Quiz

continue → it will skip the current itr? and move to the next one.

break; → simply break out of the executing loop.

```
int a=0;
for(int i=1; i<=10; i++){
    if(i%2!=0)
        continue;
    a++;
}
sop(a) → 5;
```

i the condition 1, 3, 5, 7, 9

add-5

even-5

a	i	i<=10	i%2!=0	a++	i++
0	1	T	T	skip	2
0	2	T	F	1	3
1	3	T	T	skip	4
1	4	T	F	2	5
2	5	T	T	skip	6
2	6	T	F	3	7
3	7	T	T	skip	8
3	8	T	F	4	9
4	9	T	T	skip	10
4	10	T	F	5	11
11	F → come out loop →			a	o/p → 5.

2)

```
int i=0;
for(i=0; i<5; i++){
    if(i<4){
        sop("Hello");
        break;
    }
}
```

i	i<5	i<4	O/P	
0	T	T	Hello	i++.

break.

↓

come out of loop.

Q → Given a number Print N → factorial.

↳ N=5 → 5x4x3x2x1 → 120 O/P

N=4 → 4x3x2x1 → 24 O/P

1x2x3x4 — 1 — N

1) 1 ..... N - loop

2) each number is multiplied ?

↓

inside loop.

int 2x10^9

```
int N= sc.nextInt();
int fact = 1;
for(int i=1; i<=N; i++) {
    fact = fact * i;
}
sop(fact);
```

N=5; fact=1;

i	i<=N (5)	fact	i++
1	T	1x1=1	2
2	T	1x2=2	3.
3	T	2x3=6	4
4	T	6*4=24	5.
5	5	24x5=120	6
6	F		

↓ come out of loop.

O/P → 120

Q → Given two numbers A & B. find the H.C.F | G.C.D.

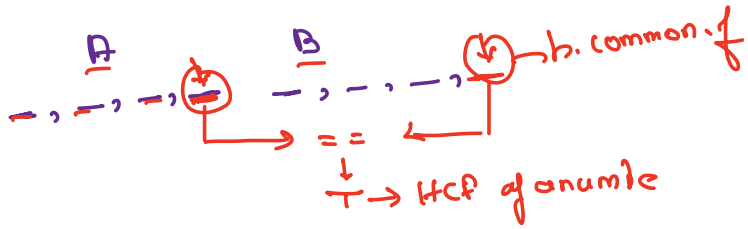
H.C.F → Highest common factor.

G.C.D → Greatest Common Divisor

factor → ? — Num which divide A|B completly

A%N == 0

↳ remainde → 0.



A = 24

1, 2, 3, 4, 6, 8, 12, 24

B = 36

1, 2, 3, 4, 6, 9, 12, 18, 36

==x

= = x

12 = = ✓12 → 12 - H.C.f.

A	B	HCF(A, B)
24	36	12
4	8	4
5	155555 →	5 ?
10	(2025555 →	5 ?
10	12,000. →	10 ?

→ 1, 5

1, 2, 5, 10

1, 5, 10, 23 ... ✗

C' min. A, B - any. → 1 - smallest

max 5.

(A 5 = B 155555) - A

(155555 5) - 5 - B

(10 15550) - A.

minimum of A × B.

1 ..... min(A, B).

min → 1

max → min(A, B).

|| X

T F → T

F T → T

T T → T

F F → F

&& (and)

T F → F

F T → F

F F → F

step1 Algo

1) take input A, B.

2) find min.

3) loop from (1 — min)

4) if i devides both A and B.

if(A%i==0 && B%i==0)

5) hcf = i;

6) print hcf.

t — min(A, B)

h. common factor

//Break time

back

10:43

Women Association

Neelam

```
int A = sc.nextInt(); 50
int B = sc.nextInt(); 60
int min;
if (A > B) {
    min = B;
} else {
    min = A;
}
```

```
if (A < B) {
    min = A;
} else {
    min = B;
}
```

```
int hcf;
for (int i = 1; i <= min; i++) {
    if (A%i == 0 && B%i == 0) {
        hcf = i;
    }
}
sop(hcf);
```

A=10 B=15 min=10

10 10 15

i	i <= min	A%1==0 && B%1==0	bcf	++i
1	T	T && T => T	1	2
2	T	T && F => F	X	3
3	T	F && T => F	X	4
4	T	F && F => F	X	5
5	T	T && T => T	5	6
6	T	F && F => F	X	7
7	T	F && F => F	X	8
8	T	F && F => F	X	9
9	T	F && F => F	X	10
10	T	T && F => F	X	11
11	F → Come out of loop			

O/p → 5.

Q → Given a number find the evenSum and oddSum of the index position of digits.

