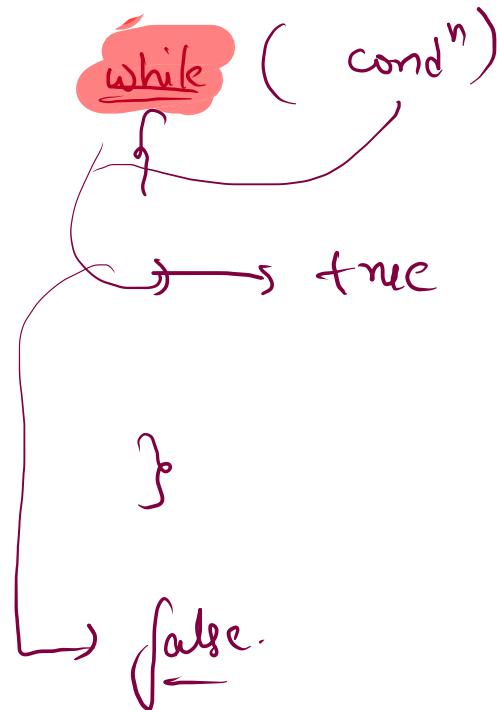


white.
T



Running Sum for loop

[Problem](#)[Submissions](#)[Leaderboard](#)[Discussions](#)**Sample Input 0**5
1 2 3 4 5**Sample Output 0**

1 3 6 10 15

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

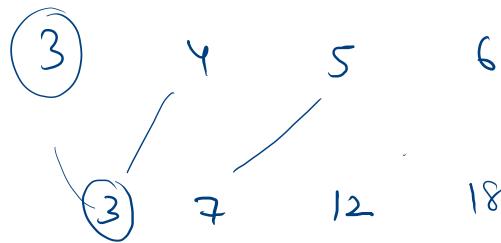
The problem is as follows: Maria will be given a series of n integers as input, she has to print the sum after she take input of an integer each time.

For example, if the series of integers is 3, 4, 5, 6 the output should be 3, 7, 12, 18

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.

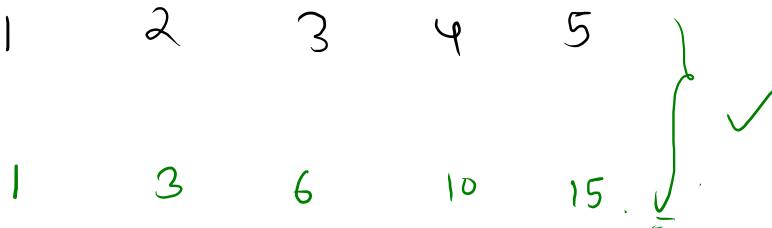
NOTE: Initially the sum is zero.

$$\text{sum} = 0$$



$$\text{sum} = \emptyset 1 3 6 10 15$$

$$n=5$$



again & again
↓ print (sum)

Sample Input 0

6
5
1 2 3 4 5

Sample Output 0

1 3 6 10 15

(n=5)

