

Instructions for Lab 4

For this lab, you will be writing a simple C program that changes the functionality of the sample code from the course book, [Figure 11.3](#)

```
1  //
2  //
3  // Countdown, our first C program
4  //
5  // Description: This program prompts the user to type in
6  // a positive number and counts down from that number to 0,
7  // displaying each number along the way.
8  //
9  //
10
11 // The next two lines are preprocessor directives
12 #include <stdio.h>
13 #define STOP 0
14
15 // Function : main
16 // Description : prompt for input, then countdown
17 int main(void)
18 {
19     // Variable declarations
20     int counter;    // Holds intermediate count values
21     int startPoint; // Starting point for count down
22
23     // Prompt the user for input
24     printf("==== Countdown Program =====\n");
25     printf("Enter a positive integer: ");
26     scanf("%d", &startPoint);
27
28     // Count down from the input number to 0
29     for (counter = startPoint; counter >= STOP; counter--)
30         printf("%d\n", counter);
31 }
```

Figure 11.3 Our first C program. It prompts the user to enter a positive number and then counts down to 0.

We would like you to update the code to support the following:

1. Prompt the user to type a starting character
2. Prompt the user to type in an ending character
3. Print every character from the starting character to the ending character in the order in which they appear in the ASCII table.
4. NOTE: make sure to properly comment your code & update any existing comments.
 1. There should be comments at the top, with your name, date of last modification, and overall program process
 2. There should be comments for each conditional/loop section at the very least

Some example output:

```
Enter a starting character: Q
Enter an ending character: V
Q, R, S, T, U, V
```

```
Enter a starting character: V
Enter an ending character: Q
V, U, T, S, R, Q
```

Your tasks are to submit 2 separate files (**DO NOT ZIP**):

1. custom-count.c
2. custom-count.doc/.docx/.pdf (you will create your own document)

The document should contain the following information:

1. Your Name & Date Completed
2. Features Improvements Section
 1. Final c code w/ comments (screenshot or pasted in)
 2. 3 screenshots showing the program working in the simulator
 - 1 screenshot should show the first test case above
 - 1 screenshot should show the second test case above
 - 1 screenshot should show your own test case(s)