N = 1 2 4 6 8 9 .

index: 6 5 4 3 2 1 ←

odd
1 → 9.
3 → 6.
5 → 2.
↳ 17 → oddsum.

even
2 → 8
4 → 4
6 → 1
evenSum. ← 13

```
int evenSum = 0;
int oddSum = 0;
int index = 1;
for(int i = N; i > 0; i = i/10){
    int d = i%10;
    if(index%2==0){
        evenSum += d;
    }else{
        oddSum += d;
    }
}
```

i = 124689 ✗
i = 12468 ✗
d = 9, 8, 6 → ✗
N = 12468 ✗

index++;

N = 12689 oddsum=0; evensum=0; index=1;

i	i>0	d	index%2==0	evensum	oddsum	index++	i=i/10
12689	T	9	F	*	9	2	12468
12468	T	8	T	8	X	3	1246
1246	T	6	F	X	15	4	124
124	T	4	T	12	X	5	12
12	T	2	F	X	17	6	1
1	T	1	T	13	X	7	0
0	f → come out of loop						

sop(evenSum); → 13

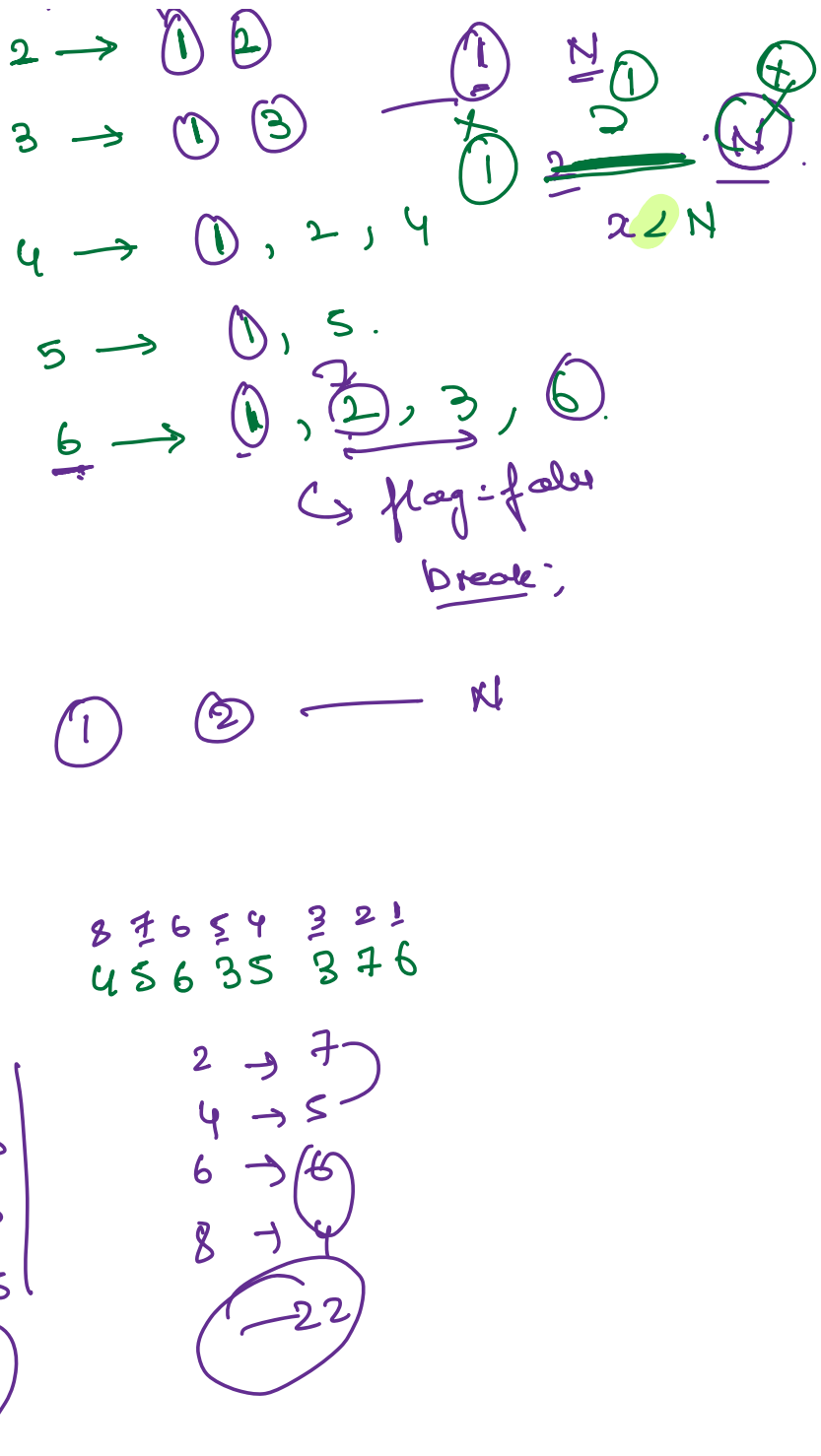
sop(oddSum) → 17

Doubt

```
for(int i=2; i<=n; i++)
    boolean flag=true;
    for(int x=2; x<i; x++){
        if(i%x==0){
            flag=false;
            break;
        }
    }
    if(flag==true){
        sop(i); x.
    }
```

fact == 2 3

25 No. 5


2 → 1 2
3 → 1 3
4 → 1, 2, 4
5 → 1, 5.
6 → 1, 2, 3, 6
flag = false
break;
N
x < N

8 7 6 5 4 3 2 1
4 5 6 3 5 3 7 6
1 → 6
3 → 3
5 → 3
7 → 5
17
2 → 7
4 → 5
6 → 6
8 → 4
22