

Lab 4

Algorithm and Flow Charts

- 1) Write an algorithm and draw a flowchart to find the sum of first 50 natural numbers.
- 2) Write an algorithm and draw a flowchart to find the average of three given numbers.
- 3) Write an algorithm to find out that given number is odd or even.
- 4) Write an algorithm and draw a flowchart to find the largest of three numbers A, B, and C.
- 5) Write an algorithm and draw a flowchart for calculating the pay of employee according to number of hours; he/she works for company.
[Hint. Consider rate of hour is also given]

Solve following using repetition construct

- 6) Write an algorithm and draw a flowchart for computing factorial N (N!)
- 7) Write an algorithm and draw a flowchart for calculating the average of 10 numbers {0 to 9} using repetition construct.
- 8) Write an algorithm to find that given number is perfect number or not.
- 9) Write an algorithm to find that given number is palindrome or not.
- 10) Write an algorithm to find that given number is Armstrong number or not.
- 11) Write an algorithm for computing the sum of digits in a number.
- 12) Write an algorithm to read a number N and print all its divisors.

Perfect number is a positive number which sum of all positive divisors excluding that number is equal to that number. For example 6 is perfect number since divisor of 6 are 1, 2 and 3. Sum of its divisor is $1 + 2 + 3 = 6$ Note: 6 is the smallest perfect number.

Those numbers which sum of the cube of its digits is equal to that number are known as Armstrong numbers. For example 153 since $1^3 + 5^3 + 3^3 = 1 + 125 + 9 = 135$