

# C++ LAB 10 PROJECT

## C++ Lab: Introduction to the repetition structure – while statements

## User Requirements

Create a command line program that displays a diamond shape made up of asterisks as seen in the figure below. The user will enter an odd number to determine the size in rows of the diamond.

```
Enter an odd number: 5
  *
 ***
*****
 ***
  *
```

```
Enter an odd number: 8
Invalid Input!

Enter an odd number: 9
    *
  ***
 *****
 *******
*****
*****
  *****
    *****
      ***
        *
```

## Software Requirements

Create a flowchart to establish an algorithm of how to solve this problem.

If the user enters a number greater of 15 or if an even number was entered the phrase “Invalid Input!” must be displayed along with another attempt to enter an odd number (see figure above).

Your program must declare the following whole number variables.

- userNum
- counter
- spacesToDraw
- starsToDraw
- row