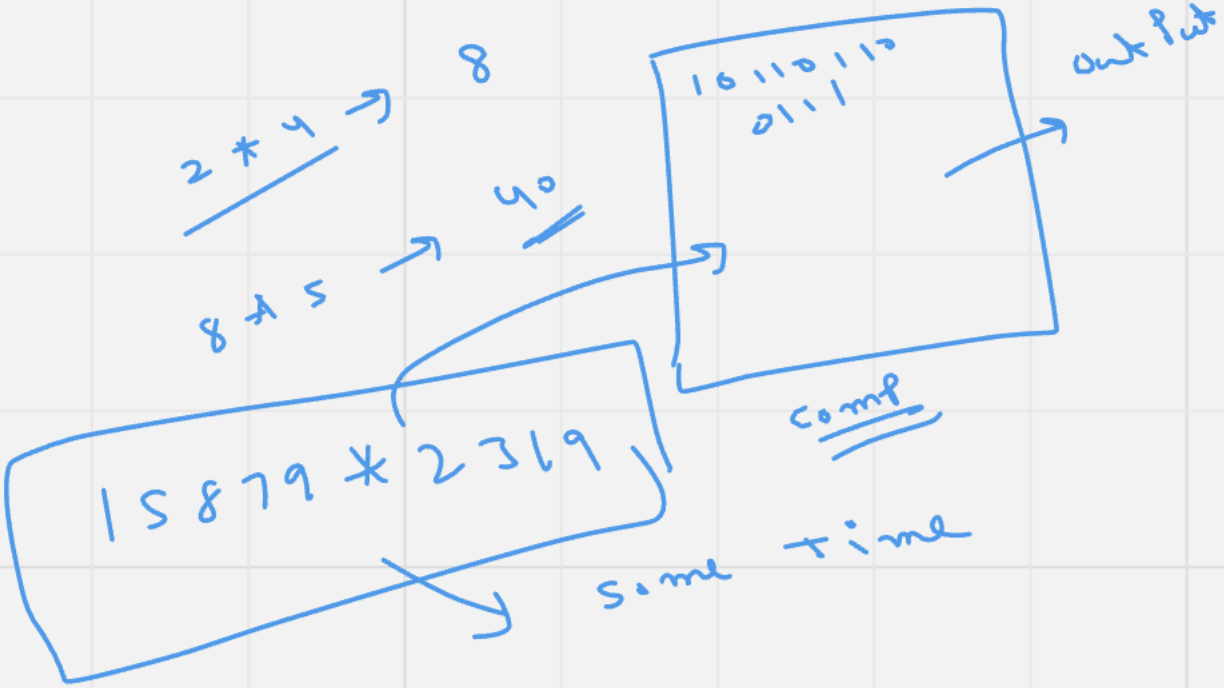
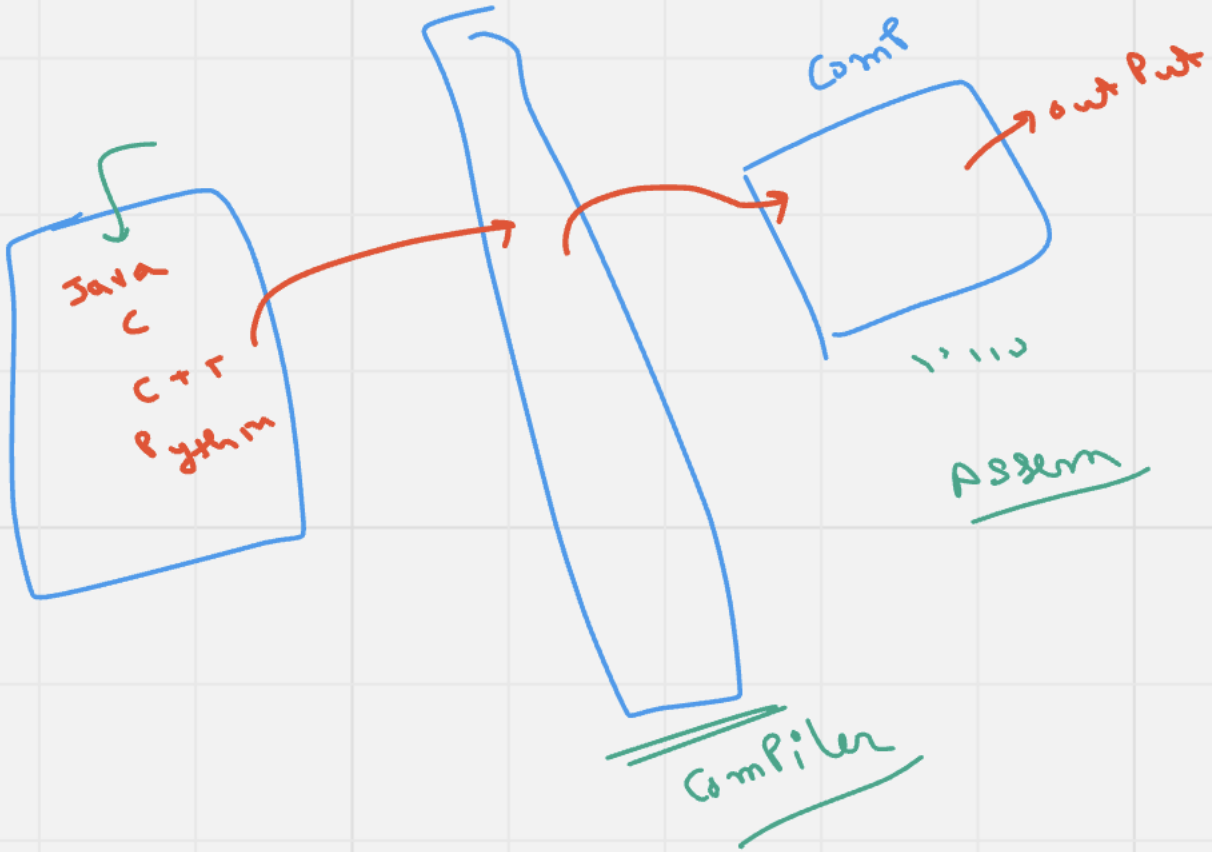
→ C → 1972

