

Lab: While Loop

Test your tasks in the Judge system: <https://judge.softuni.org/Contests/4408>

1. Numbers 1 to 100

Write a program that:

- Print the numbers from **1 to 100**, each on separate line

Example

Input	Output
(no input)	1 2 3 4 ... 100

2. Decreasing Numbers

Write a program that:

- Reads an integer number **N**
- Print the numbers from **N down to 1 (inclusively)**, each on separate line

Note: N will always be bigger than 1.

Example

Input	Output
5	5 4 3 2 1

Input	Output
4	4 3 2 1

Input	Output
7	7 6 5 4 3 2 1

3. Odd Number

Write a program to **enter an odd number**:

- Read numbers from the console until an **odd number** is entered
- Print the **odd** number as output

Example

Input	Output
2	3
4	
8	
3	

Input	Output
5	5

Input	Output
4	23
8	
10	
23	

4. Sequence $2k + 1$

Write a program to print a **sequence of numbers**:

- The first number is **1**
- Each next number is **2 times the previous number + 1**
- Read an integer number **n** from the console – the max number
- Print the **elements of the sequence (starting with 1)**, which are $\leq n$

Example

Input	Output
8	1
	3
	7

Input	Output
15	1
	3
	7
	15

Input	Output
33	1
	3
	7
	15
	31

5. Sum Digits

Write a program to **sum the digits** of given number:

- Read an **integer positive number** from the console
- **Sum** its **digits** and print the sum

Example: The number is 3451. Digits sum is $3 + 4 + 5 + 1 = 13$.

Example

Input	Output
5634	18

Input	Output
150	6

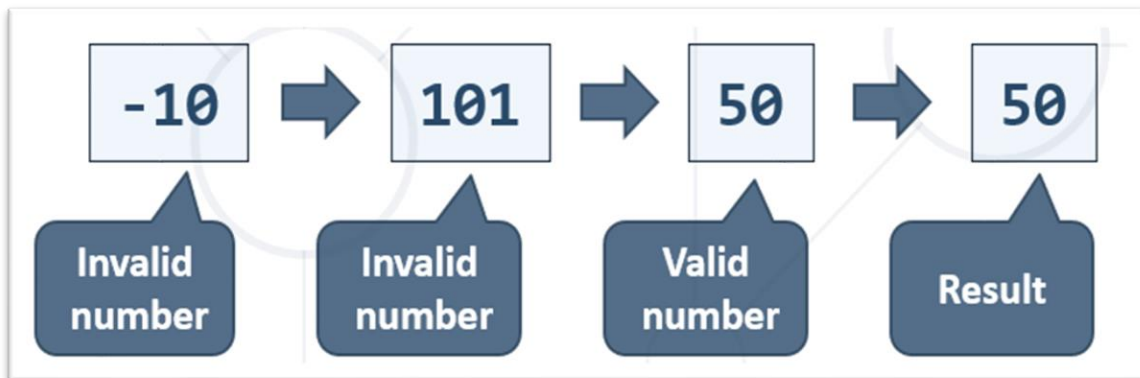
Input	Output
532	10

6. Number In Range

Write a program to **read a number in the range [1 ... 100]**:

- Read an **integer number** from the console
- Check if the number is in the **range [1 ... 100]**

- No (number is **NOT** in the range) → **read a new number**
- Yes (number is **IN** the range) → **print the number** and the program **stops**



Example

Input	Output
-10	50
101	
50	

Input	Output
150	12
-45	
12	

Input	Output
330	89
450	
89	

7. Number Processor

Write a program to **process a sequence of commands**:

- Read an **initial number** from the input
- Read an execute a sequence of the following **commands**:
 - "Inc" – add 1 to the number (increment)
 - "Dec" – subtract 1 from the number (decrement)
 - "End" – print the number and stop the program

Example

Input	Output
5	6
Inc	
End	

Input	Output
5	4
Dec	
End	

Input	Output
7	8
Inc	
Inc	
Dec	
End	