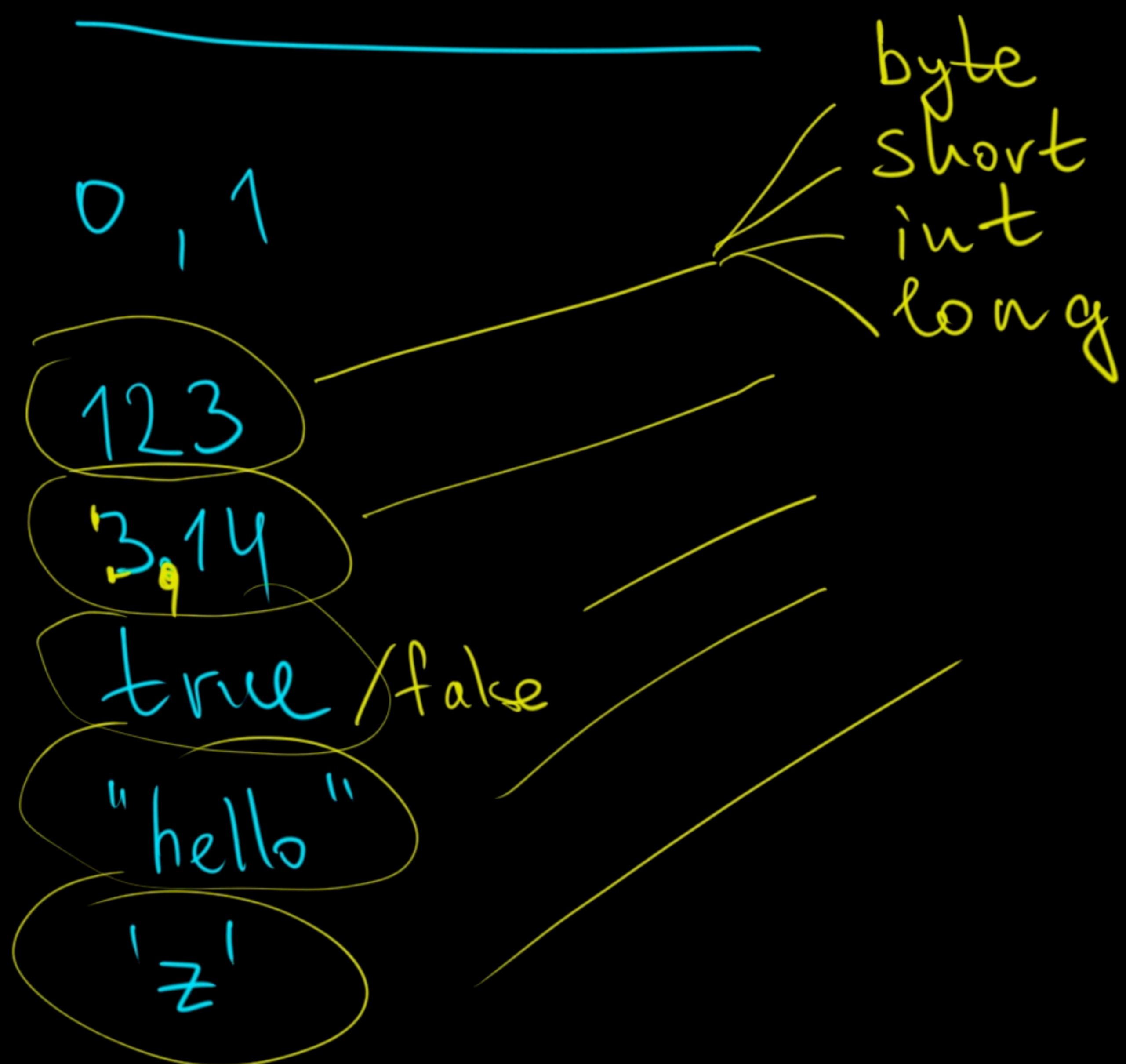
$$\begin{array}{r} + \quad 10^{-2} \\ \quad 1 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 11^{-3} \\ \quad 1 \\ \hline 100^{-4} \end{array}$$

