COM2044 LAB 3 Q1

Q1-)Write a Java program to print a **hollow diamond** (rhombus) shape using stars (*). The program should take an integer n as input, where n represents the number of rows in the upper half of the diamond (including the middle row).

The program must print the following pattern:

1. **Upper Half (including the middle row)**:

   o   The first row has 1 star centered.

   o   Each subsequent row has stars at the borders, with spaces in between.

   o   The stars increase in number as you move downward.

   o   **Do not print stars in the middle row**. The middle row should consist of only two stars at the edges with spaces in between.

2. **Lower Half**:

   o   The lower half is a mirror image of the upper half, excluding the middle row.

   o   The stars are positioned at the borders, and there are spaces between them.

Specifications:

- The number of rows in the top half is given by n, and the bottom half will have n-1 rows.

- Each row should have stars only at the outermost positions, with spaces in between (except for the first and last rows of the upper half).

- The program should print the pattern with proper alignment, ensuring the stars are centered.

- Middle row will have 2n-1 *

Example:

For n = 5, the program should print the following pattern:

```
Enter the size of diamond: 5
    *
   * *
  *   *
 *     *
*       *
 *     *
  *   *
   * *
    *|
```