Programming

↳ To instruct computer to perform certain actions

→ What, how

Programming Languages

→ medium by which you instruct the computer

Types of language

machine level — 0, 1

low level → assembly

high level → Java, C++

| 0, 1 | ─ → binary language

→ Smallest unit through which you can communicate with a computer is bit

— —

$\dfrac{2}{2} = 4$

```
0 0
0 1
1 0
1 1
```

⟶ 8 bits ⟶ 1 byte

100 Mbps ⟶ Mega bits / s

Java

Tanmay ⟶ String

24 ⟶ Integer

80.76 ⟶ decimal

A ⟶ character

false ⟶ boolean

Data types

① Primitive   ② Non primitive

byte ⎫
shoat ⎬ Integer
int ⎪
long ⎭

float ⎫
double ⎬ Decimal

char ⎤ character

boolean ⎤ boolean

Variables

① upper case, lowercase
2 special characters ($, -)
digits (0 - 9)

nowtonS ✓
nS ✓
Nsz ✓
N7S ✓

② No space

③ can not start with digit

✗ Newton school
✗ 7school
@

④ No keyword

int num = (10); → Value

↙ data type   ↘ Variable
                      name

num | ~~10~~ 30 |

int num; // declaration
num = 10; // initialisatio
num = 30;

Arithmatic   Operators   a | ~~10~~ 60 |

    + - * /

    int a = num + 40;

        a = a - 10;