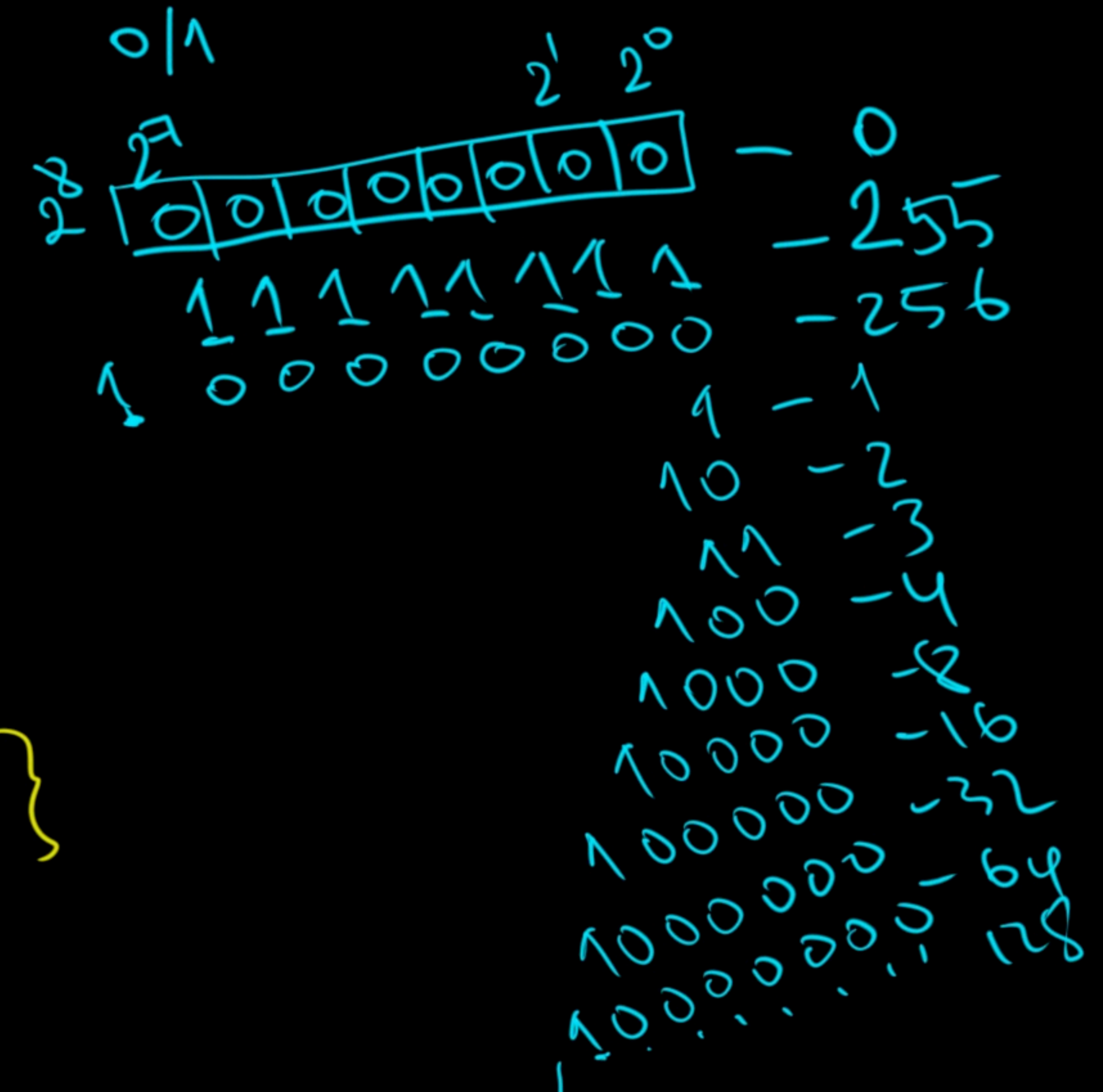