sum = ϕ 13 8 16 15

i/p → 1
o/p → 1

i/p → 4
o/p → 10

i/p → 2
o/p → 3

i/p → 5
o/p → 15

i/p → 3
o/p → 6

⑤

1 2 3 4 5

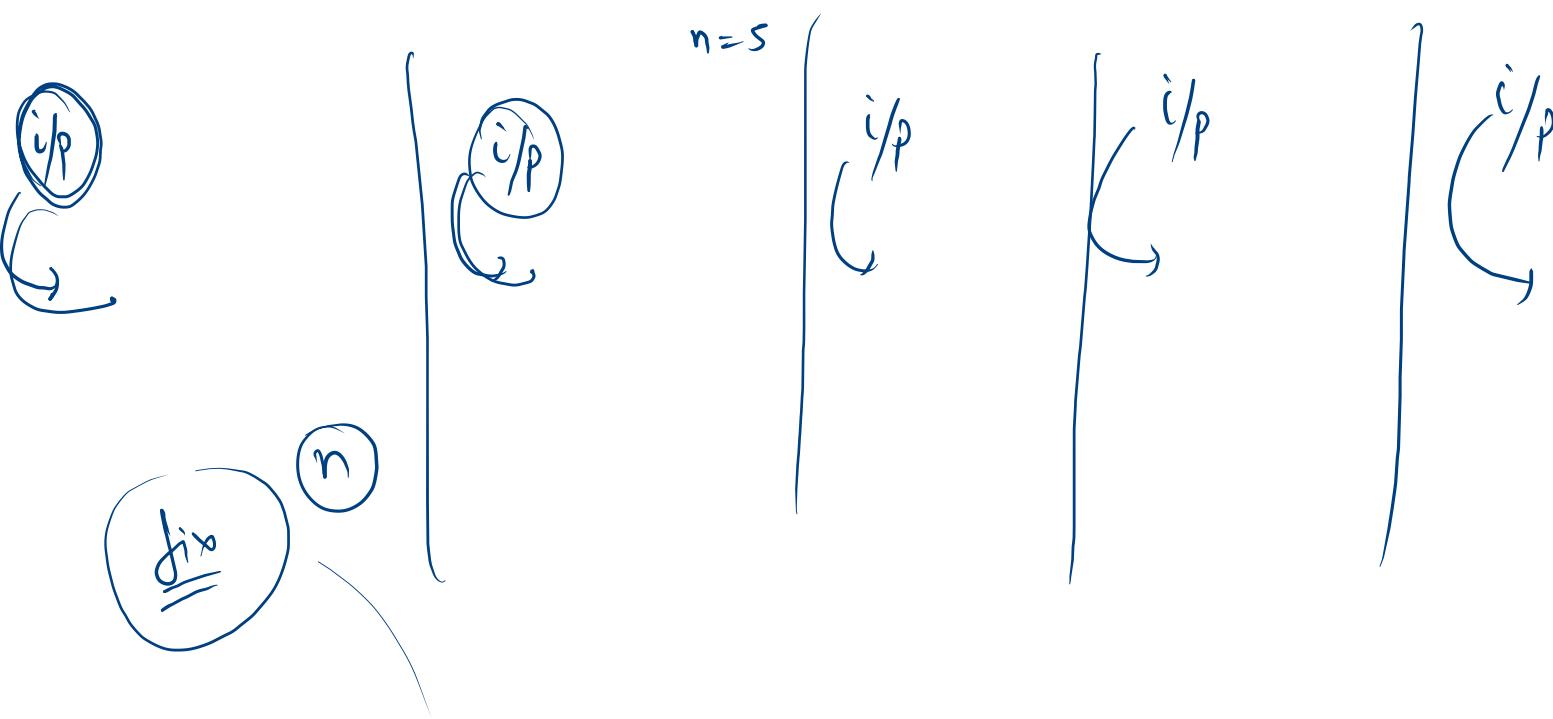
$n=5$

$sum = 0$

$i=0$

1 2 3 4

```
6 public static void main(String[] args) {  
7     Scanner scn = new Scanner(System.in);  
8  
9     int n = scn.nextInt(); // 5  
10    int sum = 0;  
11  
12    for(int i = 0; i < n; i++){  
13        int x = scn.nextInt();  
14        sum += x;  
15        System.out.print(sum + " ");  
16    }  
17 }  
18 }
```

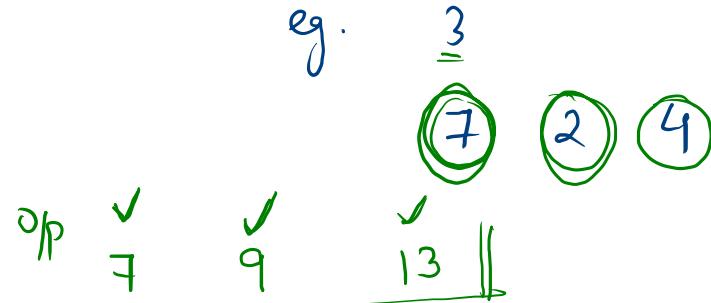


```

12 public class Main
13 {
14     public static void main(String[] args) {
15
16         Scanner scn = new Scanner(System.in);
17
18         int n = scn.nextInt();
19
20         int sum = 0;
21         for(int i = 0; i < n; i++){
22             int x = scn.nextInt();
23             sum += x;
24             System.out.print(sum + " ");
25         }
26     }
27 }

