Lab Work - 5 String

1. WAP to input any five strings and print them.

2. WAP to find the length of the entered string using strlen().

3. WAP to read a string and reverse that using strrev().

4. WAP to read a string and convert that into lower case and upper case.

[use strlwr() and strupr()]

5. WAP to copy a string into another variable using strcpy().

6. Read a string with space and concatenate with another string using strcat().

7. Input a string and find total length without using strlen().

[Note: use loop with null concept]

8. Input a string and find the total number of digits, vowels and consonants.[use null and ASCII value with loop]

9. WAP to know whether a string is palindrome or not.

10. WAP to convert a string into lowercase without using strlwr().

11. WAP to input any ten names of students and arrange them in descending/ascending order.

12. WAP to input any ten strings and search a string in that list.

Lab work - 4 : Array

1. WAP to input 10 elements and print them.

2. Let an array of size 200. Input any 10 elements and find the total of even

numbers and their average.

3. Let an array of size 200.WAP to input 10 numbers and find maximum and

minimum values.

4. An array contains some elements. Search an element in that array.

5. You are given an array age[200]. Input any ten ages of persons and count

total number of persons who have age i) <=20 ii)>20 and <100

6. You are given an array age[200]. Input any ten ages of persons and print them in sorted (Ascending and descending order) form.

7. WAP to input elements of matrix 2x2 and print them.

8. We have two matrices of order 3x3. Find their sum.

9. We have a matrix of order 3x4. Input its elements and print its elements in transpose form.

10. Suppose we have a matrix of order 3x3. Now write a program to find sum of all diagonal elements.

11. Suppose we want to read a list of n floating point quantities and then calculate their average. In addition to simply calculating the average,

however, we will also compute the deviation of each numerical quantity about the average, using the formula d=xi-avg where xi represents each of

the given quantities i=1,2,…n and avg represents the calculated average. Write a program for this.

-----------------------------------------------------------------------------------------

Lab work -3 (control structures (loop, nested loop, break, continue))

Some sample of programs:

First we have to be familiar with loop with following programs.

Loop related:

a) printing 1,2,3…10 b)printing 20,19,18…1 c) 1,4,9,16 .. 100 d) to print 1,3,5,7… nth term. d) printing our name 100 times e)to find sum of 1,2,3… 10 f) to print all numbers divisible by 2 and 3 lying between 1 and 100 using loop and if.

1. WAP to print 1,3,5,… 20 th term.

2. WAP to find sum of 2,4… 100 th term.

2.1 repeat same program to count total even numbers between 2 and 100.

3. WAP to find sum of following series 1,1/2,1/3,1/4…. 1/nth term.

4. WAP to print factors of a number. E.g. factors of 6=1,2,3,6

5. WAP to print factorial value of a number. E.g. factorial value of 4 i.e.

4!=4x3x2x1=24

6. WAP to print multiplication table of a number.

6.1 Repeat same program using nested loop

6.2 Repeat same program when you input different numbers and your

program print their table. E.g. if you enter 2, it prints table of 2. Then if

you enter 5 it prints table of 5 etc.

7. WAP to print Fibonacci series 1,1,2,3,5,… nth term.

8. WAP to know a number is Armstrong or not.

8.1 repeat same program to print all Armstrong numbers between 1 and 1000.

9. WAP to know a number is Palindrome or not.

10. WAP to know a number is prime or not.

10.1 WAP to print all prime numbers between 1 and 100.

10.2 WAP to count total prime numbers between 1 and 100.

11. WAP to print following numeric or star patterns.

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

\* \* \* \* \*

\* \* \* \*

\* \* \*

\* \*

\*

1 1 1 1 1

2 2 2 2

3 3 3

4 4

5

5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

1 2 3 4 5

2 3 4 5 6

3 4 5 6 7

4 5 6 7 8

1 0 1 0 1 0

2 0 2 0 2 0

1 0 1 0 1 0

2 0 2 0 2 0

1 0 1 0 1 0

-------------------------------------------------------------------------------

Lab work -2 (control structures (if, if else, if else if, nested if, switch)

1. WAP to input a number and display it is odd or even.

2. WAP to know a candidate is eligible to caste vote or not. (age>=18)

3. WAP to input a number and display it is positive, negative or zero.

4. WAP to input two different numbers and display greatest.

5. WAP to input three different numbers and display smallest.

6. WAP to input three different numbers and display middle.

7. WAP to input marks in five subjects calculate total, percentage and division.

8. WAP that inputs cost price (cp) and selling price (sp) and determine whether there is loss or gain.

9. A company pays its employee on hourly basis. If an employee works for 8 hrs he gets 100/hr and 120/hr for additional hours. Write a program to read working hours of an employee and calculate total salary.

10. The minimum charge for Nepal Electricity authority is Rs. 80 for 20 units consumed. If a person consumes more than that then s/he has to pay Rs. 7.25 per unit extra up to 100. If the person consumes more than 100 units then he has to pay 9.50 per unit. Write a 'C' program to calculate the total bill.

11. WAP to know whether three numbers are equal or not using nested if.

12. WAP to calculate sum, difference, product and division according to user choice using switch case.

13. Write a program to display name of day on the basis of entered number using switch.

for example, 2 for Monday.

14. WAP to find the commission amount on the basis of sales amount as per following conditions:

Sales Amount Commission

0-1500 2%

1501-5000 5%

>5000 10%

Case study:

WAP to input length and breadth and height and calculate area, perimeter and volume according to user choice

\*\*\*\*\*\*\*\*\*\*\*\*\*\*Menu\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*A-> Calculate Area\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*P->Calculate Perimeter\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*V->Calculate Volume\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*E-Exit\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-------------------------------------------------------------------------------------------------------

--- Lab 1: Input Output Function ---

1. Write a program to input three numbers and find sum and average.

2. Write a program to find area and circumference of circle. (A=3.14xr2,c=2x3.14xr)

3. Write a program to find square and cube root of a number.

[use sqrt(),cbrt()].

4. Write a program to find simple interest and net amount.[SI=PTR/100,A=SI+P]

5. Write a program to convert centigrade temperature into Fahrenheit.[f=1.8c+32]

6. Write a program to find the value of S in S=ut+(1/2)\*at2

7. Write a program to find total surface area of a cuboid. [TSA=2(lb+bh+hl)]

8. Write a program to find sum of two distances measured in kilo meter and meter.

e.g.

Kilometer meter

234 2300

100 300

336 600

9 . Write a program to find roots of quadratic equation ax2+bx+c=0.

x= (-b±√(b^2-4ac))/2a

10. Write a program to find v in v2=u2+2as.

11. Write a program to convert total number of seconds into hours, minutes and seconds. e.g. for 4850 seconds, total hours =1,minutes=20 and seconds=50

12. Write a program to input your name, address and grade. Then print them. Try this with scanf() and gets().