

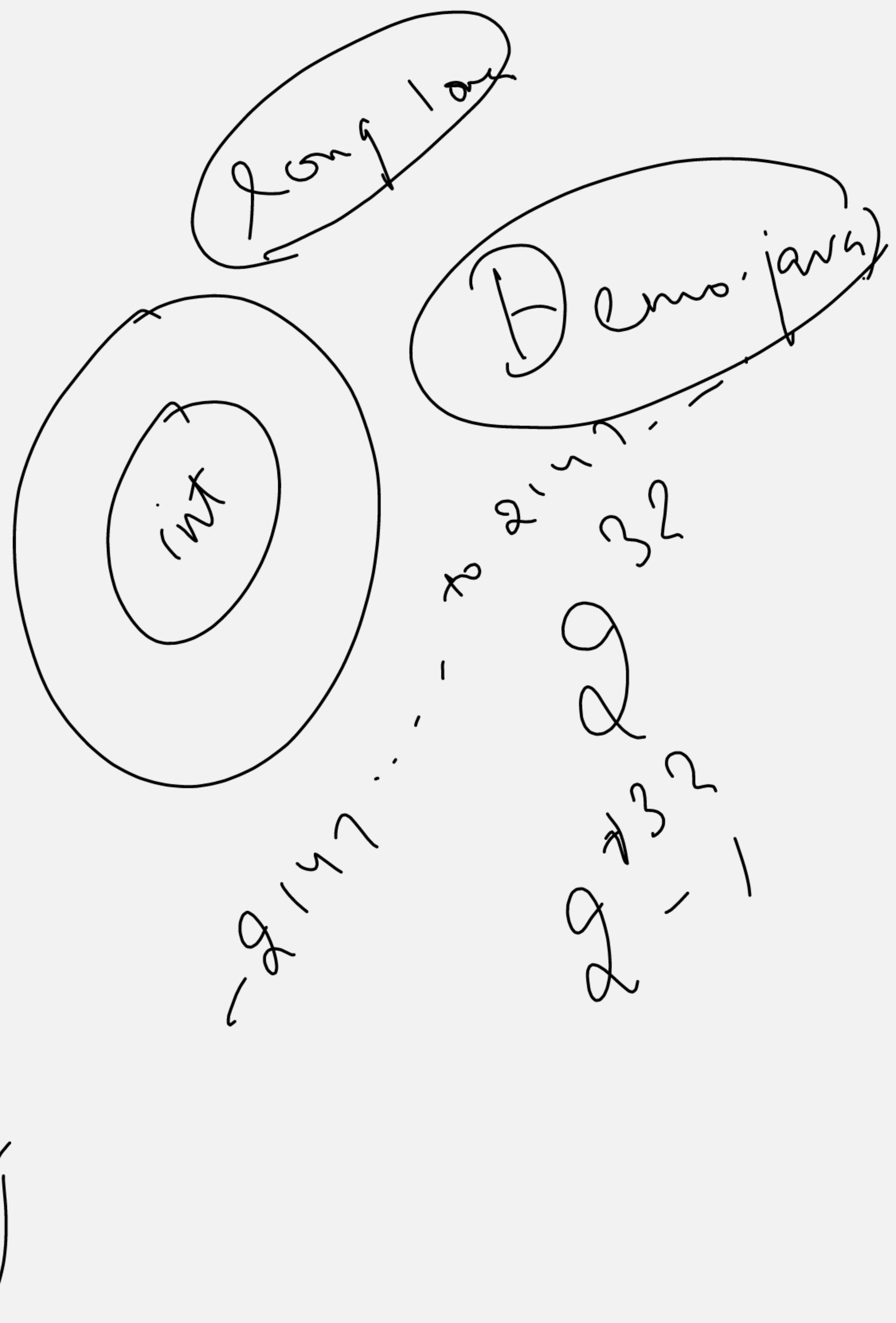
Ques. 1. Add Two numbers,


```
public class Demo {  
    public static void main(String [] args) {
```