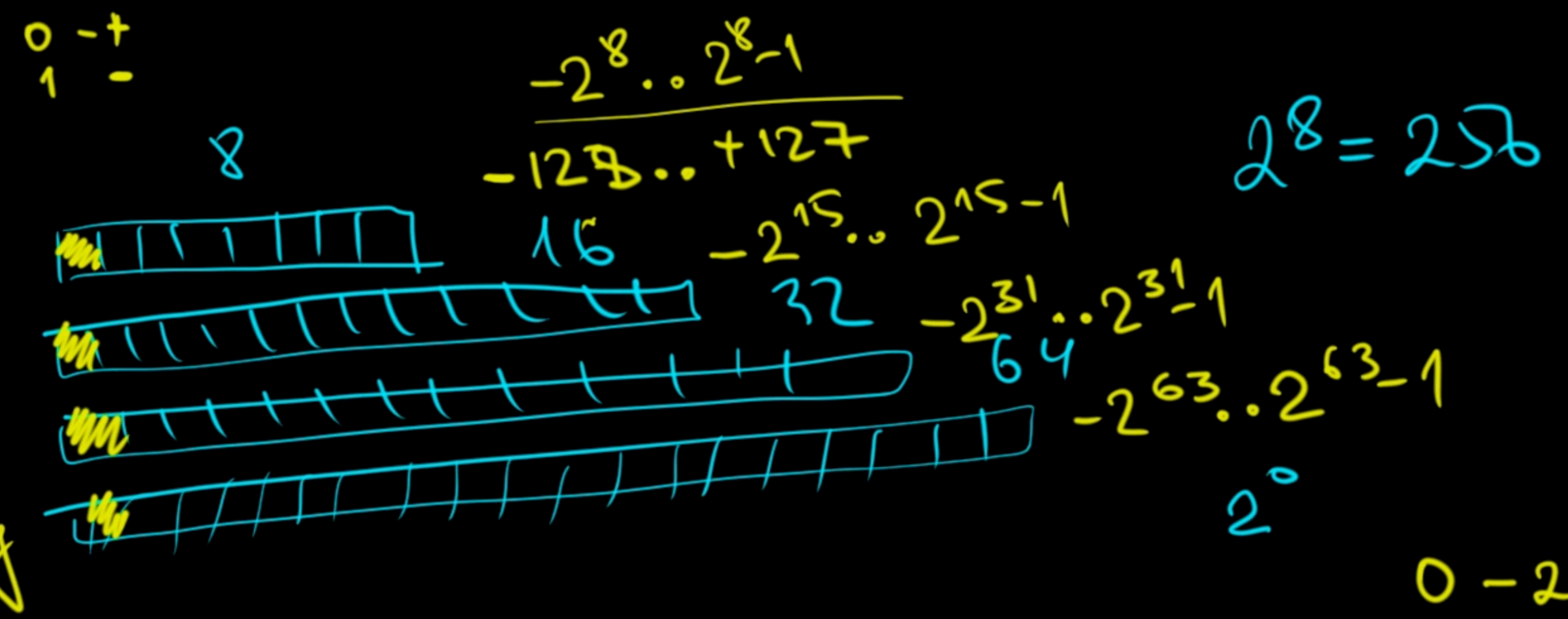