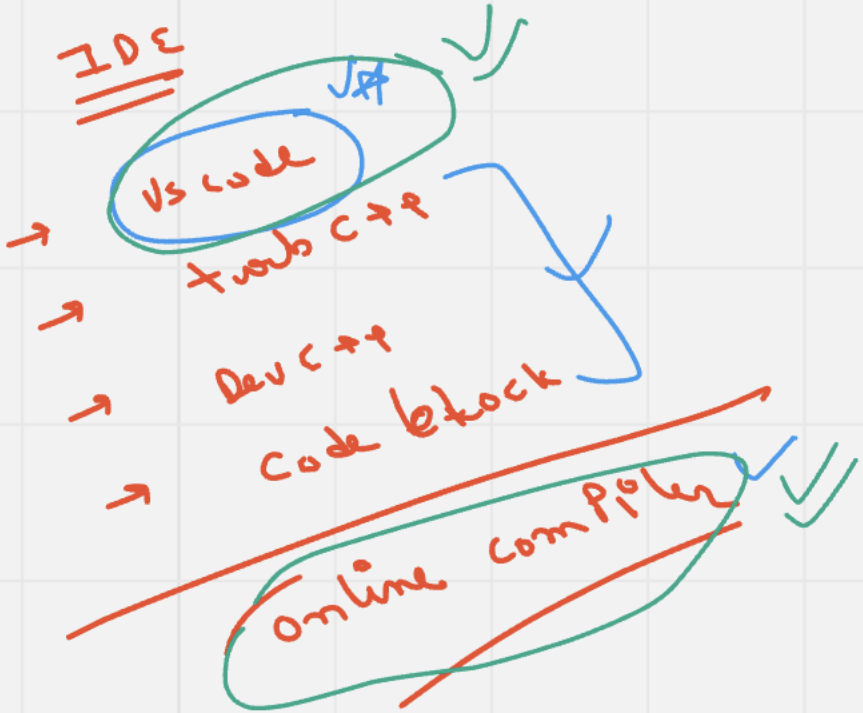
Dennis Ritchie

AT&T Bell Lab

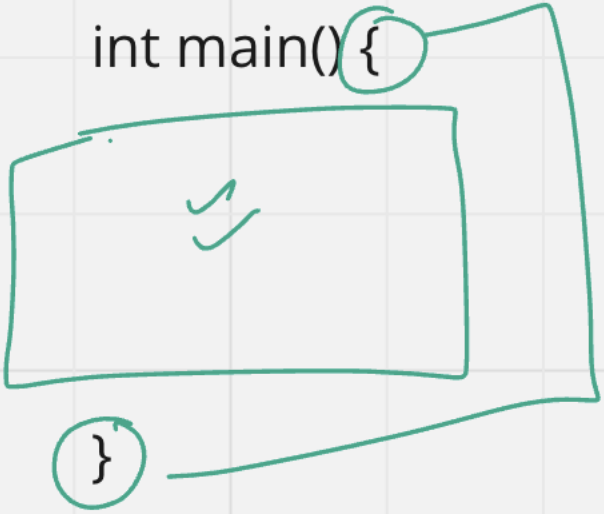



Java
C
C++
Python
Comp
output
Assem
Compiler

gcc



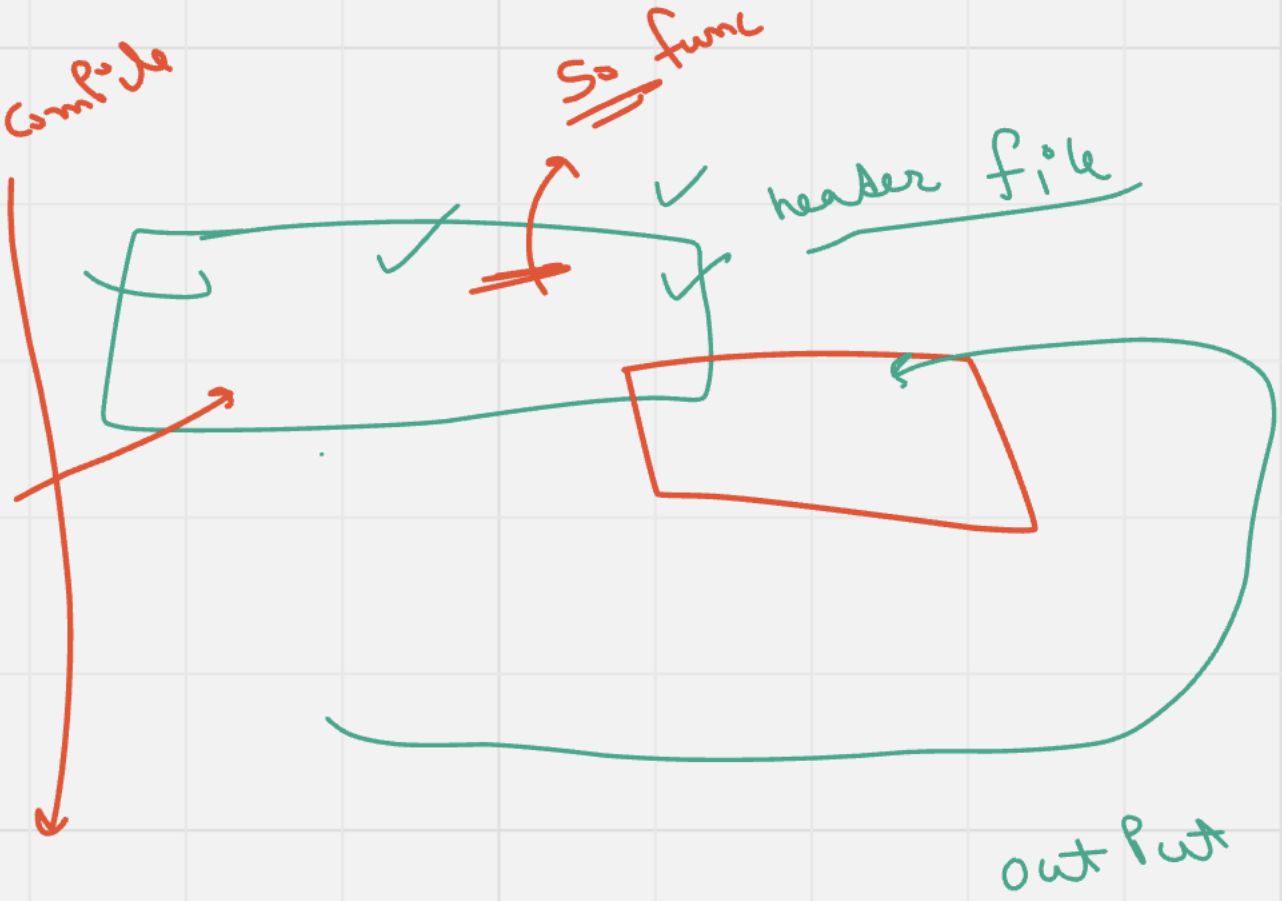