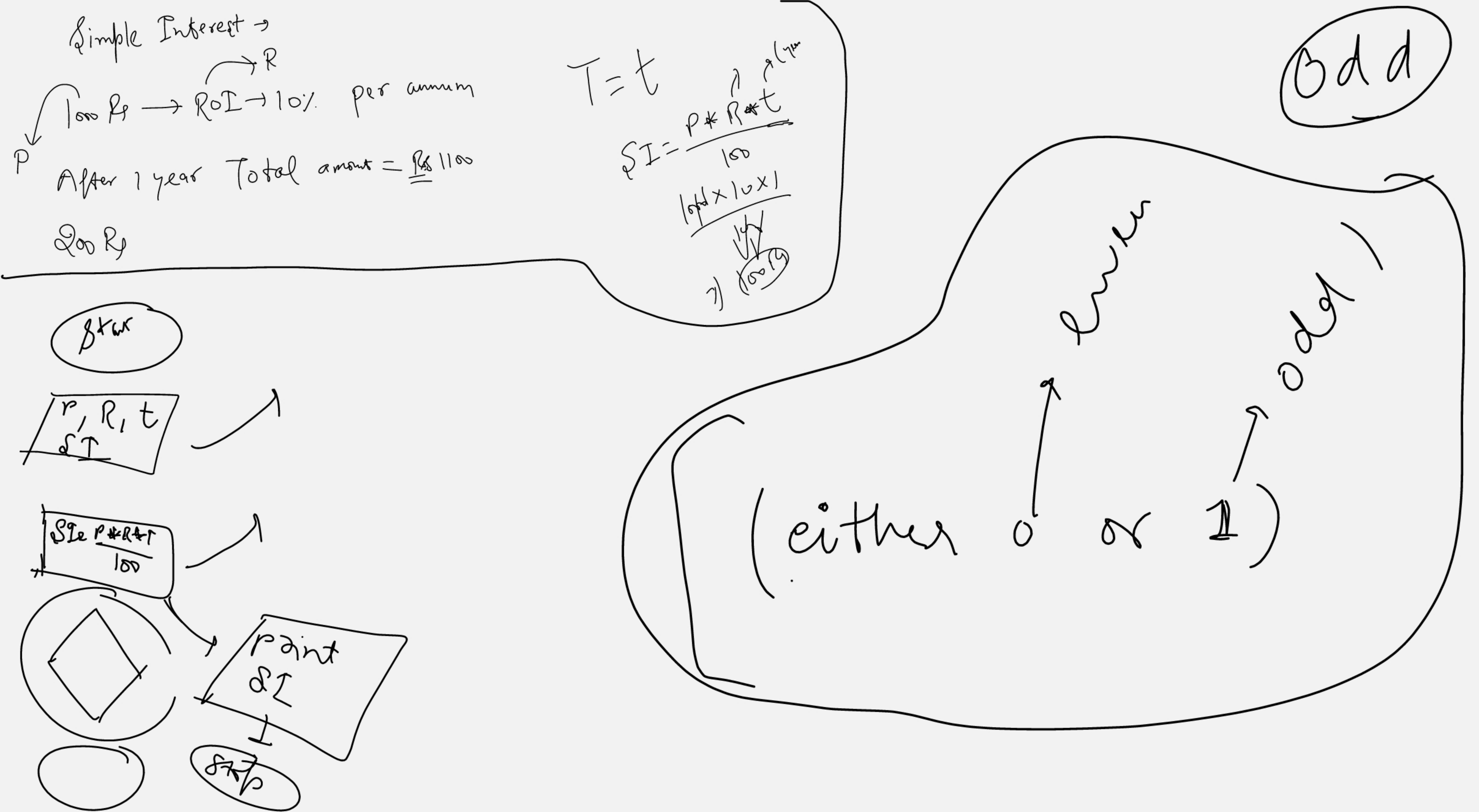
{
 → double
 → int
 → float
 → long long
 → long long}

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

```
        System.out.println("The sum is: "+sum);  
    }  
}
```

