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PROGRAMMING ASSIGNMENT 4

Discussion on a high level with your colleagues is encouraged. Make sure the work submitted is your own. When in doubt, ask a TA or the instructor. If you are not sure what constitutes academic dishonesty, please refer to the AISC web site: <https://aisc.uci.edu/>.

You can fill out your answers below in text, paste screenshots, and/or include images (make sure the image is right side up & legible).

AISC

Please initial here to indicate you understand UCI's Academic Integrity Policy and confirm that this is your own work you are submitting (this counts for points): **CPZ**

UPDATED CODE SCREENSHOT

Final c code w/ comments:

```
1  /*
2  Name: Cameron Peterson-Zopf
3  Date of Last Modification: 8/27/25
4  Description: This program will prompt the user for a starting character and prompt a user
5  for an ending character. The scanf function is used for this purpose. Then this program will
6  print every character from the starting character to the ending character, including both the
7  starting and ending characters. This program works for both an ascending sequence and a descending
8  sequence. This sequence will be printed using the printf function and a for loop. There will be two
9  for loops, one for each possibility: ascending and descending. We will use two if statements to control
10 which sets of inputs go to which loops. If both characters are the same, I have chosen this to be
11 included in the descending for loop, though it doesn't matter as we will just have one character.
12 */
13
14 #define _CRT_SECURE_NO_WARNINGS
15 #include <stdio.h>
16 #include <stdlib.h>
17
18 int main(void)
19 {
20     // Variable declarations
21     int counter; // Holds intermediate count values
22     char startPoint; // Starting point for sequence
23     char endPoint; // ending point for sequence
24     // Prompt the user for input
25     printf("==== Sequence of Characters Program =====\n");
26     printf("Enter a starting character: ");
27     scanf("%c", &startPoint); // read in first character
28     printf("Enter an ending character: ");
29     scanf("%c", &endPoint); // read in last character
30 }
```

```

31     if (startPoint >= endPoint) // descending sequence
32     {
33         for (counter = startPoint; counter >= endPoint; counter--) //convert character to decimal ASCII value
34         {
35             printf("%c, ", counter); // for printing, convert result from decimal ASCII value (int) to the character.
36         }
37     }
38     if (startPoint < endPoint) // ascending sequence
39     {
40         for (counter = startPoint; counter <= endPoint; counter++) //convert character to decimal ASCII value
41         {
42             printf("%c, ", counter); // for printing, convert result from decimal ASCII value (int) to the character.
43         }
44     }
45
46     return 0; //return value of zero => success
47 }

```

TEST CASE #1: Q, V

The result of the test case is shown below:

```

Microsoft Visual Studio Debug Console
===== Sequence of Characters Program =====
Enter a starting character: Q
Enter an ending character: V
Q, R, S, T, U, V,
C:\Users\camer\source\repos\EECS20\Lab_4\x64\Debug\Lab_4.exe (process 47592) exited with code 0 (0x0).
Press any key to close this window . . .

```

TEST CASE #2: V, Q

The result of the test case is shown below:

```

Microsoft Visual Studio Debug Console
===== Sequence of Characters Program =====
Enter a starting character: V
Enter an ending character: Q
V, U, T, S, R, Q,
C:\Users\camer\source\repos\EECS20\Lab_4\x64\Debug\Lab_4.exe (process 40216) exited with code 0 (0x0).
Press any key to close this window . . .

```

TEST CASE #3: A, Z

The result of the test case is shown below:

```

Microsoft Visual Studio Debug Console
===== Sequence of Characters Program =====
Enter a starting character: A
Enter an ending character: Z
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z,
C:\Users\camer\source\repos\EECS20\Lab_4\x64\Debug\Lab_4.exe (process 40348) exited with code 0 (0x0).
Press any key to close this window . . .

```