first code

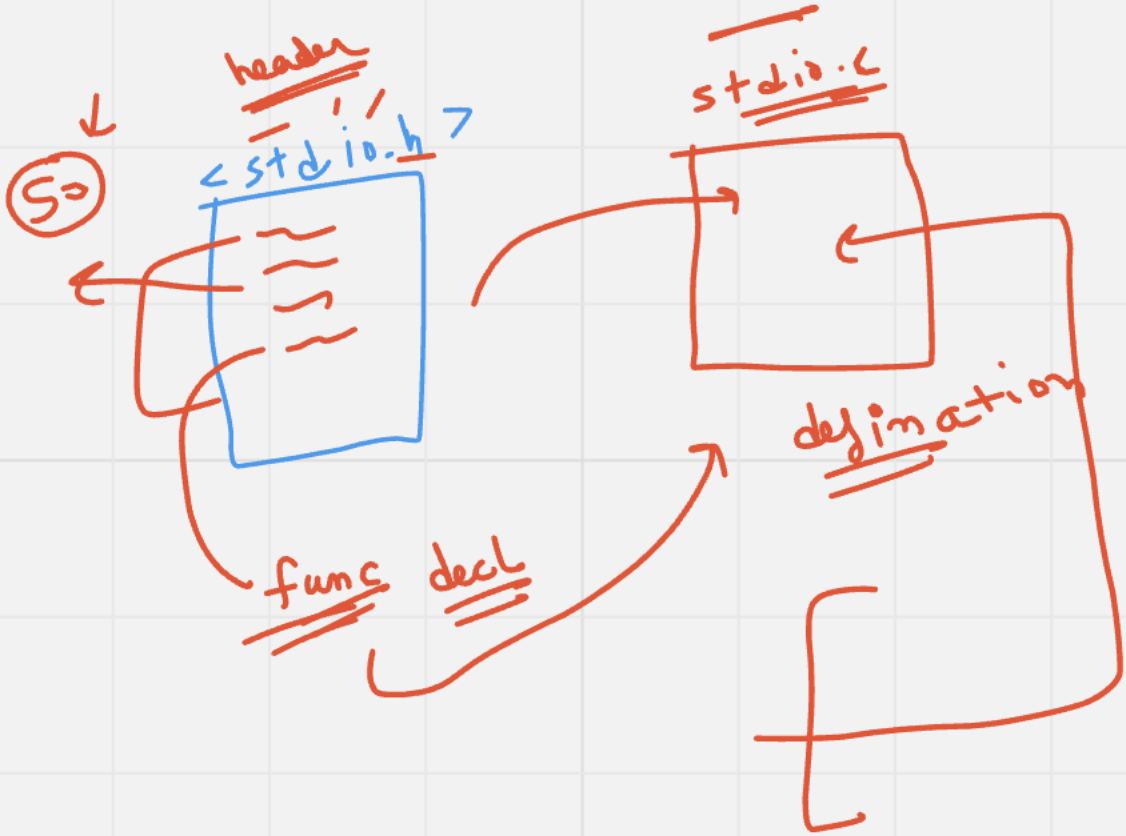


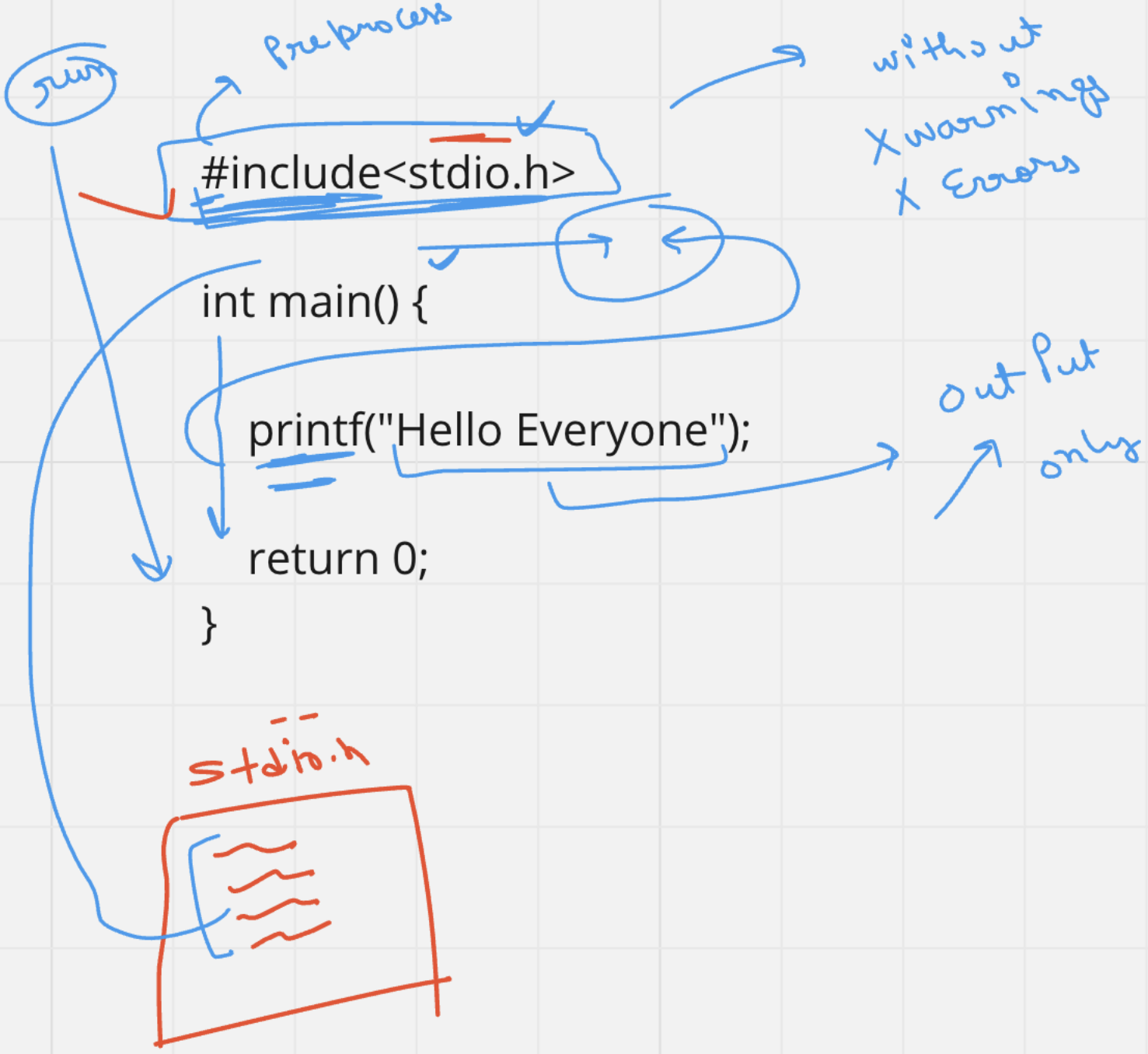
Print Something

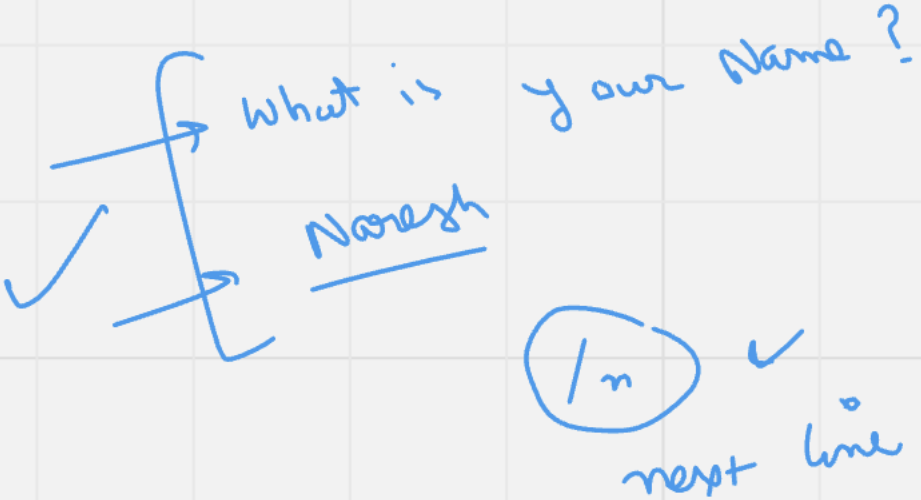
pre defined

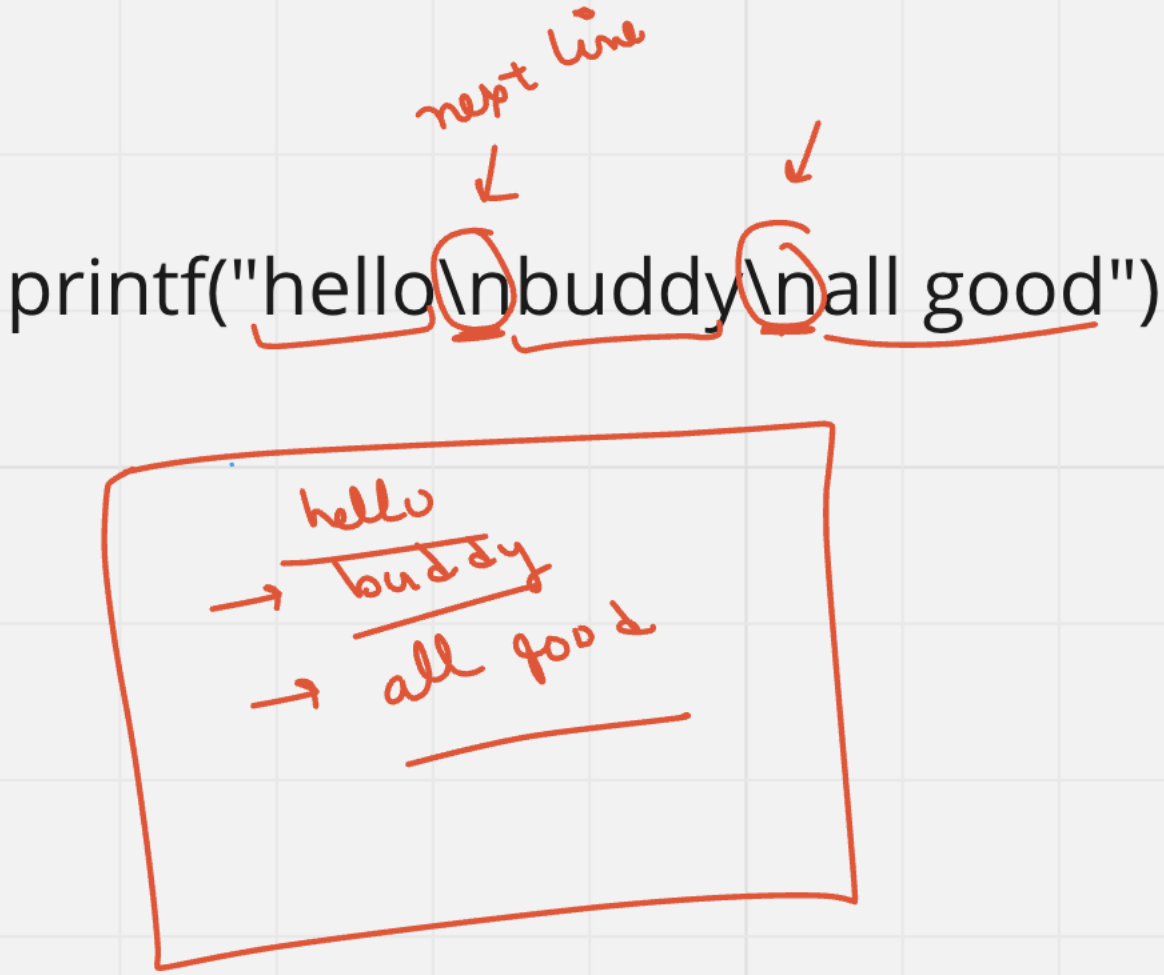
printf(" ")