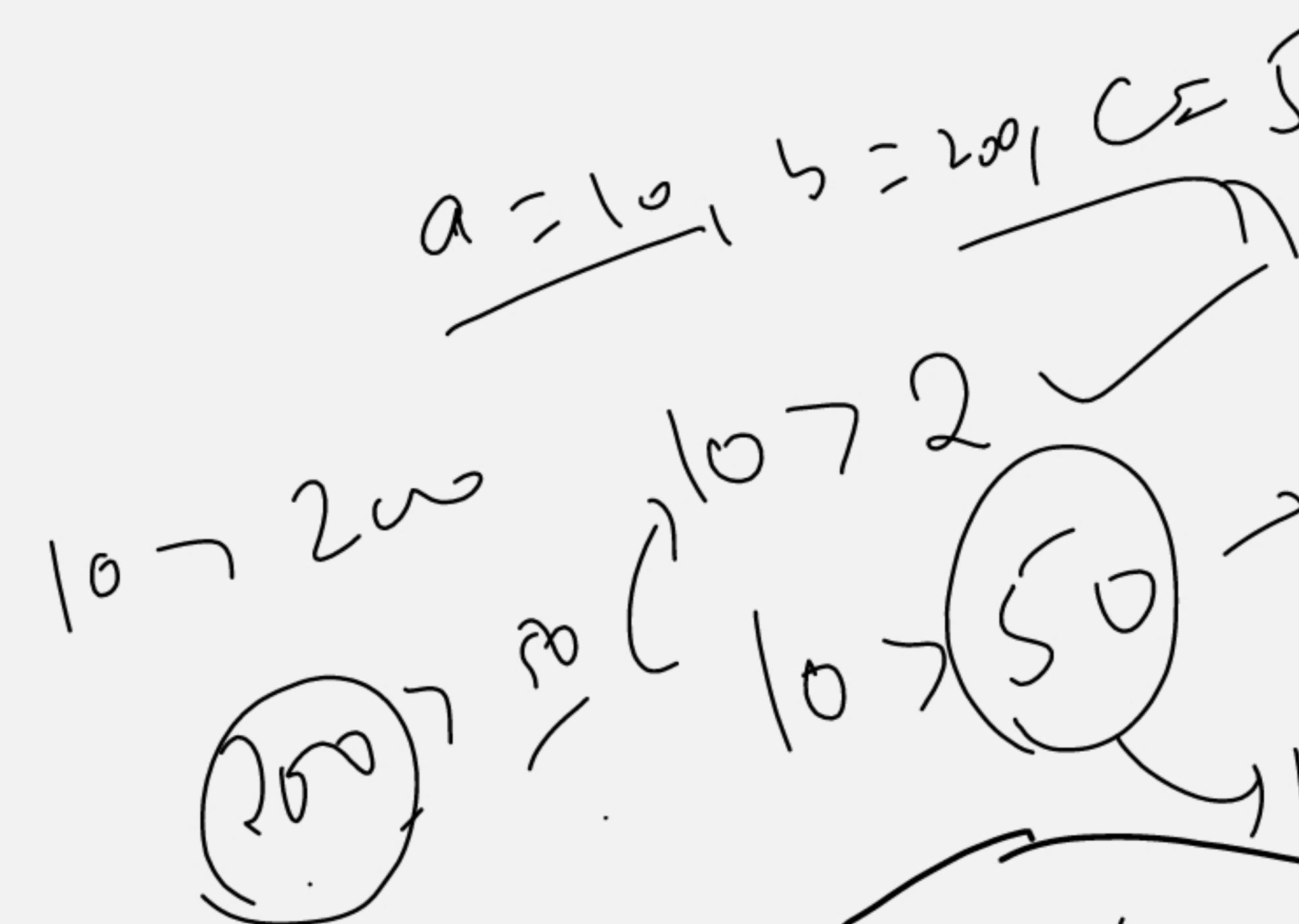
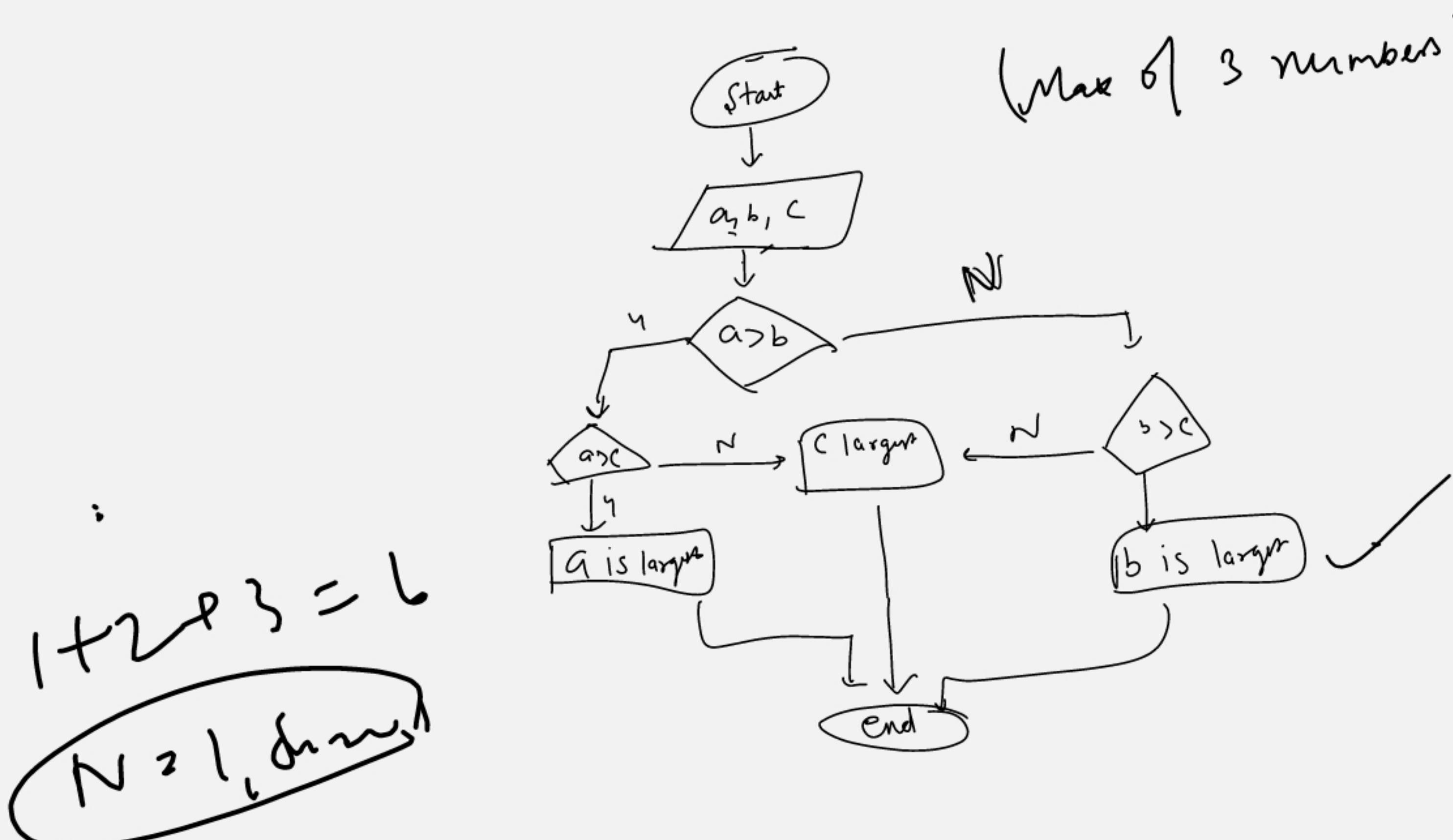






```

    input num
    if (num) / 2 ==
        0)
    print ("even");
    else
    print ("odd");
  