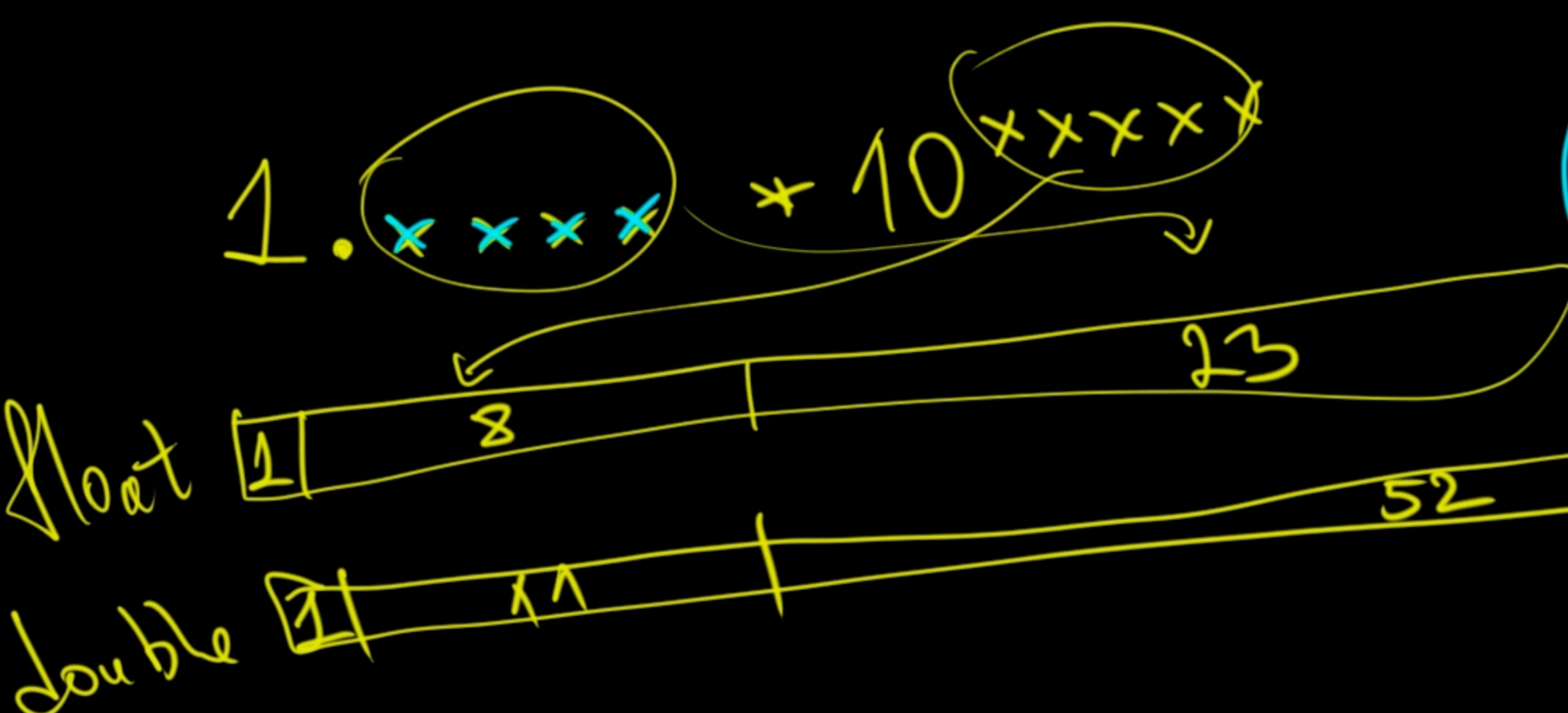
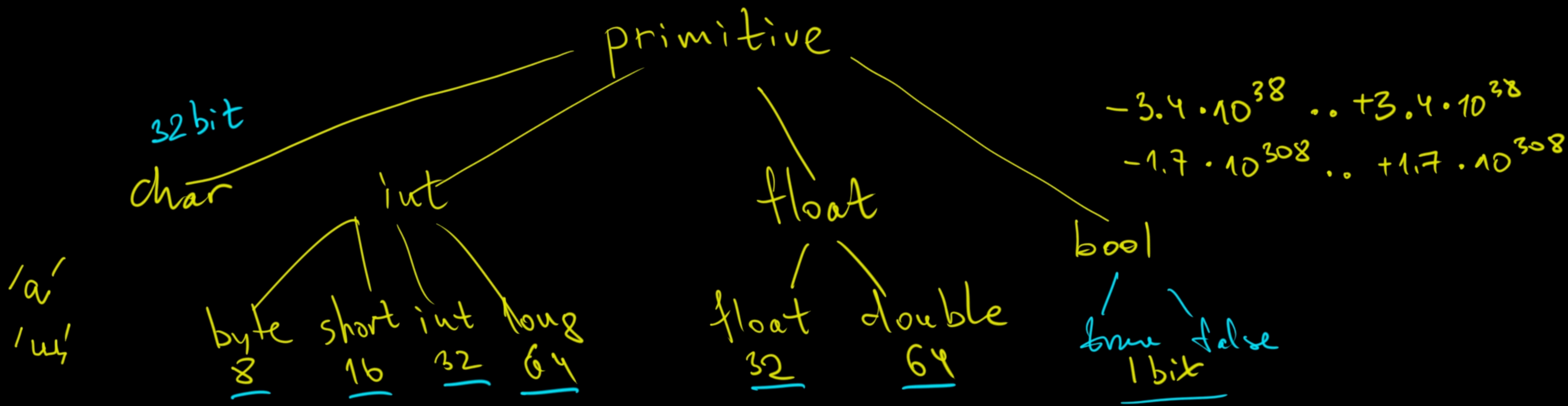
# data types