Compile
So func
header file
output


header
<stdio.h>
stdio.c
definations
func decl


run
Preprocess
#include<stdio.h>
int main() {
printf("Hello Everyone");
return 0;
}
without
warning
Errors
output
only
stdio.h


What is your Name ?
Naresh
\n
next line


next line
printf("hello\nbuddy\nall good")
hello
buddy
all good

Variables in C

Tybe of Value

"Nareyh" 10 2.73

'C' True

Data types

int a = 10

float f = 2.34

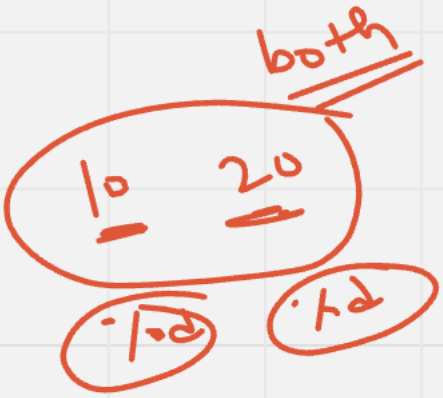
char c = 'a'

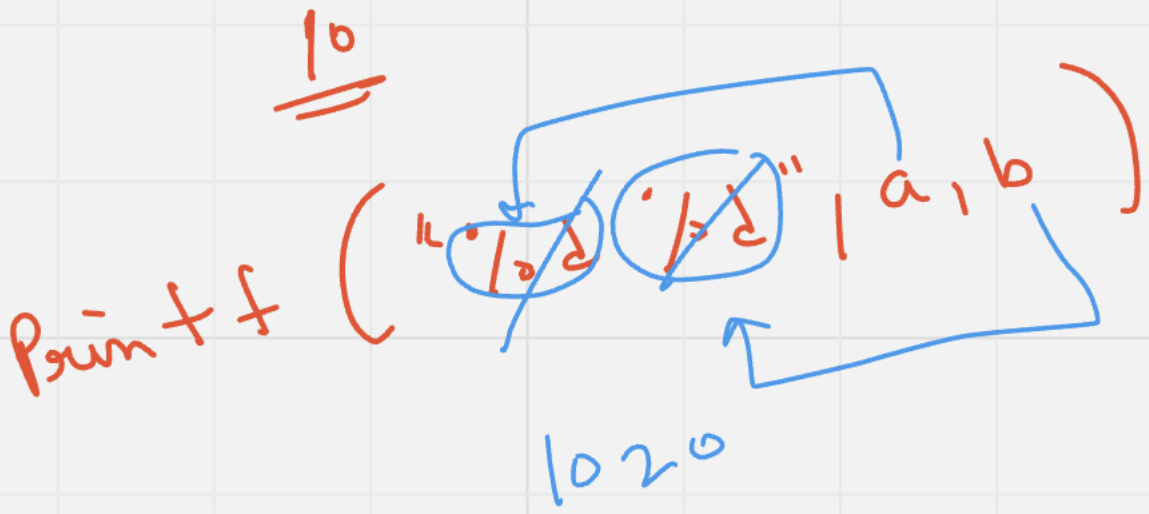
print on Screen

format specifiers

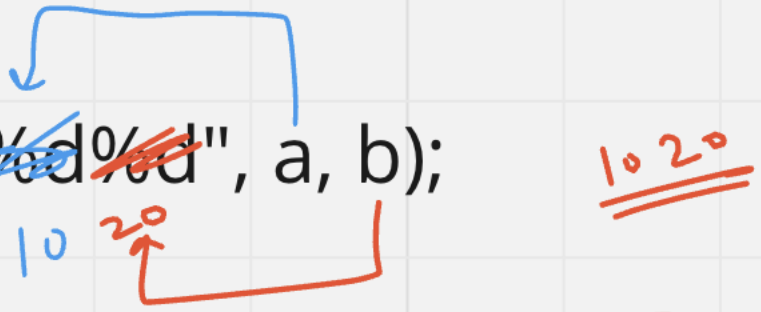
int → %d

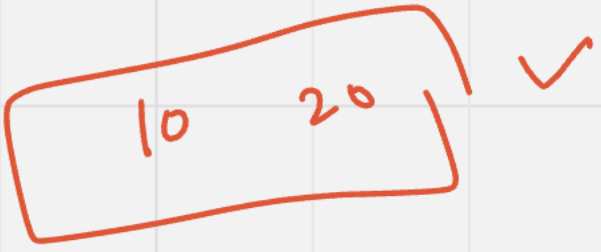
```
int a = 10;
int b = 20;

printf("%d", a);
```

