

Programming for problem solving-I Lab

Labs/PPS-I

List of Programs:

WEEK 1

1. DOS commands: Changing the default Drive, VER, VOL, DATE, TIME, PROMPT, CLS, DIR, MD or MKDIR, CHDIR or CD, COPY, CON, TYPE, MOVE, REN, COPY, EXIT.

WEEK 2

2. LINUX Commands: PWD, CAL, DATE, ECHO, LS, CD, MKDIR, CAT, HEAD, TAIL, MV, CP, WC, VI Editor.

WEEK 3

3. Designing of flowcharts using **raptor tool**
 - a) Areas of Polygons
 - b) Calculation of Simple and Compound Interest
 - c) Swapping of Two numbers with and without temporary variable
4.
 - a) Checking whether a number is even or odd
 - b) Sum of 'n' natural numbers
 - c) Checking a number whether it is divisible by any given number

WEEK 4

5.
 - a) Write a program using control strings %d %c %s %f %e %o %x %i %g %u
 - b) Write a program to print 3 student details S.No, Student name, SSC percent, Inter percent, Address using backslash constants
 - c) Write a program to swap two variables without using third variable
6.
 - a) Write a program to find displacement $s=ut+\frac{1}{2}at^2$.

- b) Write a program to read P,T,R and find Simple Interest(SI) and Compound Interest(CI)
- c) Write a program to find area and circumference of a Circle.

WEEK 5

- 7. a) Write a program using all relational and logical operators
 - b) Write a program using increment operator (pre and post) and decrement operator(pre and post)
- 8. a) Write a program using bitwise operators
 - b) Write a program to find largest among three numbers using conditional operator
 - c) Write a program to illustrate the use of size of() operator.

WEEK 6

- 9. a) Write a program to accept a number and print if it is an odd or even number.
 - b) Write a program to find roots of quadratic equation $ax^2+bx+c=0$
- 10. a) Write a program to accept two integers for a coordinate point and determine its quadrant.
 - b) Write a program to accept three integers and print the largest among them.

WEEK 7

- 11. a) Write a program to accept the year ,find whether it is a leap year or not.
 - b) Write a program using arithmetic operators (+,-,*,/) using else if.
- 12. a) Write a program that declares Class awarded for a given percentage of marks, where percentage of marks<40%=Failed,40% to <60%=second class,60% to <70%=First Class,>=70%=Distinction. Read percentage from standard input.
 - b) Write a program to find area of different geometrical figures such as a Circle, a Square, a triangle, and a Rectangle using Switch statement.

WEEK 8

- 13.a) Write a program to find the sum of 'n' natural numbers.
- b) Write a program to find the sum of individual digits of a given number where number is a +ve integer.
14. a) Write a program to accept a number and reverse it.
- b) Write a program to generate the first 'n' terms of Fibonacci series.

WEEK 9

15. a) Write a program to generate all prime numbers between 1 and n, where 'n' is a value supplied by user.
- b) Write a program to print sum of all odd numbers between 1 and 50 using do while statement.
16. a) Write a program to print the following patterns

		*				1								
						0		1						
		*		*		1		0		1				
						0		1		0		1		
	*		*		*	0		1		0		1		
						1		0		1		0		1

- b) Write a program to read two numbers x and n and compute the sum of this geometric progression: $1+x+x^2+x^3+\dots+x^n$.

WEEK 10

17. a) Write a program to find x power n using functions
- b) Write a program to check whether a number is perfect number or not using functions

18. a) Write a program to find the factorial of a given number using functions
- b) Write a program to find strong numbers between two given numbers using functions

WEEK 11

19. a) Write a program to check whether the given number is armstrong or not using functions
- b) Write a program to swap two values using functions
20. a) Write a program to calculate factorial of a given number using recursion
- b) Write a program to find G.C.D using recursion

WEEK 12

21. a) Write a program to find addition of two matrices using functions
- b) Write a program to find the sum of elements of 3*3 matrix using functions.

WEEK 13

22. Write a program to accept rows and columns of two matrices and check whether multiplication is possible or not, if possible accept two matrices and find multiplication of two matrices using functions.

WEEK 14

23. Write a program to check whether the given string is palindrome or not
24. Write a program to find the length of a string and copy to another string variable.