```

1
1
2
2
3
3

eg. 3


$$7 + 9 + 13$$

$$n=3$$

$$\text{sum} = \cancel{0} \cancel{+} \cancel{13}$$

$$i = \cancel{0} \cancel{+} 3 \quad 0 < 3 \checkmark$$

$$1 < 3 \checkmark$$

$$x = 7$$

$$n = 2$$

$$x = 4$$

$$2 < 3 \checkmark$$

$$3 < 3 \times$$

Print 0 to n

while

for ✓

You will be given an input n of integer data-type.

You have to print numbers from 0 to n in n different lines.

for eg. n is 5, so the output should be something like, As given below

0 ✓
1 ✓
2 ✓
3 ✓
4 ✓
5 ✓

} while.

i/p. { n

n=5

i = 0 ✓ ✗ ✗ ✗ ✗

0 ≤ 5 ✓

1 ≤ 5 ✓

2 ≤ 5 ✓

3 ≤ 5 ✓

4 ≤ 5 ✓

5 ≤ 5 ✓

6 ≤ 5 ✗

0
1
2
3
4
5

Scanner scn = new Scanner(System.in);
int n = scn.nextInt(); // 5

int i = 0;
while(i <= n){
 System.out.println(i);
 i++;
}



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.

$s \rightarrow 10$
 $s \rightarrow 8$
 $s \rightarrow 7$

$n=10$

Sample Output 0

5✓
6✓
7✓
8✓
9✓
10✓

$n=8$

5
6
7
8

$n=7$

5
6
7

$n=7$

5
6
7

previous:
 $n=10$

0
1
2
3
4
5
6
7
8
9
10

$n=7$

0
1
2
3
4
5
6
7

$n=4$

0
1
2
3
4

current:

$n=10$

5
6
7
8
9
10

$n=7$

5
6
7

$n=7$

X.

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt(); //4

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

Print 4,13,22,31....n

while,

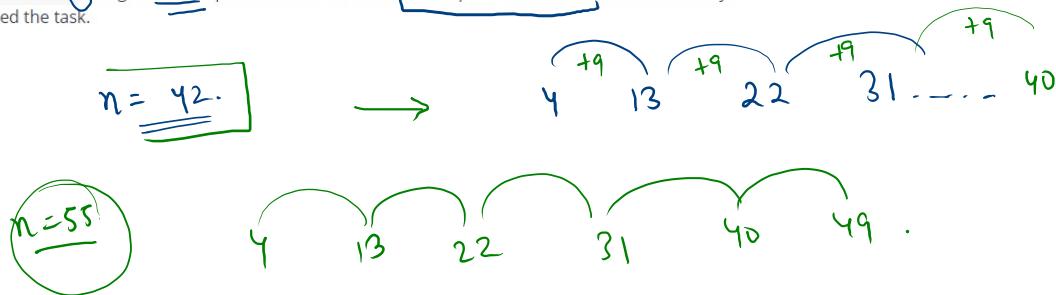
Problem

Submissions

Leaderboard

Discussions

A programming task was assigned to a beginner named Alex. The task was to print the sequence 4, 13, 22, 31.... until n using a while loop. Alex took the value of n as input from the user and successfully completed the task.



10
11
12
13
14
15

```
int i = 4;  
while(i <= n){  
    System.out.println(i);  
    i += 9;  
}
```

$$i=4 \quad 1/3 \quad 2x \quad 3/4_0 \quad n=\underline{\underline{42}}$$

$$y \leq y_2 \checkmark$$

$$13 \leq 42$$

$$22 \leq 42$$

31 ≤ 42 ✓

$$40 \leq 42$$

$$49 \leq 42$$

4

13

22

31

40

$$\underline{n=42}$$

$$\underline{i=4} \not\leq 22$$

$$4 \leq 42 \checkmark$$

$$13 \leq 42 \checkmark$$

$$22 \leq 42$$

```
int i = 4;
while(i <= n){
    i += 9;
    System.out.println(i);
}
```

13

22

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

Problem

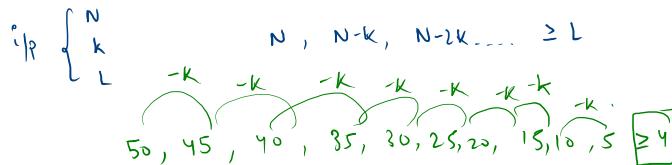
Submissions

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.**

To be clear: You will print L if L belongs to the series.