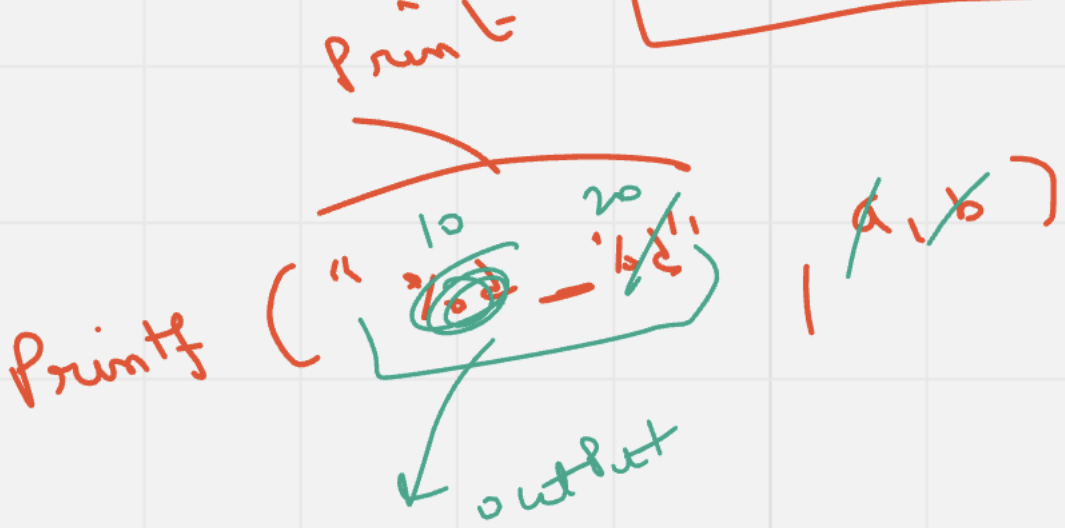


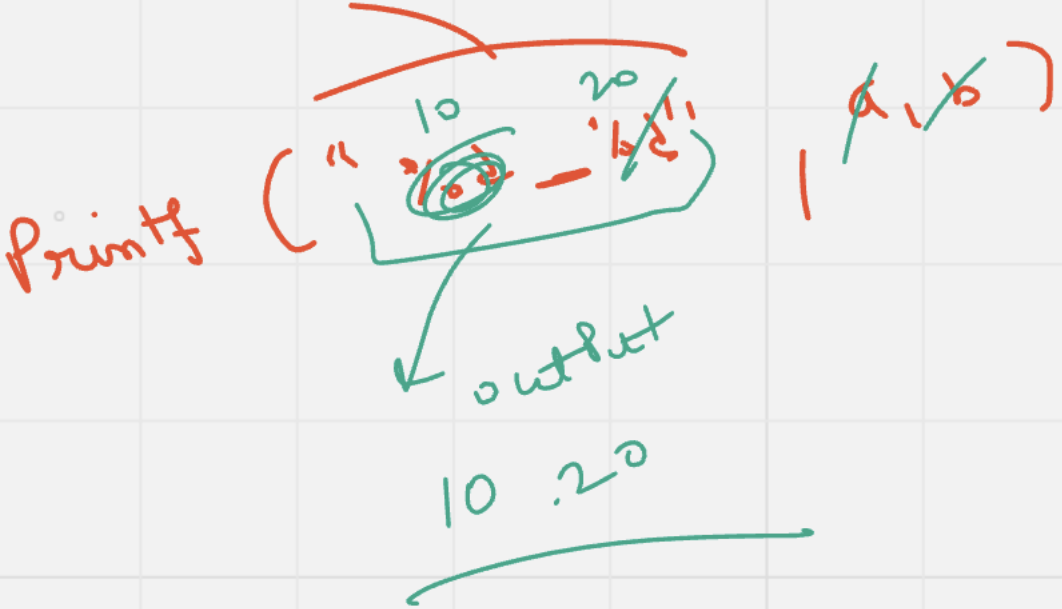

10
Printf
"%d%d"
a, b
1020

printf("%d%d", a, b);


10 20
1020


10 20


Print
Printf
10
20
a, b
output

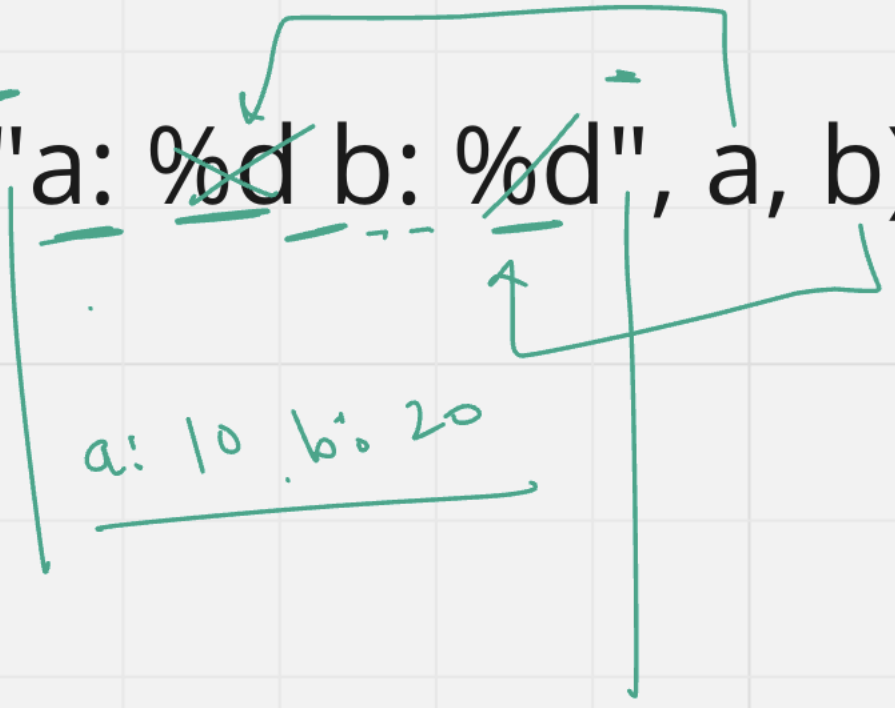


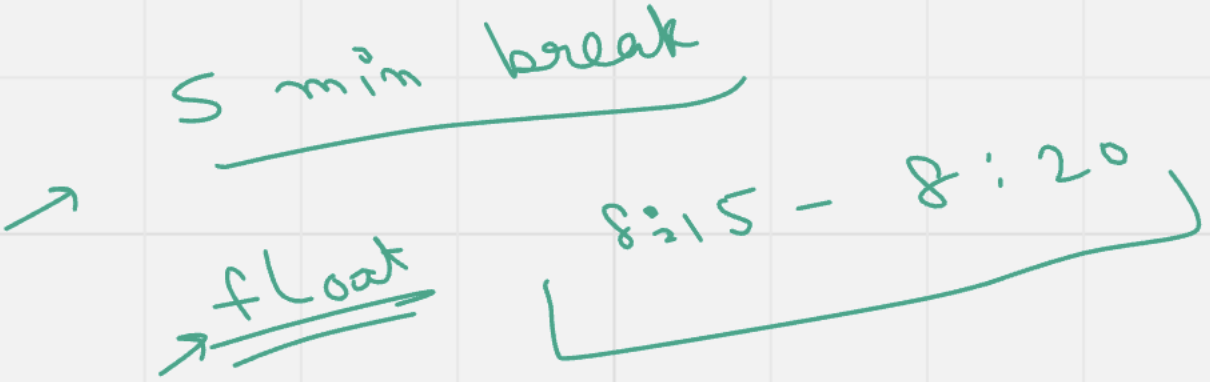
a = 10 b = 20

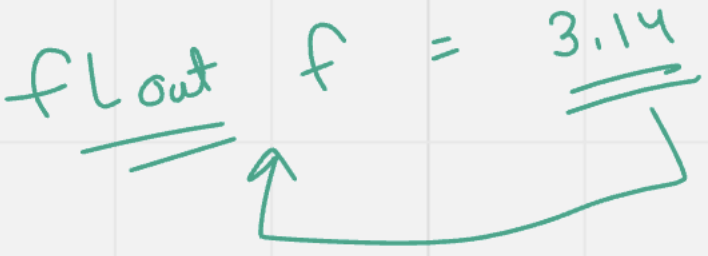
print

a : 10 b : 20

```
printf("a: %d b: %d", a, b);
```







Char

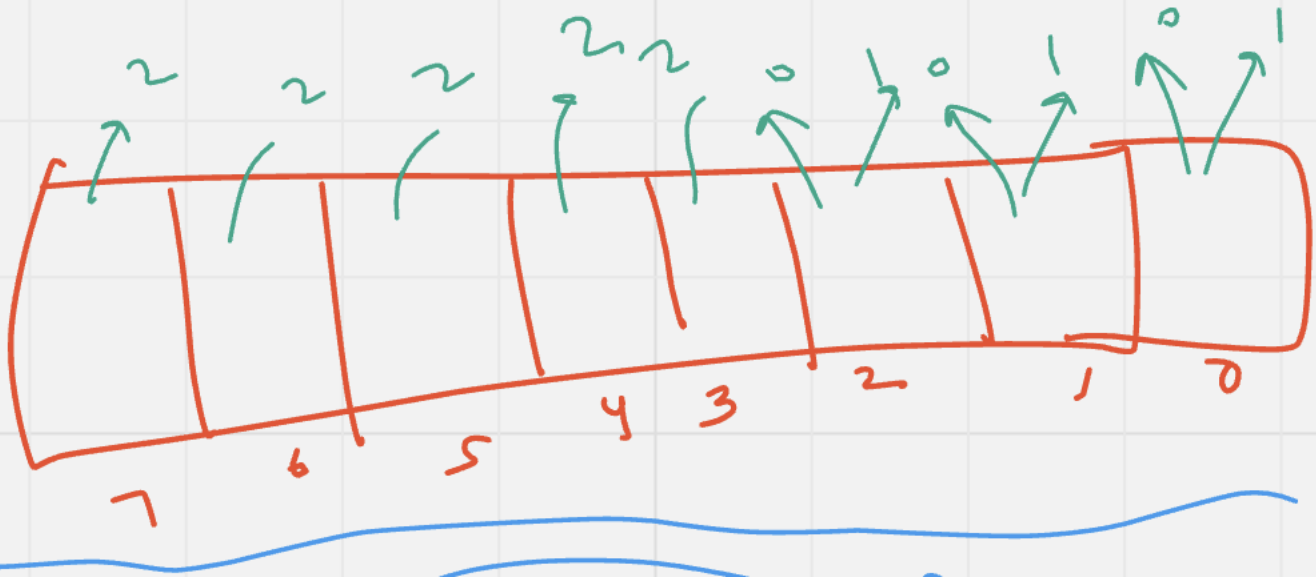
'a'

