CECS 130-50
Summer 2017
Assignment 1
Assignment due on or before 9:00 pm Friday, May 19, 2017
Please and follow the instructions below very carefully

1. Do challenge 5,
2. Do challenge 6,
3. Do challenge 7 from page 26 (shown below, This is page 25 on second edition:
4. Do challenge 1 of chapter 2.
5. Do challenge 2 of chapter 2.
6. Do challenge 5 of chapter 2.

See figures on last page

A note about assignments and reports:
Your presentation in your reports and assignments reflects great deal about you, your understanding of the assignment and on how much this course means to you. I try very hard to look at the substance of the report but I will be lying if I said that presentation does not influence my judgment. It would be wise on your part to assume that this true in every course at school and in real life/work. I expect your reports to be well formed and conform to the following rules:

1. ***First and above all, I will not accept any late assignments and I will not accept any assignments by email. All submissions must be via Blackboard and on time.***
2. All reports have to be submitted as a **PDF** report that contains:
   2.1. Title page with your name, assignment number and the day you are actually submitting this report (Not the assignment due date)
   2.2. A comprehensive set of snapshots showing the inputs submitted and outputs obtained in the case of a successful output or a failure.
3. A C/CPP source code file for each programming problem and each must be named problem_n.cpp where nn is the problem number.
4. Make sure that you include as a comment at the top of your file your name and section:
   As an example:

```
/*************************/
/* John Q. Public        */
/* CECS 130-11           */
/* Assignment 35         */
/*************************/
```

   Failure to do this will cost you points.

5. Please zip both the PDF document with the source code files in one zip files that must be named as lastName_firstName_nn.zip where nn is the assignment number, e.g. my zip file for assignment 3 should be called “imam_ibrahim_03.zip”.
6. Please do not submit your eclipse or bloodshed project or any IDE project that you may be using. I will be compiling and testing your source code from the text file in part 2 above to test running your applications and to verify that they run.
   If you do not follow the instructions above I will not grade your homework and you will get a grade of 0 (zero)

Chapter 1

Challenges

1. Study the Vim Quick Guide in Appendix B.
2. Study the nano Quick Guide in Appendix C.
3. Study the Tiny C Compiler (TCC) Quick Guide in Appendix D.
4. Create a program that prints your name.
5. Create a program that uses escape sequence \" to print your favorite quote.
6. Create a program that uses escape sequence \\ to print the following directory structure: `c:\cygwin\home\administrator`.
7. Write a program that prints a diamond, as shown here:

```
    *
   * *
  *   *
 *     *
  *   *
   * *
    *
```

8. Create a calendar program using the current month (similar to the one shown in Figure 1.6).

Chapter 2

Challenges

1. Given a = 5, b = 1, x = 10, and y = 5, create a program that outputs the result of the formula `f = (a - b)(x - y)` using a single `printf()` function.
2. Create a program that uses the preceding formula and displays the result, but this time, prompt the user for the values a, b, x, and y. Use appropriate variable names and naming conventions.
3. Create a program that prompts a user for a character name. Store the user's chosen name using the `scanf()` function, and return a greeting to the character using that name.
4. Create a Shop Revenue program that, using the following formula, prompts a user for numbers to determine total revenue for a merchant selling gear:

   `Total Revenue = Price * Quantity.`
5. Build a Shop Commission program that prompts a user for data and determines the commission for a merchant selling gear using the following formula:

   `Commission = Rate * (Sales Price - Cost).`