Sample Input 0



Sample Output 0

50
45
40
35
30
25
20
15
10
5

$st \geq L$

```

6
7 public static void main(String[] args) {
8     Scanner scn = new Scanner(System.in);
9     int N = scn.nextInt(); 
10    int K = scn.nextInt(); 
11    int L = scn.nextInt();
12
13    int i = N;
14
15    while( i >= L ){
16        System.out.println(i);
17        i -= K;
18    }
19 }
```



$i = 40 \geq 4$
 $i = 35 \geq 4$
 $i = 30 \geq 4$
 $i = 25 \geq 4$
 $i = 20 \geq 4$

$N = 40$

$K = 5$

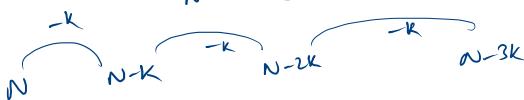
$L = 4$

$0 \geq 4$

$40 \geq 4$
 $35 \geq 4$
 $30 \geq 4$
 $25 \geq 4$
 $20 \geq 4$

$$N - 2K = N - K - K$$

$$N - K = N - K$$



$N, N-k, \underline{N-2k}, N-3k, N-4k$
 $50, 50-5, 50-2 \times 5, 50-3 \times 5$
 $3 \quad 6 \quad 12$

$N = 50$
 $k = 5$

$\text{---} \quad \text{---}$
 45

$\frac{N-3k}{N-k}$ $-3k$ $-3k$ $-3k$ $N-2k$
 $\text{---} \quad \text{---} \quad \text{---}$
 $N-9k$ $=$

$\text{---} \quad \text{---}$
 $N-k - k$

 $N-0x$
 $N-x$
 $N-2x$
 $N-4x$

$3k = x$

 $1x x$
 x
 2

```

4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int N = scn.nextInt();
9         int K = scn.nextInt();
10        int L = scn.nextInt();
11
12        int i = 0;
13
14        while( N - i * K >= L ){
15            System.out.println(N - i * K );
16            i++;
17        }
18    }

```

$$N = 30$$

$$K = 5$$

$$L = 4$$

$$i = \cancel{1} \times 2$$

$$N - i \times K \geq L$$

$$30 - (0 \times 5) \geq L$$

$$30$$

$$25$$

$$30 \geq 4 \checkmark$$

$$30 - 1 \times 5 \geq 4$$

$$25 \geq 4 \checkmark$$

$$\rightarrow N - 2 \times K$$

Ques

$n = 1 \ 2 \ 3 \ 4 \ 5$

$$\begin{cases} n \% 10 \\ n / 10 \end{cases}$$

{
5
4
3
2
1

$n = 12345$

$$\begin{aligned} n \% 10 &= 5 \\ \downarrow \\ n / 10 \end{aligned}$$

$\hookrightarrow 1234$

$$\begin{aligned} n \% 10 &= 4 \\ \hookrightarrow \\ n / 10 \end{aligned}$$

123

$$n \% 10 = 3$$

$$\text{last digit} = n \% 10$$

$$12345 \rightarrow 1234 \quad \} n / 10$$

$$\begin{aligned} 12345 &\\ /_{10} &\left(\begin{array}{c} 1234 \\ 123 \\ 12 \\ 1 \\ 0 \end{array} \right) \end{aligned}$$

$$\begin{array}{r}
 123\textcircled{4} \\
) 1234 \\
 \hline
 10 \\
 \underline{23} \\
 20 \\
 \underline{34} \\
 30 \\
 \hline
 4
 \end{array}$$

