# Lab #8: Pointers and Functions

## Getting started

Download lab08 materials from D2L (including this instruction and three starter codes)
Enter Mimir IDE
Change into the cse220 directory
Create a new directory called lab08
Change into the new directory
Uncompress and upload three starter codes to Mimir IDE (do not upload the whole zip file), save them in /home/(your_username)/cse220/lab08/
Implement the programs below in your lab08 directory

## *Integer Reversal*

Write a recursive function that takes an integer as input and prints its digits in reverse order.

Write a program **intReverse.c** that asks the user to enter an integer, and then use the function you wrote to print the digits of that integer in reverse order.

Example input/outputs (underline is user input, bold is calculated/created by the program):

```
Please enter an integer: 123
The reverse is: 321

Please enter an integer: 124332
The reverse is: 233421

Please enter an integer: 7
The reverse is: 7
```

## *Character Arrays vs. Pointers*

### Part 1 - Arrays:

Write a program **array_vs_ptr.c** that prompts the user to input a string of characters, with a maximum length of 50. Your program must read these characters into an array, and then perform the following tasks on the array:

1. Count the number of 't's in the array
2. Change every third character to a 'w'

Lastly, your program should print the array, skipping over all remaining spaces.

### Part 2 - Pointers:

Write a program **array_vs_ptr_2.c** that performs exactly the same as the program from part 1, however apart from the array declaration and initialization, you CANNOT use square brackets in your code (i.e.[]).

Example input/outputs (underline is user input, bold is calculated/created by the program):

Please enter a group of no more than 50 characters: asdflnasddf123
The number of t's in this array is: **0**
The transformed string: **aswflwaswdfw23**

Please enter a group of no more than 50 characters: tatar sauce
The number of t's in this array is: **2**
The transformed string: **tawarwsawce**

Please enter a group of no more than 50 characters: top cheddar
The number of t's in this array is: **1**
The transformed string: **towcwedwar**