Revision.

while loop.

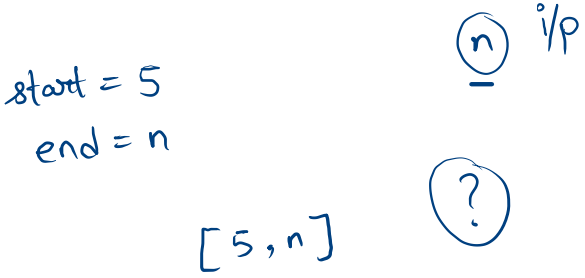
```
while ( condⁿ)
{
    body
}
```

condⁿ → true
↓
body
condⁿ → false

Printing 5 to N(While Loop)

Problem | Submissions | Leaderboard | Discussions

WAP to print numbers from **5 to n**(using while loop) where **n** is taken as input from the user using while loop.




```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    int i = 5;
    while(i <= n){
        System.out.println(i);
        i++;
    }
}
```

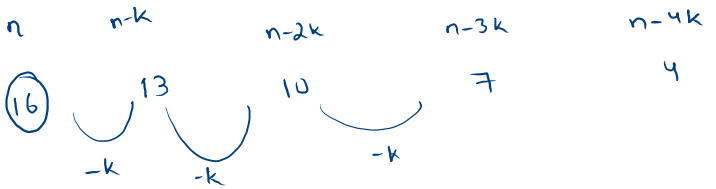
Print n, n-k, n-2k, n-3k.... till l 1

Problem | Submissions | Leaderboard | Discussions

You will be given three integer inputs N,K and L and you to print the series `N, N-K, N-2K, N-3K....` till last where the value printed in the end should be just greater than or equal to the given input L.

n = 16
k = 3
l = 2

≥ l ✓




```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int k = scn.nextInt();
    int l = scn.nextInt();

    while(n >= l){
        System.out.println(n);
        n -= k;
    }
}
```

n = 17 14 11 8 5 (2)
k = 3
l = 4

17 14 11 8 5 (2)

17 ≥ 4 ✓
14 ≥ 4 ✓
11 ≥ 4 ✓
8 ≥ 4 ✓
5 ≥ 4 ✓
2 ≥ 4 X

Running product while loop.

Imagine you are a math teacher and one of your students, Maria, is struggling with understanding how to find the **running product** of a series of integers. You decide to give her a problem to work on as practice.

The problem is as follows: Maria will be given a series of **n** integers as input, she has to print the product after she take input of an integer each time.

For example, if the series of integers is `3, 4, 5, 6` the output should be `3, 12, 60, 360` Maria is a little bit confused at first, but with your guidance and some careful practice, she is eventually able to understand and solve the problem successfully.

```
int n = scn.nextInt();

int ans = 1;

int i = 1;

while( i <= n ){
    int val = scn.nextInt();
    ans = ans * val;

    System.out.print(ans + " ");
    i++;
}
```

dry.

n = 3.

ans = 1 12 24 96

i = 1 2 3 4

while → n times.

1 ≤ 3

2 ≤ 3

val = 12

3 ≤ 3

val = 2

val = 4.

4 ≤ 3

| 12 ... 24 ... 96 ...

```
int n = scn.nextInt();

int ans = 1;

int i = 1;

while( i <= n ){
    int val = scn.nextInt();
    ans = ans * val;

    System.out.print(ans + " ");
    i++;
}
```

n = 3

ans = 1 12 24 96

i = 1 2 3 4

1 ≤ 3

2 ≤ 3

3 ≤ 3

v = 12

v = 2

v = 4

4 ≤ 3

12 ... 24 ... 96 ...

Steps till n greater than 0

Problem | Submissions | Leaderboard | Discussions

Meet Jake, a data analyst who is working on a project to analyze the performance of a new machine learning model. One of the tasks he has been assigned is to write a program that simulates the operation of the model by taking an integer input n and performing a series of steps until the value of n becomes 0.

```
If n is even, the program should subtract 1 from n.
If n is odd, the program should subtract 3 from n.
```

Jake needs to keep track of the total number of steps that the program performs and print this value at the end. Can you help Jake come up with a solution for this problem?

