



Challenge – 3

Problem Statement:

Develop a Python program that generates a pattern of stars based on user input. The program should prompt the user to input the number of lines (`a`) and a boolean value (`b`). The boolean value indicates whether the pattern should be printed in ascending order (`True`) or descending order (`False`).

The program should define a function `star(a, b)` that takes the number of lines (`a`) and the boolean value (`b`) as parameters. Inside this function, it should print a pattern of stars based on the specified conditions. If `b` is `True`, the pattern should be printed in ascending order, starting from one star in the first line and increasing by one star in each subsequent line, up to `a` lines. If `b` is `False`, the pattern should be printed in descending order, starting from `a` stars in the first line and decreasing by one star in each subsequent line, down to one star.

The program should then call the `star()` function with the user-provided inputs to generate and display the desired star pattern.

Input:

- `a`: An integer representing the number of lines for the star pattern.
- `b`: A boolean value (0 or 1) indicating whether to print the pattern in ascending order (`True`) or descending order (`False`).

Output:

- The program should output the star pattern based on the provided inputs.

Constraints:

- `a` will be a positive integer.



- `b` will be either 0 or 1.
- The star pattern should be printed according to the specified conditions.

Example:

```
mathematica Copy code

Input:
Enter no of lines : 5
Enter 0 - False & 1 - True : 1

Output:
*
**
***
****
*****

mathematica Copy code

Input:
Enter no of lines : 4
Enter 0 - False & 1 - True : 0

Output:
****
***
**
*
```



Solution:

```
a = int(input("Enter no of lines : "))
b = bool(int(input("Enter 0 - False & 1 - True :
")))
def star(a,b):
    if b == True:
        c=1
        while c<=a:
            print(c * "*")
            c = c+1
    else:
        while a>0:
            print(a * "*")
            a = a-1

star(a,b)
```

Output:

```
C:\Users\test\PycharmProjects\project_1\.venv\Scripts\python.exe C:\Users\test\PycharmProjects\project_1\Challenge-3
Enter no of lines : 5
Enter 0 - False & 1 - True : 0
*****
****
***
**
*
```