```



Show of n natural number

Input $n = 10$
 $\text{sum} = 0$

$$\frac{n * (n+1)}{2}$$

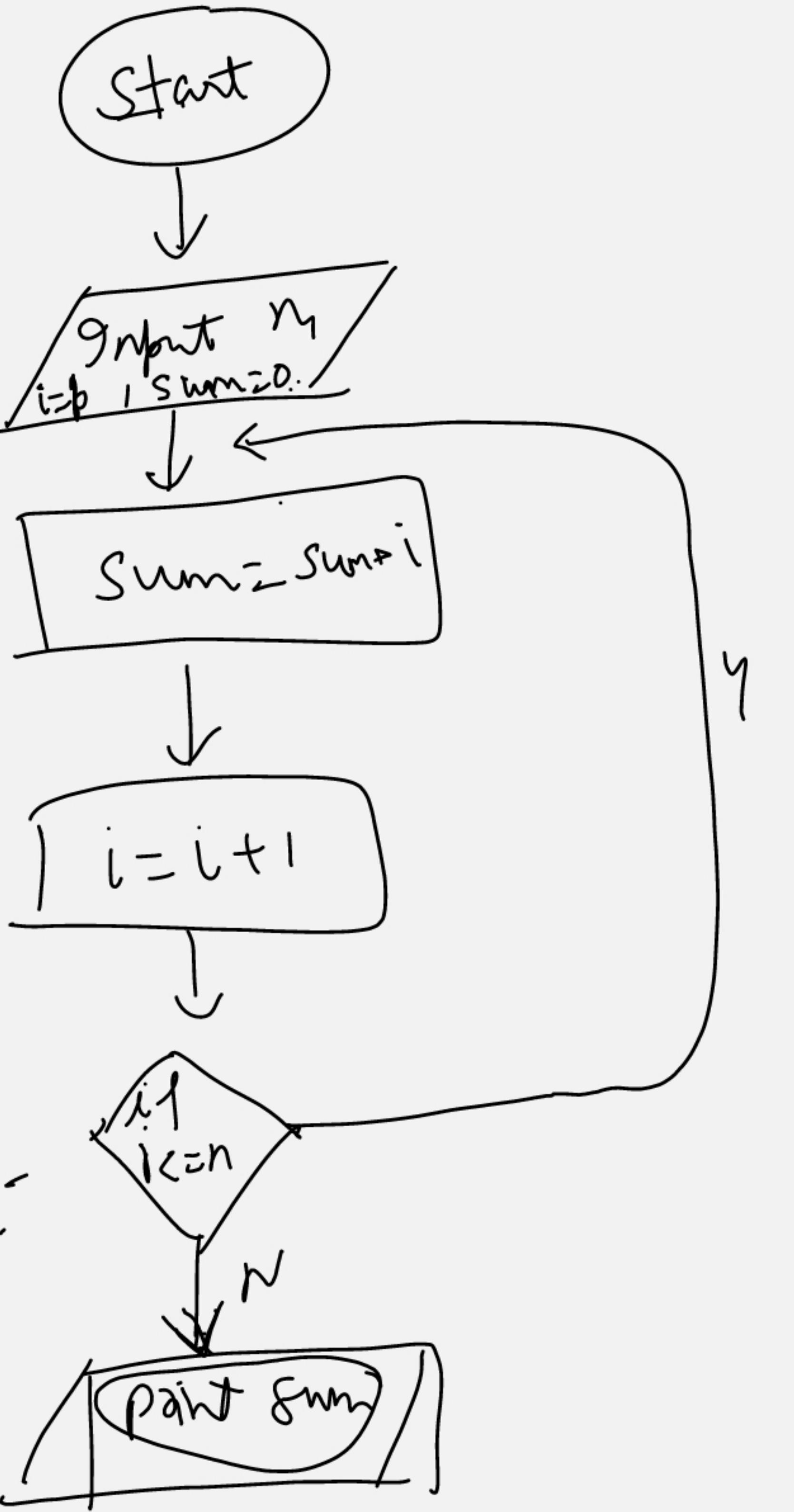
for(
 int i=1; i<=n; i++) {

$$\text{Sum} = \text{Sum} + i;$$

}

```

if(a > b) {
    if(a > c) {
        a is larg
    } else c is larg
} else if(b > c) {
    b is largest
} else c is largest;
    
```



