CS142 Introduction to Object Oriented Programming

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Lab 2: Compiling and executing from the command line, command line args, 2D arrays

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Q1. Write a program to print the sentence 'Welcome to Lab 2' to the screen. Compile and run the program at the command prompt. You can use any text editor you like – we used notepad in the lectures. Please follow the notes you took down in class on how to do this.

Q2. Write a program that reads in a String from the command line. The program should determine the number of each vowel in the String and get a total count of every other character in the String. The program should print the results to the screen.

Q3. Write a program that works as a calculator. Three command line arguments should be accepted as follows (a) a string representing a whole number, (b) a string representing a mathematical operator (-, +. /, x) and (c) a string representing a while number. The program should convert the first and last Strings to ints and should get the first (and only) character out of the operator String. The program should perform the appropriate arithmetic and print the result.

Q4. Please download GuessTheNumber.java from Moodle and get it running on your machine. We stepped through this in class but if you have any questions please ask your demonstrator. Modify the program as follows:

(a) Instead of randomly generating 10 numbers, read 10 integer values from the command line. You may assume that the 10 ints are entered correctly at the command line.
(b) Change the program so that the user responds with a char instead of a String – H for higher, L for lower and C for correct. You should process the input as a char not as a String, that is get the char out of the String and check its value.

Q5. Write a program which declares a 2D int array with 4 rows and 5 columns. Write code that fills each element in the array with the number 42 and prints the array to the screen.

Q6. Write a program that takes in the number of rows and the number of stars in each row at the command line. The program should create a 2D array of this size, fill it with stars and print the array to the screen. For example, given a 4 x12 array, the program should print:

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* * * * * * * * * * * *
* * * * * * * * * * * *
* * * * * * * * * * * *
* * * * * * * * * * * *
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