Sample Input 0

```
2
20
37
```

Sample Output 0

```
10
19
```

n = 6 (-1) = 5

n = 7 (-3) = 4 (-1) 3 (-3) 0

n odd (-3)

n even (-1)

> 0

≥ 0

≤ 0 x stop

2 case

case 1

case 2

val = 20

1 → 19 → 16 → 15 → 12 → 11 → 8 → 7 → 4 → 3 → 0

n = 2

9 (case 1) 12 (case 2)

case 1

val = 9 > 0

9 → 6 → 5 → 2 → 1 → -2 (> 0)

5

val = 12

12 → 11 → 8 → 7 → 4 → 3 → 0

6

eg. t= ②

12 9

Case 1

n = 12

Case 2

n = 9

t= 3

5 7 6

Case 1

Case 2

Case 3

nth power of 10 using while loop

Problem | Submissions | Leaderboard | Discussions

A programming task was assigned to a beginner named Emily. The task was to take an integer input **n** and print the **nth power of 10** integers as an output. Emily successfully completed the task by taking the input value of **n** and using it to access the desired element of the sequence.

n } i/p.

n=2

10*10

n=0

$10^0 = 1$

n=3

10 * 10 * 10 =

n=2

$10^2 = 100$

n=3

$10^3 = 1000$

Sample Input 1

```
0
```

Sample Output 1

```
1
```

Sample Input 2

```
2
```

Sample Output 2

```
100
```

Sample Input 3

```
3
```

Sample Output 3

```
1000
```

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    int ans = 1;

    while(n > 0){
        ans *= 10;
        n--;
    }
    System.out.println(ans);
}
```

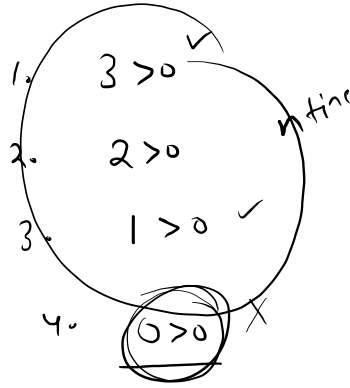
n times

[1 ... ≤ n]

[n ... > 0]

n = 3 ~~2 1 0~~

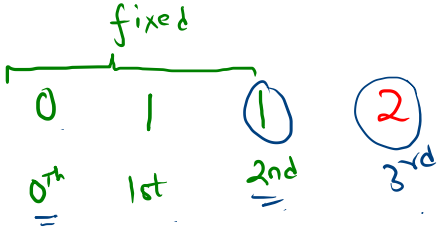
ans = ~~1 10 100~~ 1000

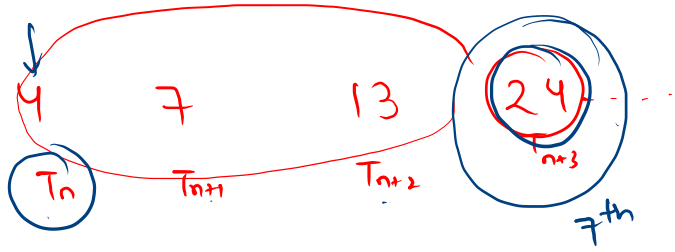


n = 3 ——— 1000

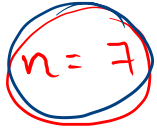
Print nth Tribonacci number

fibo.... 0 1 1 2 3 .....





$T_{n+3} = T_n + T_{n+1} + T_{n+2}$



```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt(); 116

    int a = 0;
    int b = 1;
    int c = 1;

    int i = 0;

    while(i < n){
        int d = a + b + c;
        a = b;
        b = c;
        c = d;

        i++;
    }
    System.out.println(a);
}
```

0 1 1 2 4 7 13 24

a = 0 1 1 2 4 7 13

b = 1 1 2 4 7 13 24

c = 1 2 4 7 13 24 44

i=0

0<6 ✓

d=2

i=1

1<6

d=4

i=2

2<6

d=7

i=3

3<6

d=13

i=4

4<6

d=24

i=5

5<6 ✓

d=44

i=6<6 ✗