

Introduction to Programming – Autumn 2019

Assignment 3: Product of Even Positive Numbers

Submission Deadline: ~~25th September 2019, 10:00 pm~~
26th September 2019, 02:00 pm

Problem Statement

Write a program to output the product of all even **positive integers** less than or equal to N (N is a positive integer). The number N is given as input. In case of any invalid input, your program should output “Error”. For example, see the sample test cases.

Note: - You have to use a **while loop** for this computation.

Input Format

An integer N, such that:

- $N \leq 30$ (i.e. N is such that the product output $< 10^{18}$)

Please note that you are not required to check any conditions specified in the input format - you can just assume them. However, if you want to make your program more robust, feel free to add such checks. For example, checking for integer overflow might be an interesting problem.

Output Format

Print all the even positive integers less than or equal to N.

Print product of all even positive integers less than or equal to N.

Sample Test Cases

a)

INPUT 5
Output 2 4 8

b)

INPUT -5
Output Error

c)

INPUT 0
Output Error

Submission Details:

Please submit the following information:

- **Source Code:** Your source program. The name of your file should be in this format: Prod-<roll no>.c where you replace "<roll no>" with your roll number.
- **Readme.txt:** In this file, you should explain how to compile and run your program. The name of your file should be in this format: Prod_Readme-<roll no>.txt where you replace "<roll no>" with your roll number.
- **Design.txt:** In this file, you explain the design of your program (control flow of your program). Your objective should be such that the TA reading this file should easily understand the working of your program. Please add details about how you have handled corner cases - i.e. for what inputs you have printed "Error". The name of your file should be in this format: Prod_Design-<roll no>.txt where you replace "<roll no>" with your roll number.

Zip all these files and name it as Prod-roll no.zip. Please follow the naming convention strictly. Otherwise, your program will not be evaluated. Then, submit it on google classroom for this assignment by the above-mentioned deadline.

Evaluation Policy:

The TAs will use the following evaluation policy:

- Design: 30%
- Execution: 60%
- Indentation and Documentation (with comments): 10%

Late Submission Penalty:

For each day after the deadline, your submission will be penalized by 10 marks.