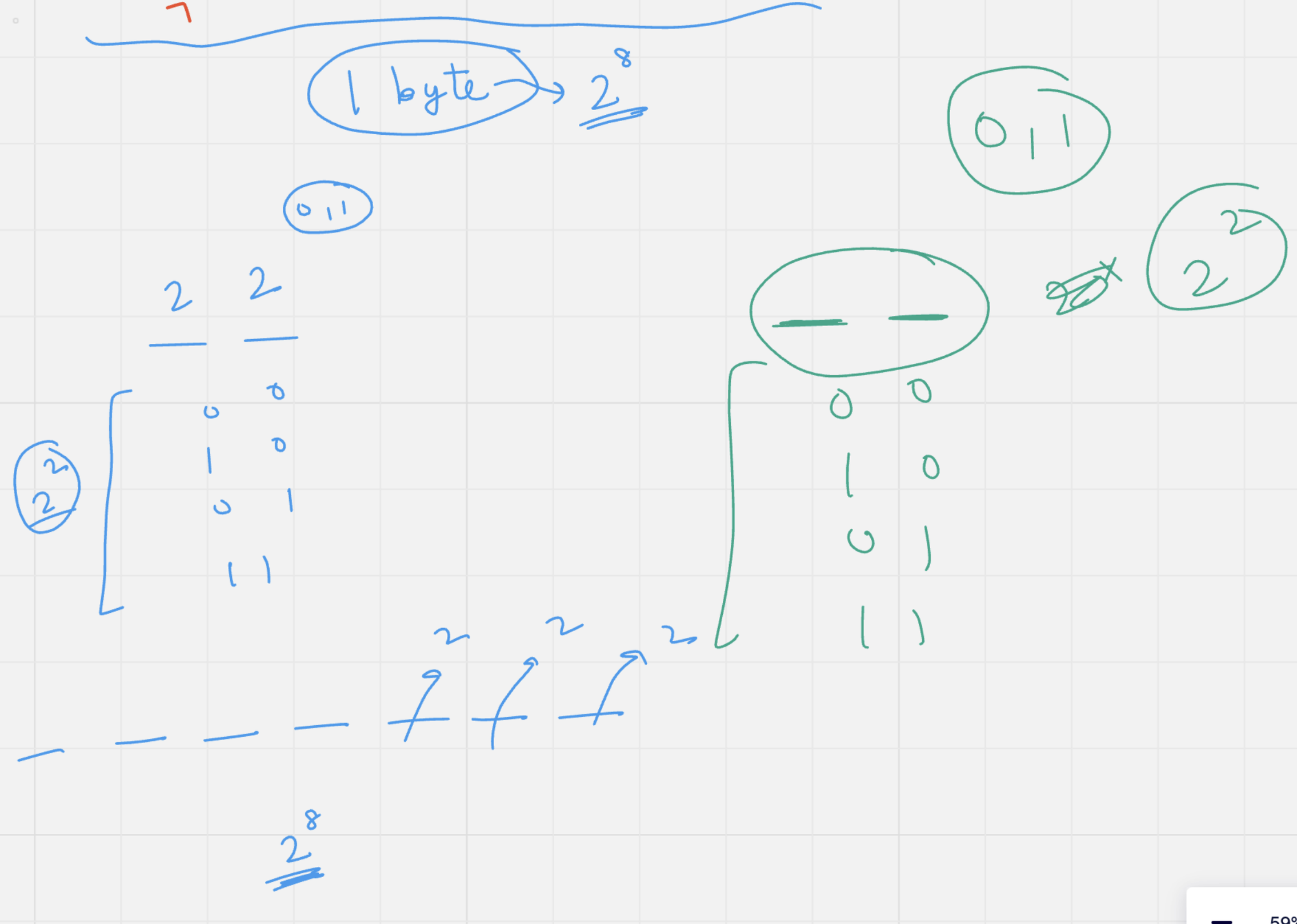
Range of int

size of int

4 byte → 32 bit

1 byte → 8 bit





1 byte → 2^8

0 1 1

0 1 1

2^2

2^2

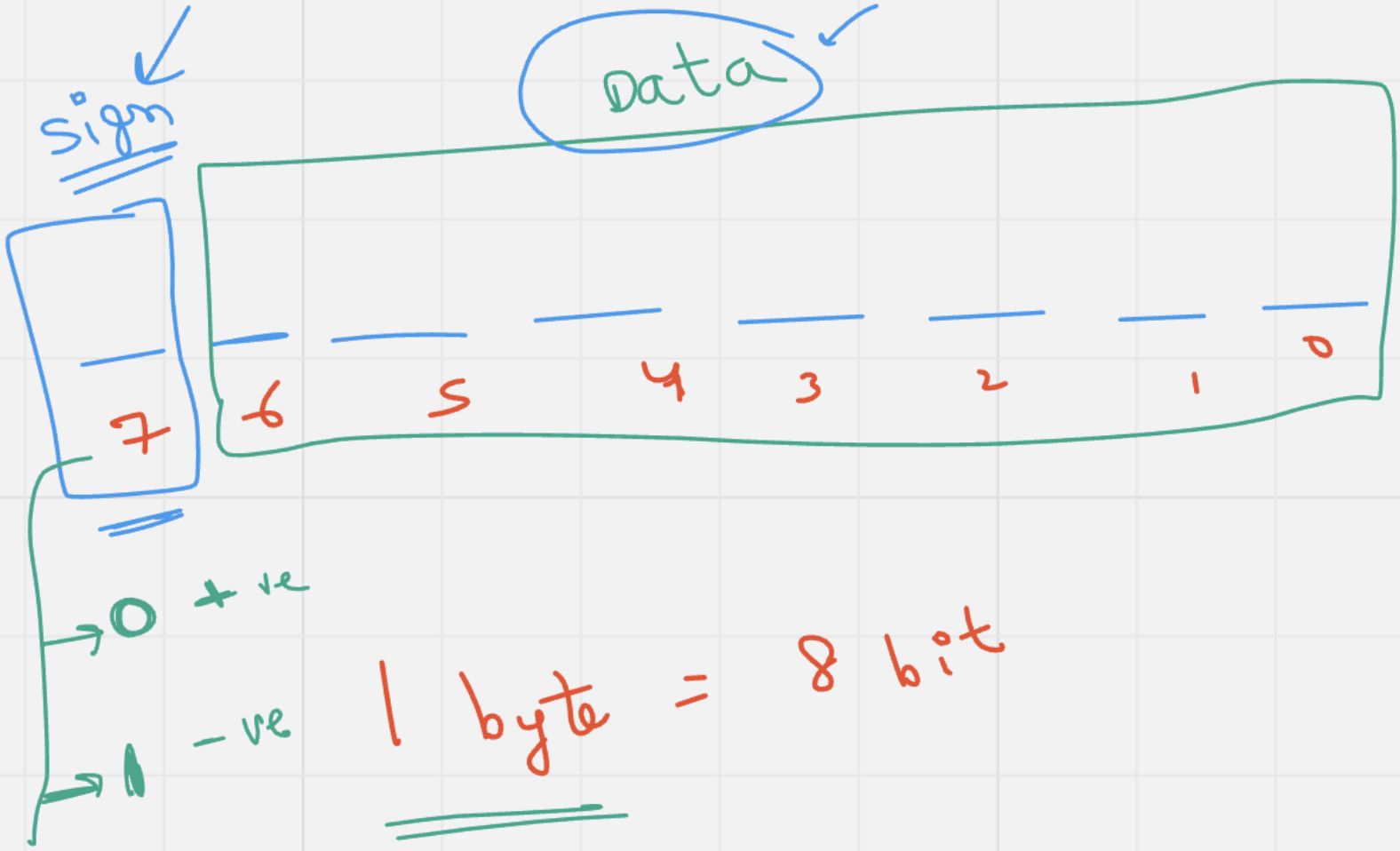
2	2
0	0
1	0
0	1
1	1

0	0
1	0
0	1
1	1

2^2 2^2 2^2

