

# CS 100 Exam Two – Coding – Spring 2018

You are not allowed to use the Internet while coding the two problems below.  
You can log into the cs-intro server to test your programs if you wish.  
When you have finished coding your problems, submit your exam via Blackboard

Create a directory called **exam2** using `mkdir exam2` and move into that directory with `cd exam2`

Complete the two programs shown below:

1. Name this program **one.c** – This program reads integers from standard input until end-of-file (control-d) and writes them to either the file **good** or the file **bad**. Write the first number to the file **good**. After that, as long as the number is larger than the one it read before (the previous value), write that number to the file **good**. Otherwise, write that number to the file **bad**. Two sample executions are shown below.

```
./a.out
Enter your data:
1 3 5 2
3 5
3 1 9 2
ctrl-d
```

good	bad
1	2
3	3
5	1
3	2
5	
9	

```
./a.out
Enter your data:
20 15 10
30 40
30 20 90 1
ctrl-d
```

good	bad
20	15
30	10
40	30
90	20
	1

2. Name this program **two.c** – This program reads two strings from standard input and uses a function to determine the number of common characters at the start of the two strings. For example, if the first string is **computer** and the second string is **complex**, then these two strings have **4** (four) initial characters in common. Likewise, if the two strings are **Alabama** and **Auburn**, then the two strings have **1** (one) initial character in common. Finally, **cat** and **catalog** would have **3** (three) initial characters in common. This function is case-sensitive, upper-case letters do not match their equivalent lower-case letter (the letter **A** is different from the letter **a**).

Use the template for **two.c** that is shown below to code your solution (write the function **commonStart**).

```
#include <stdio.h>
#include <string.h>

int commonStart(char [], char []);

int main(void) {
    char str1[50], str2[50];
    printf("Enter two strings : ");
    scanf("%s %s", str1, str2);
    printf("\nThere are %d common letters at start of %s and %s\n\n",
        commonStart(str1, str2), str1, str2 );
    return 0;
}
```

## Submit your exam

- First, on your local machine, compress your **exam2** directory into a single (compressed) file.
- Second, once you have a compressed file named **exam2.zip**, submit that file to Blackboard.