

Programming Fundamentals

BSCS -- B2

Assignment 3

Name: _____

Registration No. _____

Instructions:

- Be yourself, don't copy.
- Create .cpp files for each question.
- Create a compressed folder of .cpp and upload it on portal submission.
- Get your hands dirty with these following C++ programs.
- Deadline: Sunday 26, 2022 till 1:00 PM.
- If plagiarism found, assignment will be graded to -10.

Question no. 1: (30 Marks)

Write a program in C++ that reads data from a file (ask user to enter file name). Create dynamic memory according to the data. Now your task is to perform the operations:

1. Row wise Sum
2. Column wise Sum
3. Diagonal wise Sum

Example:

data.txt

```
4
5 1.6 10.2 33.7 99 20.5
3 44 50 96.1
2 8 9
4 74 50 99 19.1
```

Note: The first value in file tells you about the number of rows in the data.

Output:

Sum row wise: 165, 191, 17, 242.1

Sum col wise: 127.6, 120.1, 228.8, 118.1, 20.5

Sum diagonal wise: Not Possible

Note: You are restricted to use pointers and your function should be generic as we discussed in class. Avoid memory leakage, dangling pointer. Use regrow or shrink concepts if required.