Color : { Red , Yellow , Green }







	MIN		MAX
i8:	-128		127
i16:	-32768		32767
i32:	-2147483648		2147483647
i64:	-9223372036854775808		9223372036854775807
i128:	-170141183460469231731687303715884105728		170141183460469231731687303715884105727
isize:	-9223372036854775808		9223372036854775807
u8:	0		255
u16:	0		65535
u32:	0		4294967295
u64:	0		18446744073709551615
u128:	0		340282366920938463463374607431768211455
usize:	0		18446744073709551615
f32:	-3.4028235e38		3.4028235e38
f64:	-1.7976931348623157e308		1.7976931348623157e308



int

int[] → {1, 2, 3}



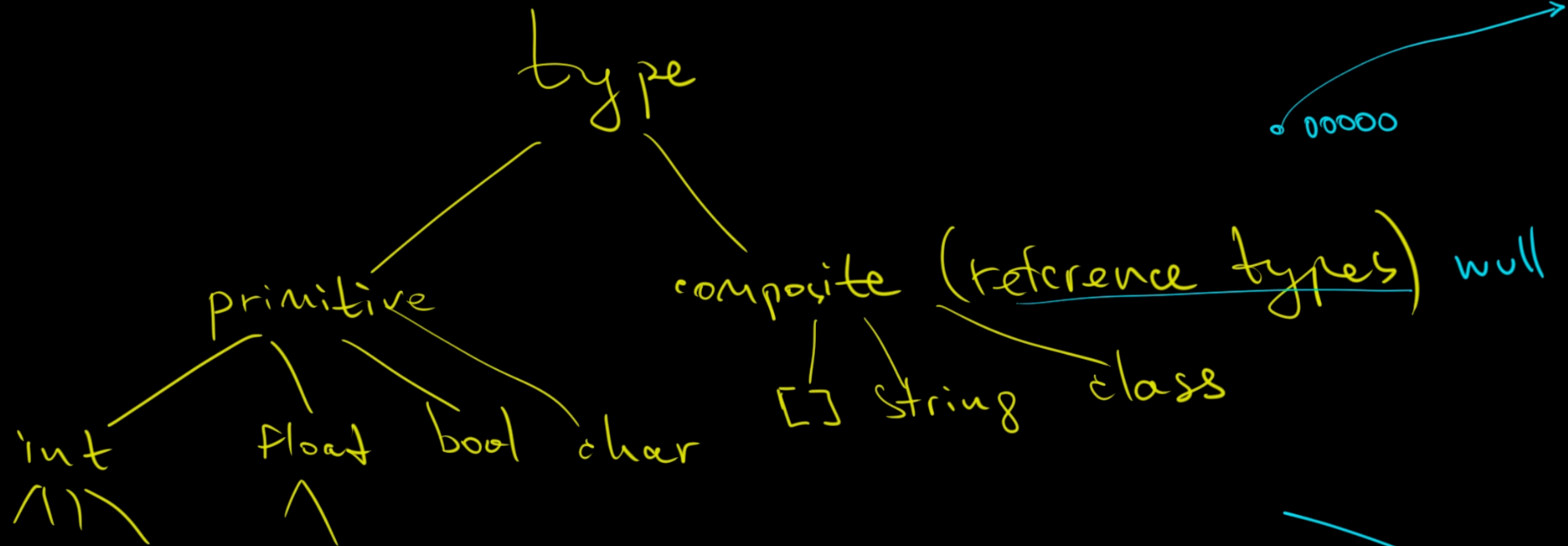
int[][] { {1, 2, 3},  
          {4, 5, 6},  
          }

