

Lab 5

Algorithms

(During 10/08/2015 to 16/08/2015)

- 1) Ramesh's basic salary is input through the keyboard. His dearness allowance (DA) is 40% of basic salary, and house rent allowance is 20% of basic salary. Write an algorithm to calculate his gross salary.
- 2) The distance between two cities (in km.) is input through the keyboard. Write an algorithm to convert and print this distance in meters, feet, inches and centimeters. (Hint: 1 meter = 3.281 feet)
- 3) If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.
- 4) Temperature of a city in Fahrenheit degrees is input through the keyboard. Write an algorithm to convert this temperature into Centigrade degrees.
[$C = (F - 32) / 1.8$]
- 5) The length & breadth of a rectangle and radius of a circle are input through the keyboard. Write an algorithm to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.
- 6) Two numbers are input through the keyboard into two locations C and D. Write an algorithm to interchange the contents of C and D.
- 7) If a five-digit number is input through the keyboard, write an algorithm to reverse the number.
- 8) If a four-digit number is input through the keyboard, write an algorithm to obtain the sum of the first and last digit of this number.

- 9) In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write an algorithm to find the total number of illiterate men and women if the population of the town is 80,000.
- 10) A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard in tens, hundreds or thousands, find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.
- 11) If the total selling price of 15 items and the total profit earned on them is input through the keyboard, write an algorithm to find the cost price of one item.
- 12) If a five-digit number is input through the keyboard, write an algorithm to print a new number by adding one to each of its digits. For example if the number that is input is 12391 then the output should be displayed as 23402. [if digit is 9 it should be converted into 0]