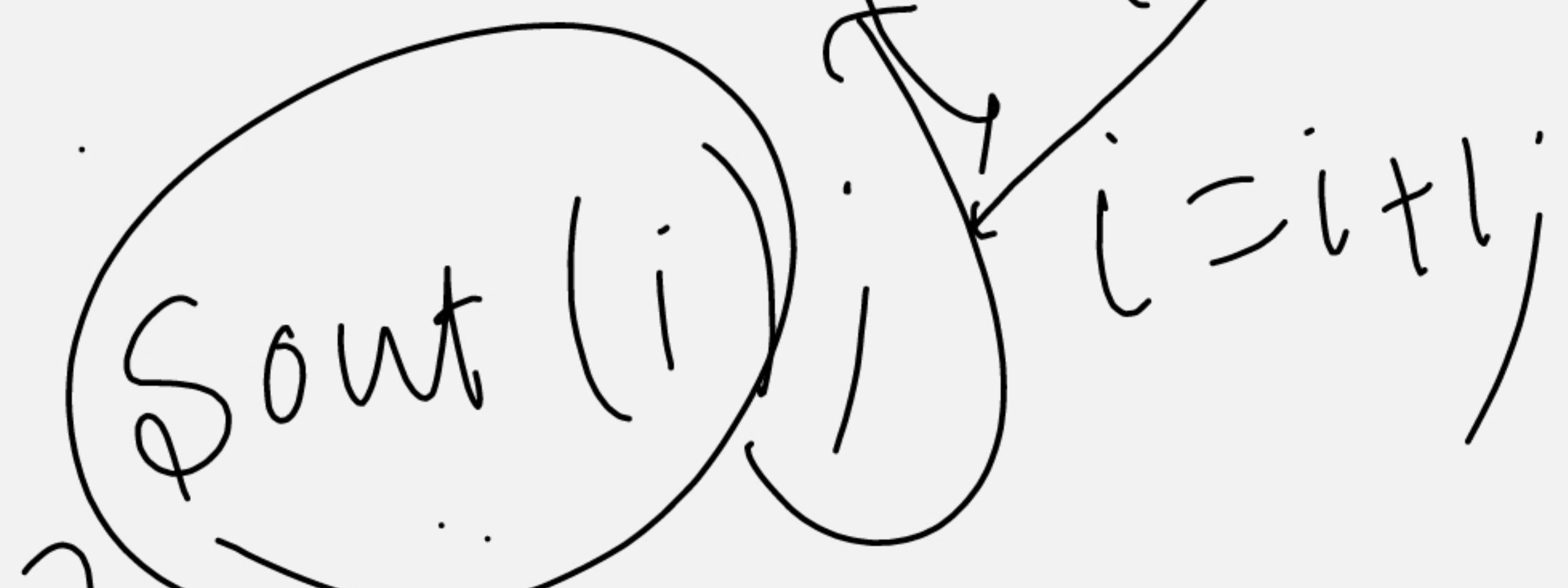
$i = 1, 2, \dots, 100$

for ($i = 1, i \leq 100$)
 {
 Sum = sum + i;
 System.out.println("sum");
 }
 sum = 0

Output

1 2 ... 99 100

\Rightarrow Sout("My name");
 }



$n = 5; i$

$sum \leftarrow$

$\rightarrow int n = 5$

$\rightarrow int sum = 0;$

$sum \neq 15$

$i = 1, 2, 3, 4, 5, 6$

5

n

3
2

sum

$\rightarrow int n = 5$

$\rightarrow int sum = 0;$

for ($int i=1; i < n; i++$) {
 $int a = i;$

$sum = sum + i;$

...

}
 $cout(sum);$

i

6
L = 5
11
11

$7 \rightarrow \text{constant}$

$$\begin{aligned} 7 \times \underbrace{1}_{n} &= 7 \\ 7 \times 2 &= 14 \\ 7 \times 3 &= 21 \\ 7 \times 4 &= 28 \\ 7 \times 5 &= 35 \\ \vdots & \\ 7 \times 10 &= 70 \end{aligned}$$

$$\begin{aligned} \text{Prod} &= 7 \\ &\quad \vdots \\ &\quad 7 \\ &\quad \vdots \\ &\quad 7 \\ &\quad \vdots \\ &\quad 7 \end{aligned}$$

