

project[5]: 2D Arrays

Due Thursday, 10/19/2017, 11:59:59am

Project Goals

The goal of this project is to:

1. Get you familiar the usage of 1D arrays
2. Get you familiar the usage of 2D arrays

Important Notes:

1. **Formatting:** Make sure that you follow the precise recommendations for the output content and formatting: for example, do not change the text in the first problem to differ from what is in the assignment. Your assignment will be auto-graded and any change in formatting will result in a loss in the grade.
2. **Comments:** Header comments are required on all files and recommended for the rest of the program. Points will be deducted if no header comments are included.

Project Description

Write a program that asks the user to enter an NxM-dimensional array containing single digit values (only the digits between 0 and 9) and counts the number of times each one of the 10 digits appears in the array. This program should:

- prompt a user to enter the sizes (number of rows, then number of columns) of the array, and read in the dimensions given by the user
- prompt the user to enter the array row-by-row and read in each value (separated by spaces)
- display the total number of times each digit appears in the array

Here is an example of exactly how the program should behave (items underlined are entered by the user):

```
This program counts occurrences of digits 0 through 9 in an NxM array
Enter the size of your array: 2 6
Enter row 0: 0 1 2 3 4 5
Enter row 1: 0 1 6 7 8 9
```

Total count for each digit:

Digit 0 occurs 2 times

Digit 1 occurs 2 times

Digit 2 occurs 1 time

Digit 3 occurs 1 time
Digit 4 occurs 1 time
Digit 5 occurs 1 time
Digit 6 occurs 1 time
Digit 7 occurs 1 time
Digit 8 occurs 1 time
Digit 9 occurs 1 time

Grading Rubric

Grading will be done for each problem as follows:

Correctly-named file	5%
Header comment	2%
Program compiles	5%
Correctly-reading data from terminal	28%
Correct result printed	60%

Submission details

To submit your project, you will have to save your project files on nomachine:

- create a directory called “project5”
- save your *.c files in that directory
- TO Submit:
 - > cd project5
 - > submit

The submission script copies all files in the current directory to our directory. You may submit as many times as you like before the deadline, we only keep the last submission.

Academic Honesty

Academic dishonesty is against university as well as the system community standards. Academic dishonesty includes, but is not limited to, the following:

Plagiarism: defined as submitting the language, ideas, thoughts or work of another as one's own; or assisting in the act of plagiarism by allowing one's work to be used in this fashion.

Cheating: defined as (1) obtaining or providing unauthorized information during an examination through verbal, visual or unauthorized use of books, notes, text and other materials; (2) obtaining or providing information concerning all or part of an examination prior to that examination; (3) taking an examination for another student, or arranging for another person to take an exam in one's place; (4) altering or changing test answers after submittal for grading, grades after grades have been awarded, or other academic records once these are official.

Cheating, plagiarism or otherwise obtaining grades under false pretenses” constitute academic dishonesty according to the code of this university. Academic dishonesty will not be tolerated and penalties can include canceling a student’s enrollment without a grade, giving an F for the course, or for the assignment. For more details, see the University of Nevada, Reno General Catalog.