Lab2 description:

Prerequisites:

- All operators are discussed in the lectures.
- All loops and flow control statements are discussed in the lectures.

Examples objective:

- Using bitwise operators to perform bit masking operation.

Assignments:

1- Write a program to perform a generic rotate right and rotate left expression using bit masking. The code shall ask the user to enter an 8 bit number x, number of rotate cycles n and rotate option o. The software shall print the rotate value of x, n times based on the value of o.

2- Write a program that prints the following diamond shape. You may use printf statements that print either a single asterisk (*) or a single blank. Maximize your use of iteration (with nested for statements) and minimize the number of printf statements.

3- The Fibonacci series 0, 1, 1, 2, 3, 5, 8, 13, 21, … begins with the terms 0 and 1 and has the property that each succeeding term is the sum of the two preceding terms. a) Write a code that print the number of series terms after reading it from a user input.

HW assignment1:

Exponential function using taylor series:

- **Without using functions,** you are required to write a code to calculate the exponential function using Taylor series. Your program is required to ask the use to enter the exponent and the number of iteration and then print the exponential result.