$$1234 \overline{\div} 10 = 4$$

$$\underline{1234} \div 10 = 123$$

Print in reverse Digit one by one

```
Main.java ::  
8  
9 import java.io.*;  
10 import java.util.*;  
11  
12 public class Main  
13 {  
14     public static void main(String[] args) {  
15         Scanner scn = new Scanner(System.in);  
16  
17         int n = 46389;  
18  
19         while(n > 0){  
20             System.out.println(n % 10);  
21             n = n / 10;  
22         }  
23     }  
24 }  
25  
26 }
```

input

$n = 46389$

~~46389~~ ✓

~~4638~~

~~463~~

~~46~~

~~4~~

~~0~~

~~3~~

~~6~~

~~8~~

~~9~~

$46389 \rightarrow 0$

$4638 \rightarrow 0$

$463 \rightarrow 0$

$46 \rightarrow 0$

$4 \rightarrow 0$

$0 \rightarrow 0$ ✓

Running product while loop.

Problem

Submissions

Leaderboard

Discussions

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 takes input of an integer each time.

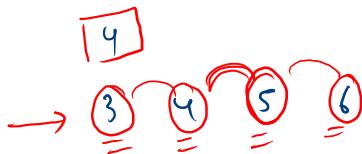
For example, if the series of integers is 3, 4, 5, 6 the output should be 3, 12, 60, 360. Maria is a little bit confused at first, but with your guidance and some careful practice, she is eventually able to understand and solve the problem successfully.

Sample Input 0

4
3 4 5 6

Sample Output 0

3 12 60 360



3 12 60 360

$n = 4$

4 times

$\text{prod} = \sqrt{3}$

$i = 0$

$i < 4$

1 by 1

[i/p
o/p]

repeat:

$i = 1$
 $i \leq 4$

$x = 3 / 4 / 5 / 6$
 $\text{prod} = \text{prod} * x$
System (prod)

```
4 public class Solution {  
5  
6     public static void main(String[] args) {  
7         Scanner scn = new Scanner(System.in);  
8         int n = scn.nextInt();          // n will tell abou  
9  
10        int i = 1;  
11  
12        int prod = 1;  
13  
14        while(i <= n){  
15            int x = scn.nextInt();  
16            prod *= x;  
17            System.out.printn(prod);  
18            i++;  
19        }  
20    }  
21 }  
22 }
```

+ " ")

```
4 public class Solution {  
5  
6     public static void main(String[] args) {  
7         Scanner scn=new Scanner(System.in);  
8         int n=scn.nextInt();  
9         int i=1;  
10        int prod=1;  
11        while(i<=n){  
12            int x=scn.nextInt();  
13            prod*=x;  
14            System.out.print(prod + " ");  
15            i++;  
16        }  
17 }
```

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.

$$\underline{\underline{n=0}} \rightarrow 1$$

$$\underline{\underline{n=1}} \rightarrow 10$$

$$\underline{\underline{n=2}} \rightarrow 100$$

$$10^n$$

1
10
2
 $10^2 = 100$

$$n=0$$

$$10^0 = ? = 1$$

$$n=1$$

$$10^1 = 10 = 10$$

$$n=2 \quad 10^2 = 100 \quad \checkmark$$

$ans = 1$

✓

$n = 2$.

$i = 0$

while ($i < n$)

{ $ans * = 10$

$i++$

}

```

5
6     public static void main(String[] args) {
7         Scanner scn = new Scanner(System.in);
8         int n = scn.nextInt(); // 0
9
10        int ans = 1;
11
12        int i = 0;
13        while(i < n){
14            ans *= 10;
15            i++;
16        }
17
18        System.out.println(ans);
19    }
20 }
```

$$n=2 \checkmark$$

$$\text{ans} = 1 \times 10^{\frac{100}{\underline{\underline{}}}}$$

$$i = 0 \checkmark 2$$

$$0 < 2$$

$$1 < 2$$

$$2 < 2 \cancel{\times}$$

$$1 \times 10 \times 10 \times 10 = 1000$$

$$= 1000$$

~~Sat~~ → main ↴