# Lab 5: Control Structures (Switch case) and Repetitive Structures (for loop)

## Objectives:

## To understand the programming knowledge using Decision Statement “switch”

To understand the programming using for Loop

## Tasks:

1. Write a program to input two integer numbers and display the sum of even numbers between these two input numbers.
2. Write a program to print all natural numbers in reverse (from n to 1).
3. Write a program that takes a number as input, checks it if it is between 1 and 25 (using switch) and if it is in valid range your program should output a line containing that number of adjacent asterisks. On invalid input number, the program should end.

For example, if your program input is 7, it should print \*\*\*\*\*\*\*.

1. Write a program to create Simple Calculator using switch case.
2. Write a program to find Factorial of a number.
3. Write a program to print multiplication table of any number.
4. Write a program to print all ASCII character with their values.
5. Write a program that takes the base and exponent as input and display the result of power.
6. Write a program to check if a number input by user is PRIME or not, range of input is 1 to 300.
7. Write a guessing game where the user has to guess a secret number. After every guess the program tells the user whether their number was too large or too small. At the end the number of tries needed should be printed.
8. Write a program to display Fibonacci series up to 200.

Fibonacci series: 0, 1, 1, 2, 3, 5, 8, 13, ….

1. Write a program to find GCD (greatest common divisor or HCF) and LCM (least common multiple) of two numbers.
2. Write a program that performs a survey tally on beverages. The program should prompt for the next person until a sentinel value of –1 is entered to terminate the program. Each person participating in the survey should choose their favorite beverage from the following list:

1. Coffee 2. Tea 3. Coke 4. Orange Juice

**Sample Run:**

Please input the favorite beverage of person #1: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
4  
Please input the favorite beverage of person #2: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
1  
Please input the favorite beverage of person #3: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
3  
Please input the favorite beverage of person #4: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
1  
Please input the favorite beverage of person #5: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
1  
Please input the favorite beverage of person #6: Choose 1, 2, 3, or 4 from the above menu or -1 to exit the program  
-1  
The total number of people surveyed is 5. The results are as follows:

Beverage Number of Votes  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
Coffee 3  
Tea 0  
Coke 1  
Orange Juice 1