2^8

2^8



1 byte = 8 bit

+ve

-ve

int = 4 byte

32 bit

sign

data

1

31

sign

31

data

+ve

-ve

number

31

2

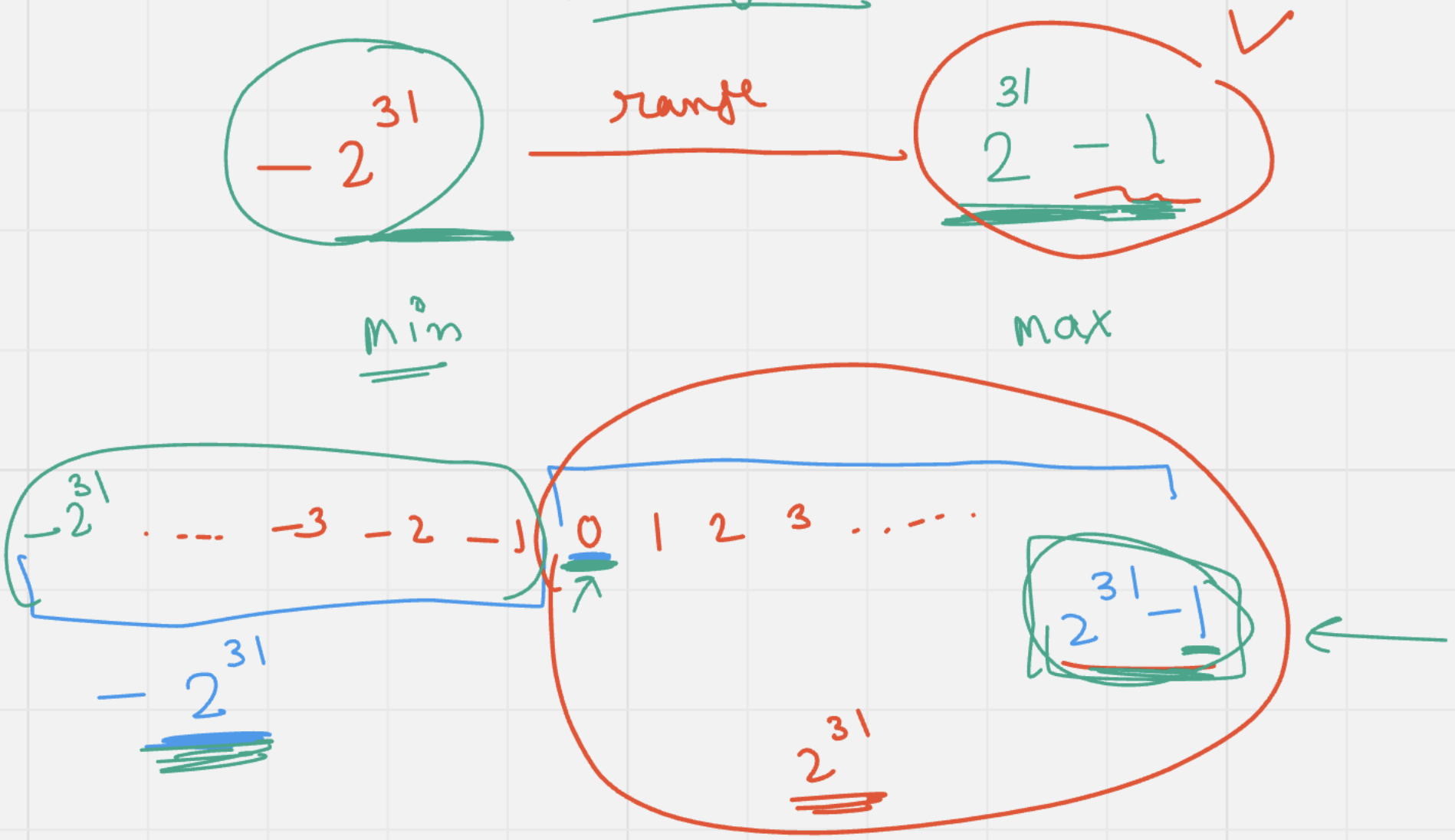
Range of int

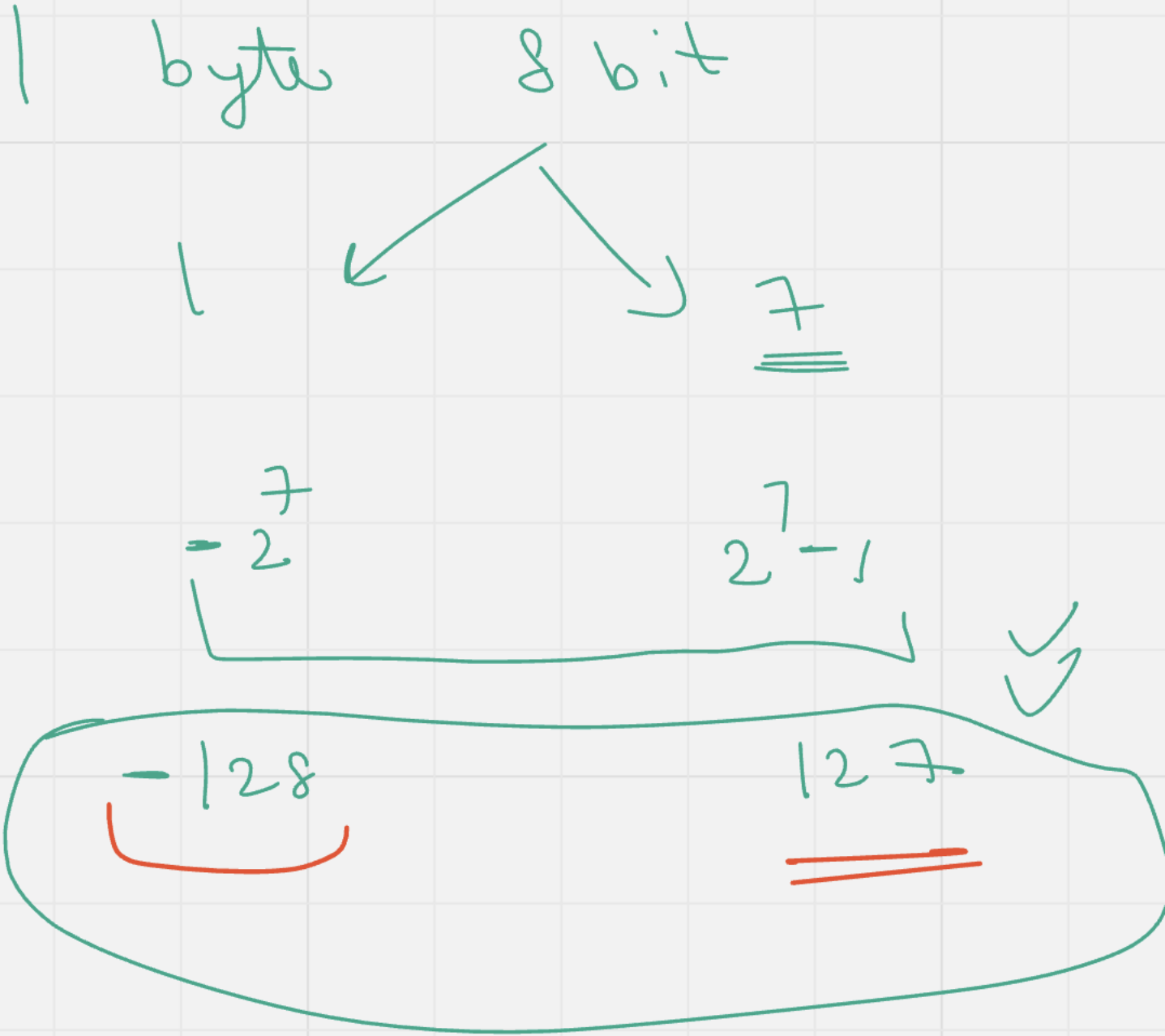
-2^{31}

