Lab 2

Problem 1: Print a Multiplication Table

Write a C program that prints the multiplication table of a given number up to 10. For example, if the user inputs 5, the program should print the multiplication table for 5 from 5 x 1 to 5 x 10

Input Format:

- A positive integer n.

Constraints:

- `n` ≤ 100

Output Format:

- The multiplication table of the entered integer, space-separated on the same line.

Example:

```
Input:
4
Output:
4 8 12 16 20 24 28 32 36 40
Note: A space is added after each result, including the last one.
Exact output expected for the above input is "4 8 12 16 20 24 28 32 36 40 "
```

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Problem 2: Game Score Collector

You are a game developer working on a new scoring system for a game. The game records scores as players progress through levels. Your task is to calculate the total score a player achieved before encountering a special event indicator, which is represented by a score of `0`. When you see a `0`, it signifies the end of the scoring session. You need to sum all the scores

recorded before this event.

Input Format:

The input consists of two lines:

- The first line contains an integer `n` representing the number of scores.
- The second line contains `n` integers separated by spaces, where each integer represents a score. The list ends with a `0`, which serves as the special event indicator and should not be included in the total score.

Output Format:

Output a single integer representing the total score accumulated before the special event indicator `0`.

Constraints:

- $1 \leq n \leq 1000$
- $1 \leq score \leq 10^{12}$
- The integer `0` will appear atleast once in the list.

Good luck!

Example:

Input:

```
5
10 20 30 0 40
```

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Output:

```
60
```

In this example, the sequence is `10 20 30 0 40`. The total score before the `0` is `10 + 20 + 30 = 60`.

Problem 3: Factorials

You are given a number `n`. Calculate the factorial of the number.

Input Format:

First line contains an integer `n`.

Output Format:

- Print the factorial of the number `n`

Constraints:

- `0 <= n <= 18`

Examples:

```
Input: 1
Output: 1
```
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```
Input: 3
Output: 6
```
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Submission Guidelines

- Do not rename any files given in the handout. Only write the code in the specified C files in the respective directories.