String ≡ char[]

```
class Person {  
    String name  
    int    age  
}
```

"hello" = {'h', 'e', 'l', 'l', 'o'}





~~if (x == null)~~

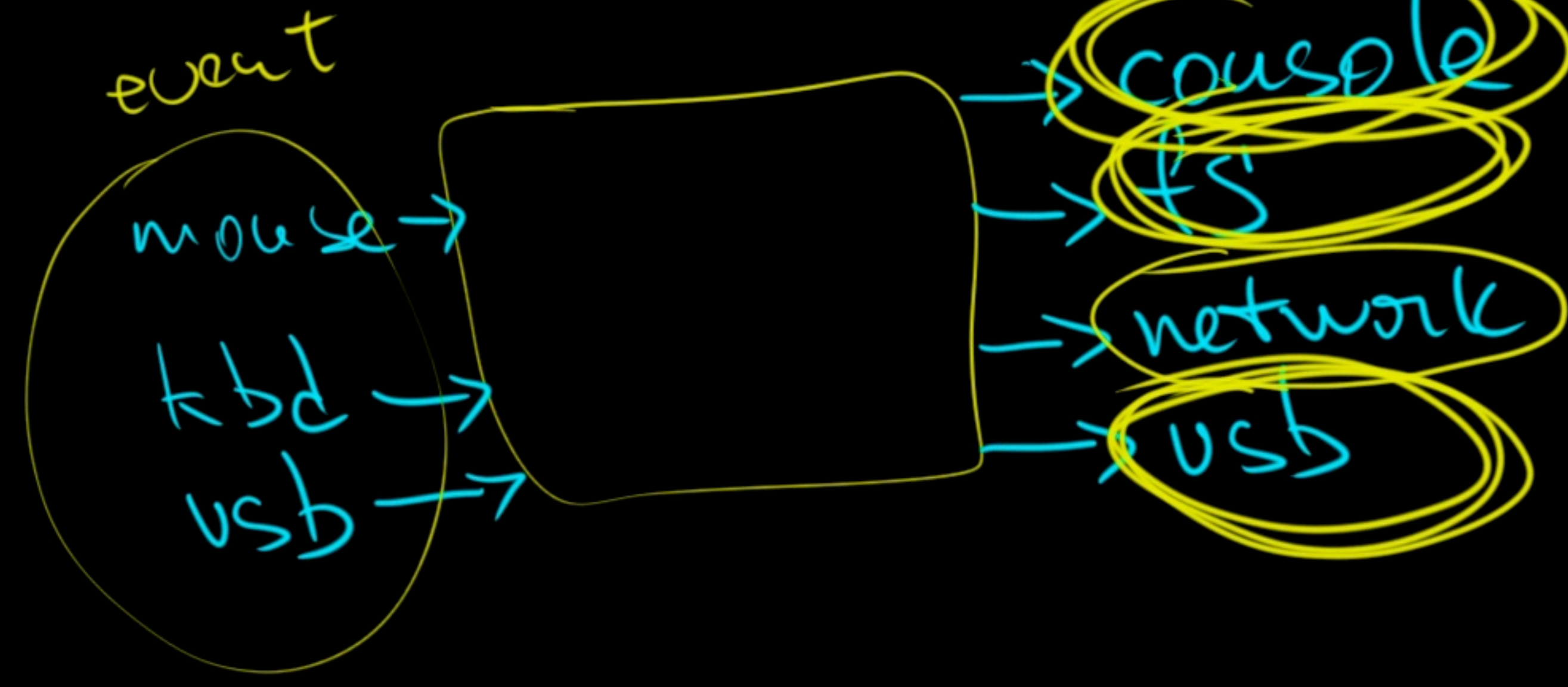
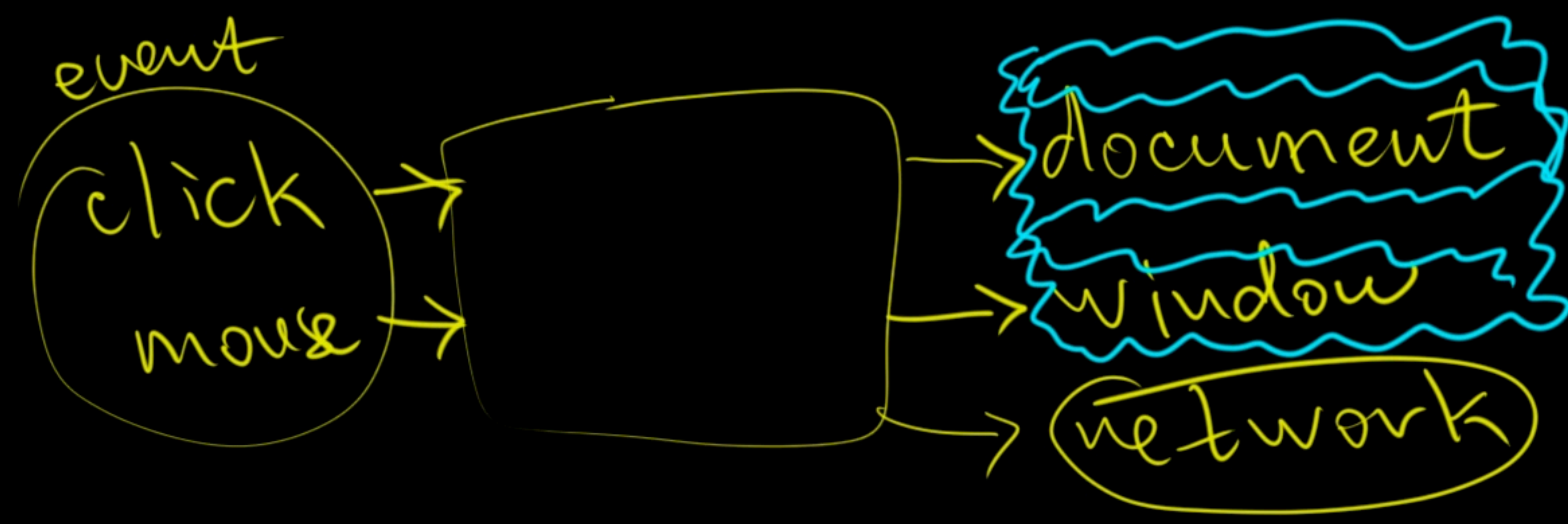