\dots

$$7 \times 1 = 7$$

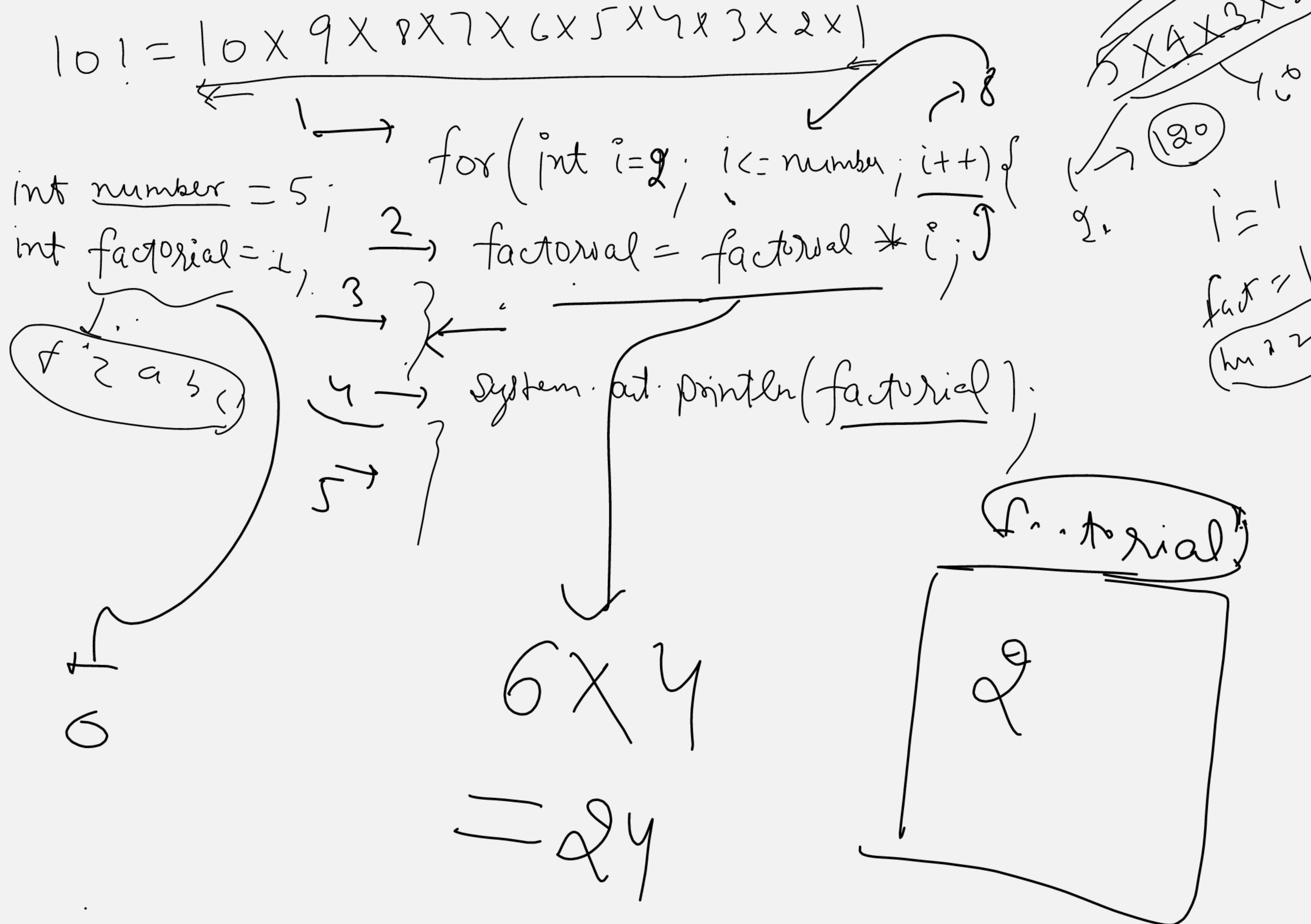
$$\begin{cases} 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \end{cases}$$

```
int n=7; prod=1;
for(int i=1; i<=10; i++){
    prod = n * i;
    System.out.println(prod);
}
```

$\begin{array}{c} 7 \\ \downarrow \\ 2 \end{array}$

$\boxed{2 \leq 10}$

Factorial of a given number \rightarrow



$$5! = 5 \times 4 \times 3 \times 2 \times 1$$

$$7! = 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$$

Dry Run

$$i = 2 \times 3 \times 5$$

$$\text{factorial} = 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10$$

$$\text{number} = 5$$

number - 7

$$\text{factorial} = 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10$$

$$i = 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$$

Constant