Programming Fundamentals LAB – BSDSF24
(Both Morning and Afternoon)
Lab 09 – 23-11-2024

use notepad++ and developer command prompt for the following tasks

Task 01 (20 marks each)

1. Create an array<string, 12> to store names of months. Input names of months in random order into it, and then print them through a function.

2. Create an array<char, 20> to store character of different categories, e.g., alphabets, digits, special signs, etc. Input data in a random order into it, and then print the count of various categories of characters in the array.

3. Create arrays of integers to store **distances** travelled in some corresponding **times**. Then generate a three column output for distances, corresponding times and speed, speed being the ratio of distance and time. *REQUIREMENT: make use of explicit type casting*.

Task 02 (6 marks each and 4 marks)

Write programs to display the following patterns/shapes, using loops and by making appropriate possible functions (if any).

1 12 123 1234 12345 123456 …	* ** *** **** ***** ****** …	… XXXXXX XXXXX XXXX XXX XX X

1
121
12321
1234321
123454321
12345654321
…
	1
	12
	123
	…
	123
	12
	1
		…
		      6
		     5
		    4
		   3
		  2
		1

Write programs to compute and output area of a circle for radius provided by the user. This program MUST make use of *a global named constant PI*.

-- End of Lab --