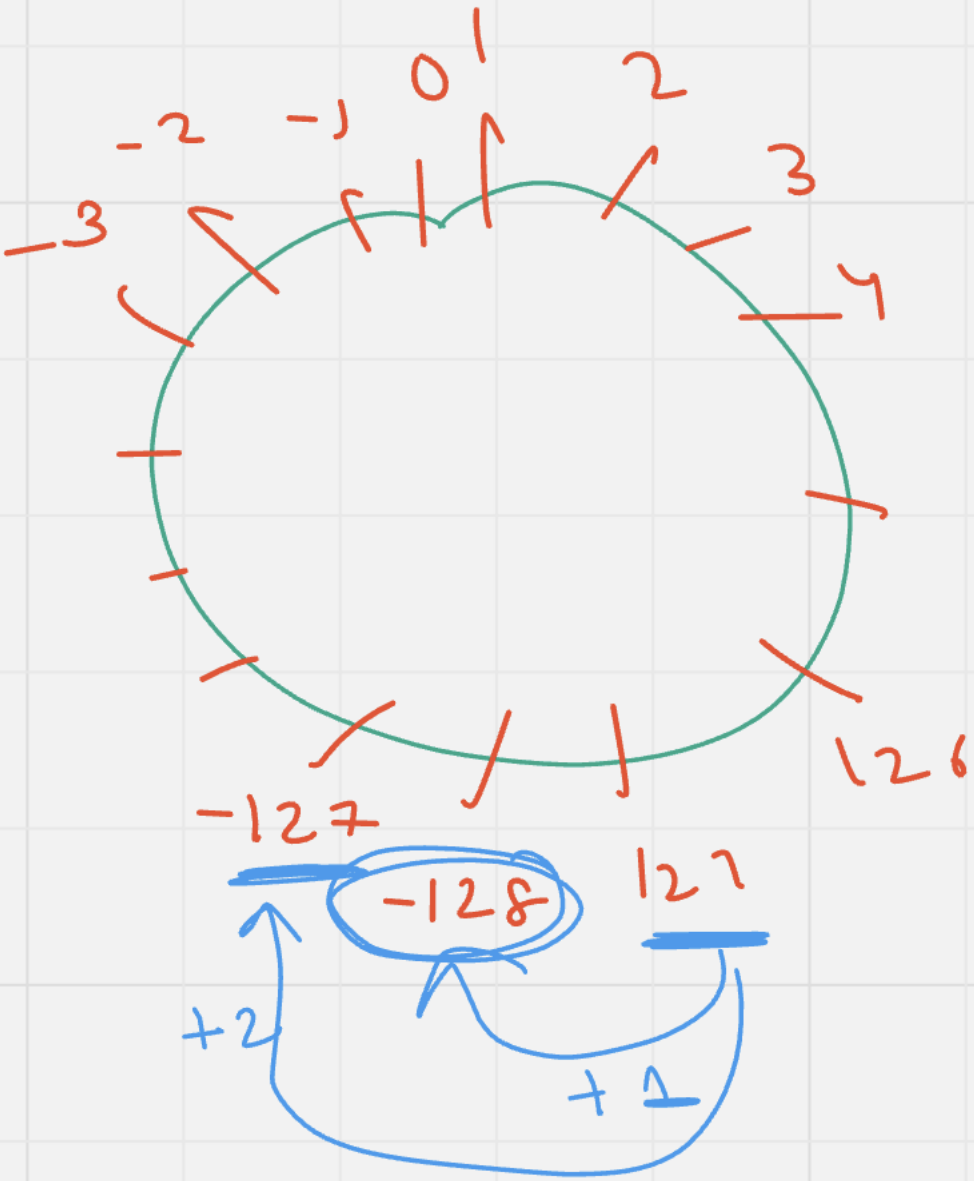
range

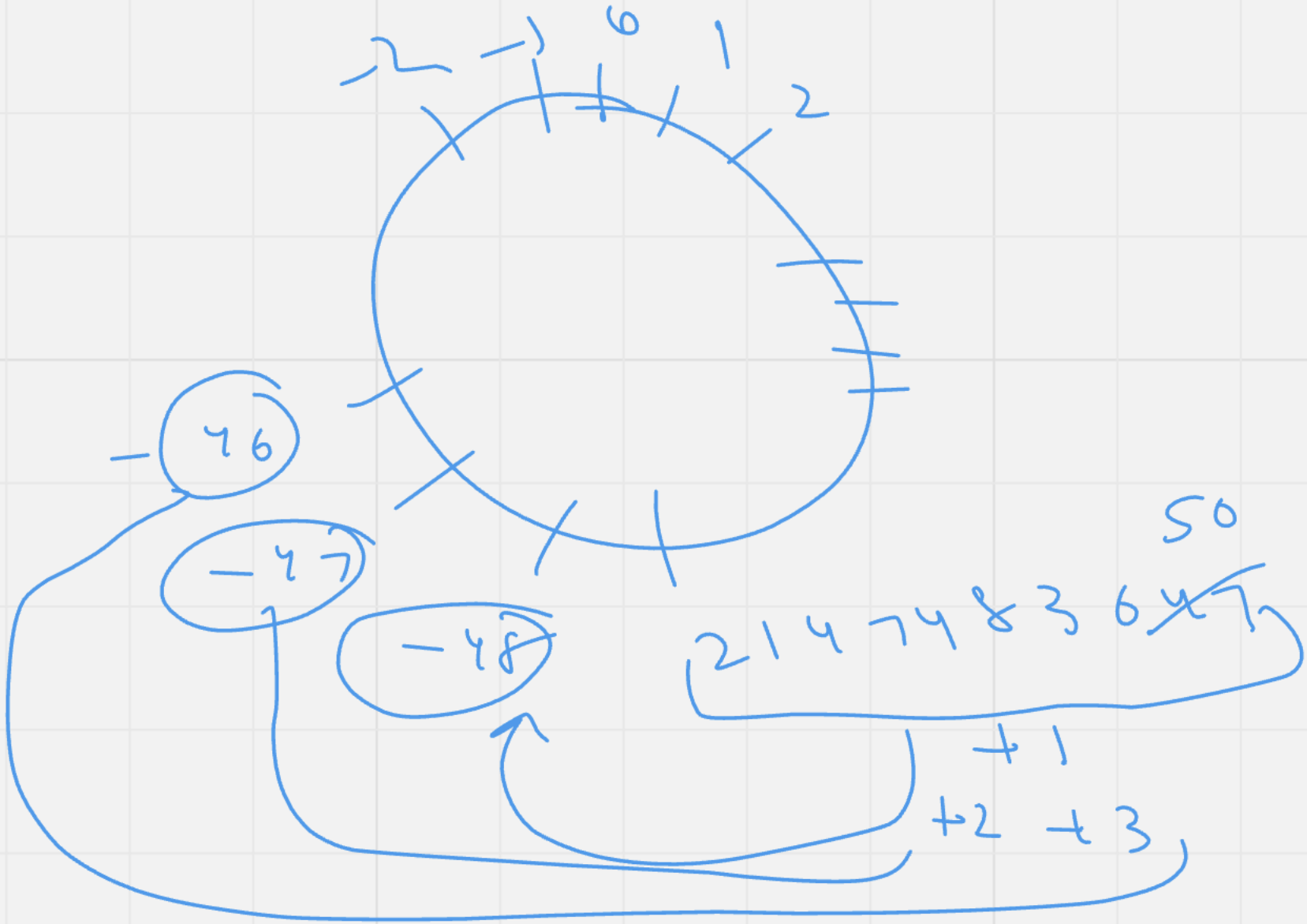
$2^{31} - 1$

Range of int




1 byte
8 bit
1
7
-2^7
2^7-1
-128
127


0
1
2
3
4
-1
-2
-3
126
-127
-128
127
+2
+1

-2147483648

-2 -1 0 1 2 3 . . . 2147483647