C++ Programming While Loops Homework 1

Mostafa S. Ibrahim
Teaching, Training and Coaching since more than a decade!

Artificial Intelligence & Computer Vision Researcher
PhD from Simon Fraser University - Canada
Bachelor / Msc from Cairo University - Egypt
Ex-(Software Engineer / ICPC World Finalist)



Problem #1: Print Range

- Given a starting number X and an ending number Y, print all numbers between X and Y inclusive, each on a line.
- Input 3 7
- Output
 - 0 3
 - 0 4
 - 0 5
 - 0 6
 - 0 7

Problem #2: Line Of Characters

- Input: Read an integer N followed by a single character
- Output: Print the character N times as below
- Input ⇒ Output
 - \circ 5 Y \Rightarrow YYYYY
 - 3 # ⇒ ###

Problem #3: Print left angled triangle

Read integer N, then print a left angled triangle that has N rows as below:

```
5
*
**
***
***
```

Problem #: Print face down left angled triangle

Read integer N, then print a face down left angled triangle that has N rows.

```
6
*****
****
***
**
```

Problem #5: Special Average

- Read integer N, followed by reading N numbers. Print 2 values
 - The average of the numbers in odd positions (1st, 3rd, 5th, ...)
 - The average of the numbers in even positions (2nd, 4th, 6th, ...)
- Input
 - 0 6 10 100 20 200 30 600
- Output
 - 0 20 300
- Explantation
 - \circ (10+20+30)/3 = 20
 - o (100+200+600)/3 = 300

"Acquire knowledge and impart it to the people."

"Seek knowledge from the Cradle to the Grave."