

while.

initialization
while(condition) {

upgradation;
}

Example.

```
for(int i=0; i<5; i++) {  
    s.o.pln(i);  
}
```

```
int i=0;  
while(i<5) {  
    s.o.pln(i);  
    i++;  
}
```

Dry Run

Dry Run

0 i → 1
1 i → 2

2 i → 3

3 i → 4

4 i → 5

```
while(true) {
```

```
    S.o.Pl("Hello");
```

```
}
```

 → infinite loop.

```
while(4==4) {
```

```
    S.o.Pl(4);
```

```
}
```

 → 4

4

4

...

← Infinite

break - This statement is used is to

break:- This statement is used to break the execution of loop which means within a loop. if this get executed then there will be no further execution in the loop.

Continue → If this statement is executed then instead of executing any further lines within the loop, it goes to the next iteration.

Example:-

```
int i = 0;
while(i < 5) {
    if(i % 2 == 0) {
        i++;
        continue;
    }
    s.o.pln(i);
    i++;
}
```

Output → 1
3

3

Print $n, n-k, n-2k, n-3k$

$$n = 30$$

$$k = 4$$

$$30 - \overset{i=0}{\uparrow} 0 \times 4 = 30 - 0 = 30$$

$$30 - 1 \times 4 = 30 - 4 = 26$$

$$30 - 2 \times 4 = 30 - 8 = 22$$

$$30 - 3 \times 4 = 30 - 12 = 18$$

$$30 - 4 \times 4 = 30 - 16 = 14$$

$$30 - 5 \times 4 = 30 - 20 = 10$$

$$30 - 6 \times 4 = 30 - 24 = 6$$

$$30 - 7 \times 4 = 30 - 28 = 2$$

$$\underline{(n - i \times k >= 0)} \Leftarrow 30 - 8 \times 4 = 30 - 32 = -2$$

← Not print.