**Graded Lab 4**

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Write a program in C++, that reads a matrix from a file till -99, and displays the data column wise.

**Hint: Firstly,** Count data for row and col size now.

**Example**

Data.txt

1 2 3 -99

4 5 6 -99

**Code: -**

#include<iostream>

#include<fstream>

using namespace std;

void count(char file\_name[], int& row, int& col) {

ifstream file(file\_name);

if (file.is\_open()) {

for (int a = 0; !file.eof(); a++) {

int temp = 0;

col = 0;

for (int b = 0; temp != -99 && !file.eof(); b++) {

file >> temp;

if (temp != -99) {

col++;

}

}

row++;

}

file.close();

}

else {

cout << "File Not Found!" << endl;

}

}

int\*\* memory\_allocater(int row, int col) {

int\*\* arr = new int\* [row];

for (int a = 0; a < row; a++) {

arr[a] = new int[col];

}

return arr;

}

void memory\_deallocater(int\*\* arr\_f, int row, int col) {

for (int a = 0; a < row; a++) {

delete[] arr\_f[a];

}

delete[] arr\_f;

}

void read(char filename[], int\*\* arr, int row, int col) {

ifstream file(filename);

if (file.is\_open()) {

for (int r = 0; r < row; r++) {

int temp = 0;

for (int c = 0; c < col; c++) {

file >> temp;

arr[r][c] = temp;

if (c == col - 1) {

file >> temp;

}

}

}

file.close();

}

else {

cout << "File Not Found!" << endl;

}

}

void display(int\*\* arr, int row, int col) {

cout << "Output Array: " << endl;

for (int c = 0; c < col; c++) {

for (int r = 0; r < row; r++) {

cout << arr[r][c] << " ";

}

cout << endl;

}

}

int main() {

char filename[20] = "data.txt";

int row = 0, col = 0;

count(filename, row, col);

int\*\* arr = nullptr;

arr = memory\_allocater(row, col);

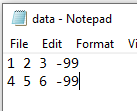
read(filename, arr, row, col);

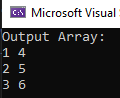
display(arr, row, col);

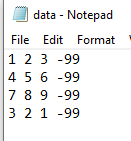
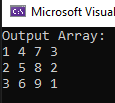
memory\_deallocater(arr, row, col);

return 0;

}

**Data in data.txt file: -**

**Output on Console: -**

**Another Example: -**