

North South University
Department of Electrical and Computer Engineering
CSE225L Data Structure and Algorithm

C++ Practice Sheet 1

1. Write a program that will ask the user to input his/her height in cm and weight in kg. The program will convert the height and weight from cm to inches and kg to pound respectively.
2. Write a program that takes an integer as input from the user and displays whether the number is even or odd.
3. Write a program that will keep taking inputs from the user until the user inputs -1. Finally display the all numbers and also display all numbers excludes the odd number and find the sum of them.
4. Design an infinite loop to take 2 integers inputs from the keyboard and also ask the user for which operation to perform: '+', '-', or '*'. Perform the appropriate operation and show the result. (solve the problem using both if-else and switch case)
5. Write a function combination(int n, int r) that takes two integers as its parameter and calculates the combination using the formula given below.

$$nCr = \frac{n!}{r!n-r!}$$

6. Write a program that calculates and prints the Electricity bill of a given customer. The customer ID, name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charges are as follows:

Unit	Charge per unit (tk)
0 - 200	3.5
201 - 500	4
501 - 1000	5
> 1000	7

Sample Input: 1234
Md. Ali
450

7. Write a program to find the sum of the series $1 + 11 + 111 + 1111 + \dots$ n terms

Sample I/O:

Input the number of terms: 5

Expected Output :

$1 + 11 + 111 + 1111 + 11111$

The Sum is: 12345

8. Write a program to count the total number of words in a string without any library functions.