Programming

↳ To instruct computer
perform certain actions

→ what, how

Programming Language

↳ medium by which you interact with computer

eg → Java
→ C++
→ Python
etc

Types of Languages

→ Machine Language → 01
→ High level language
→ Low level
→ Assembly language

0, 1 → binary language

↳ Smallest unit through which you can communicate with computer

$2^2 \Rightarrow 4$

00 → 0
01 → 1
10 → 2
11 → 3

2^3
8

000 → 0
001 → 1
010 → 2
011 → 3
100 → 4
101 → 5
110 → 6
111 → 7

8 bit

0 0 0 0 0 0 0 1

3 bit

byte - - - - - - - -

B b

1 byte = 8 bits

4 bytes = 32 bits

100 Mbps

↳ 100 Mega bits / s

Data types

Tanmay → string

24 → Integer

80.80 → decimal

A → character

false → boolean

Primitive

Non Primitive

↳ Integers

int, long, byte, short

→ Decimal

float, double

→ character

char

→ boolean

boolean

int

Variables → ① Upper case, lower case
2 special characters (_, $)
digits (0-9)

② don't start with digits

③ no spaces

④ no keywords

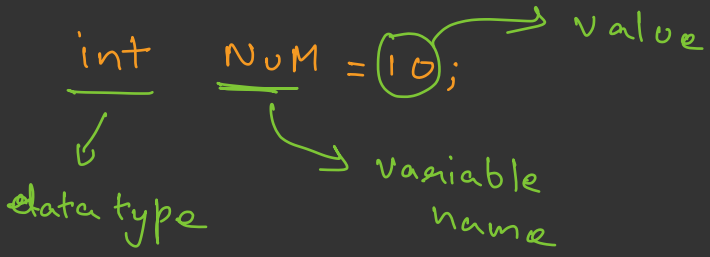
✗ New school

✗ -abc

✓ New_school

✓ Newschool

✓ New7school




```
int a;          // declaration
a = 10;         // initialisation
a = 30;
sysO( a)
```

a | 10 |

```
int c = 10 + 20;
int d = c + 60;
sysO(c);    // 30
sysO(d);    // 90
```

```
int e = 10;
e = 20;
e = e + 30;
sysO(e);
```

e | 20 |

Conditionals

if –
else

20 < 30

```
if (condition) {
    syso("inside if block")
}
```

Loops

↳ repeative work

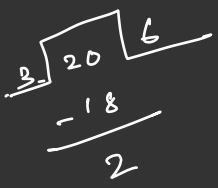
```
while ( condition ) {
    Syso ("Hi");
}
```

6.33

20 / 10 = 2

int 20 / 3 = 6

20 % 3 = 2



5 % 1 = 0

5 % 2 = 1

num % 5

→ 0, 1, 2, 3, 4

(1)

```
if(num % 2 == 0) {
    syso ("even");
} else {
    syso ("odd");
}
```

Ques Find if number is Prime

(18)

2, 3, 5, 7, 11, 13, 17, 19, 23. .

121

(2) 3 4 5 11

X X X

Not Prime