Intro to Computing—CSCI-1310

Mon, Mar 30, 2015 · Lab

Lab 11—Functions, for loop and arrays

Objectives

Use functions.
Use nested `for` loops.
Use two dimensional arrays.

Write a program to generate `8x8` checker board composed of red and black squares. Following are the steps to populate the board:

Take a two dimensional character array of size 8x8, named board.
Example of 4x4 matrix:

```
char board[4][4]=

    {‘ ’,’b’,‘ ‘,‘b’},

        {‘ ’,’ ’,‘ ‘,‘ ’},

        {‘ ’,’ ’,‘ ‘,‘ ’},

        {‘r’,’ ’,‘r‘,‘ ’}
```

3.In the same format as above, create an 8x8 checker board where `b` is for black checkers and `r` for red checkers. The empty squares are denoted by spaces in the array.

Now, create a function named `displayBoard` which prints out the board. The `displayBoard` function should take the board array as a parameter.

Syntax

```
void displayBoard(char board[8][8]) {
    // print the board
}
```

Use a nested for loop inside the `displayBoard()` to print out the board.

Finally, create the `main` function that calls the `displayBoard()` inside it.

Output

```
  0 |1 |2 |3 |4 |5 |6 |7 |
0 *| b| *| b| *| b| *| b|
1 b| *| b| *| b| *| b| *|
2 *| b| *| b| *| b| *| b|
3 *| *| *| *| *| *| *| *|
4 *| *| *| *| *| *| *| *|
5 r| *| r| *| r| *| r| *|
6 *| r| *| r| *| r| *| r|
7 r| *| r| *| r| *| r| *|
```

Zip and submit

To get credit for this lab exercise:

Submit the file to Moodle as a zip file named Firstname_Lastname_Lab11.zip
Show the TA your code and run your program.

Pass by reference IO Streams