

NES411- Network Programming

Programming Assignment #0

Objective:

To review C programming language.

Description:

In this programming assignment, basic C programming constructs are revised. You are required to develop an ANSI C program under a UNIX-based environment. You need to write a C program that reads a local file containing information about four courses for a student, and then display a menu for the user with the possible operations. The file is composed on one line per course. Each line contains the following fields each separated by a comma:

1. Course name: a string representing the official course name
2. Code: a string representing the short name of the course in capital letters, such as NES 416
3. Credit: an integer representing the number of credit hours assigned to this course
4. Grade: an integer representing the grade a student got in the course

For example, one line representing our course will be like this:

Network Programming, NES 416, 3, 84

Once you read the file, the program displays the following menu to the user to select an operation:

1. Display all courses information
2. Compute GPA of all courses
3. Display highest grade and the corresponding course name
4. Display lowest grade and the corresponding course name
5. Display course(s) code(s) whose credit hours are based on your input
6. Display course information for given course code
7. Display the grade as letter format for given course code(ex: 85 is B)
8. Exit

For example, if the user selects item 5, the program asks the user to input the number of credit hours and then displays all courses' codes which match that number. Furthermore, if the user selects item 6, the program asks for the course code whose information will be displayed. The menu is kept displayed until the user enters item 8, at which time the program exits. In addition, the name of the file that contains the information about courses should be passed to the program as a command-line argument.

Notes:

- Code each item in the menu as a function which might use other simpler functions
- Represent course information by using structures definition.