null , Exception



frontend (JS) +

Backend (Java)





```
String next1 = sc.next();  
int x = Integer.parseInt(next1);
```

"5"  
"abc"

String

parseInt : String => Int | Exception

f

A

=> B

???

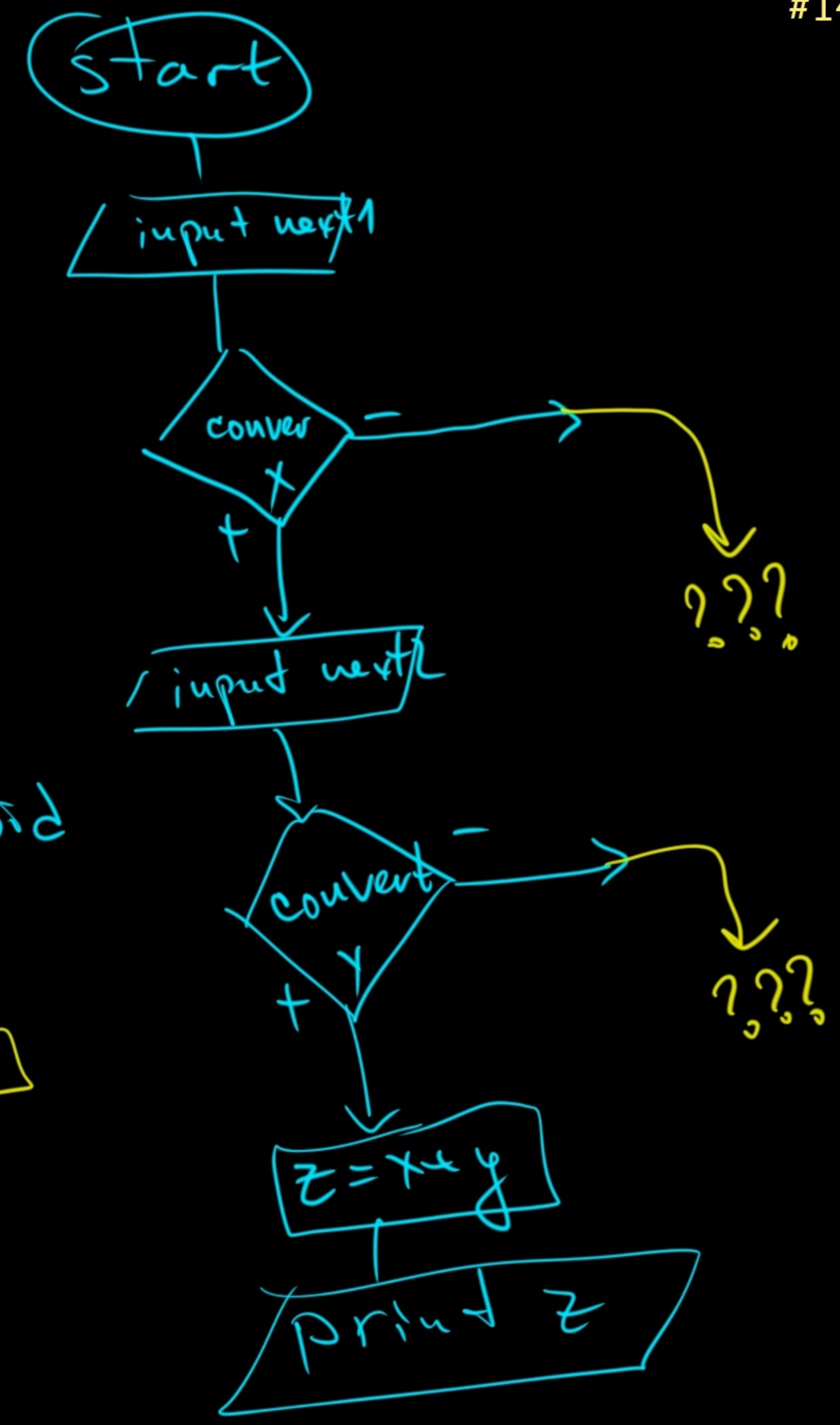


console (kbd)

```
Scanner sc = new Scanner(System.in);  
  
-> System.out.print("Enter first number: ");  
-> String next1 = sc.next();  
-> int x = Integer.parseInt(next1);  
  
-> System.out.print("Enter second number: ");  
-> String next2 = sc.next();  
-> int y = Integer.parseInt(next2);  
  
var result = x + y;  
System.out.printf("The sum is: %s", result);
```

console (screen)  
terminal

- f1 : String → void
- f2 : Scanner → String
- f3 : String → Int  
          ↳ Exc
- f4 : Str → void
- f5 : Scaw → Str
- f6 : Str → Int  
          ↳ Exc
- f7 (Int, Int) → Int
- f8 (Str, Int) → void





$f: A \Rightarrow B \mid \text{Exception}$

$A \Rightarrow B$   
 $\searrow$   
 $???$

