CS16, 10S, **H07**, due **Mon Lecture 04.12**
Functions that print characters using for and if, based on lecture notes, and Etter 3.1-3.3
Total Points: 50
Available online as http://www.cs.ucsb.edu/~pconrad/cs16/10S/homework/H07 — printable PDF

Name: (4 pts) _____ Umail Address: (4 pts) _____ @umail.ucsb.edu

Lab Section (2 pts)—circle one: 9am 10am 11am noon unknown

(Note: For now, circle the lab section you are registered for on GOLD. If you need to request attendance at a different lab section because of an ACTUAL SCHEDULE CONFLICT, please email pconrad@cs.ucsb.edu with details)

This assignment is due **IN Lecture on Monday, 04.12.**
It may ONLY be submitted Lecture, in Chem 1171 at 1pm on Monday.
You must come IN PERSON to turn it in during your assigned Lecture section.

Late Policy: No email submission allowed—and don't "slip it under my door". If you need to make it up, you must do so during office hours, or make an appointment to see me, and you must request this appointment within 48 hours of when the assignment was originally due.

Personal Day/Sick Day policy: Everyone is permitted one "personal day/sick day" when you get to make up a missed homework assignment for free during office hours or via appointment. After that, you may not make up the homework assignment—you can only earn back the points through extra credit opportunities.

(For more details, see the syllabus and the homework policy)

Review your lectures notes from 04/05, 04/07 and 04/09, and also read Section 3.1, 3.2, and 3.3 in Etter. Then answer these questions.

1. (20 pts) Write a C function definition for a function called printKSpacesNXs that **takes two integer parameters, k and n.**

   The function should print k spaces, and then n lowercase 'x' characters on standard output.
   It should NOT print a new line after it is finished.

   Example output:

This code	produces this output

`printf("1234567890\n");`
`printf("|");`
`printKSpacesNXs(3,5);`
`printf("|\n");`
	`1234567890`
	`|   xxxxx|`

`printf("1234567890\n");`
`printf("|");`
`printKSpacesNXs(2,4);`
`printf("|\n");`
	`1234567890`
	`|  xxxx|`

Please turn over for questions to answer

Continued from other side

2. (20 pts) Write a C function definition for a function called alternatePrintNTimes that takes one integer parameters n, and two character parameters c1 and c2. The function should alternate between printing c1 and c2, until n characters have been printed.

   Hints: There are many ways to approach this problem.

   One way is to use an if test that checks whether the index variable of a for loop is odd or even.
   If the variable i is odd, then i%2 will be 1. If it is even then i%2 will be 0.

   Another way is to initialize a character variable c to the value of c1 before the loop starts. Then, each time through the loop, you can check whether the value is c1 or c2, and depending on which value it is, you can change it to the other value.

   Example output:

This code	produces this output

`printf("1234567890\n");`
`printf("|");`
`alternatePrintNTimes(4,'x','o');`
`printf("|\n");`
	`1234567890`
	`|xoxo|`

`printf("1234567890\n");`
`printf("|");`
`alternatePrintNTimes(5,'x','o');`
`printf("|\n");`
	`1234567890`
	`|xoxox|`

`printf("1234567890\n");`
`printf("|");`
`alternatePrintNTimes(6,'+','-');`
`printf("|\n");`
	`1234567890`
	`|+-+-+-|`

`printf("1234567890\n");`
`printf("|");`
`alternatePrintNTimes(7,'+','-');`
`printf("|\n");`
	`1234567890`
	`|+-+-+-+|`

`printf("1234567890\n");`
`printf("|");`
`alternatePrintNTimes(7,'-','+');`
`printf("|\n");`
	`1234567890`
	`|-+-+-+-|`

End of H07