

LAB 2: INTRODUCTION TO C PROGRAMMING

For each problem below:

- Analyze the problem by identifying input, output, formula, and condition
- Design an algorithm to solve the problem using pseudocode (so that you could include the pseudocode in your program)
- Prepare several, appropriate number of test data to verify the correctness of your program
- Prepare, compile, link, and execute the program to solve the problem
- Test your program using the prepared test data
- Write proper documentation in the program. Include the following information to form a banner at the beginning of your program:

```

/*****
 * Author: your name and student ID
 * Course: the course code only
 * Section: your specific section number
 * Date: of lab session
 * Brief description: of what problem the
 *                  program tries to solve
 * Test data: provide a set of test data
 *              - input & expected output
 *****/

```

QUESTIONS

- Write a program to print the following on the screen.

```

Congratulations!

You now know how to write a simple C program.

```

- Re-write the program in (1) using one `printf()` statement only.
- Write a program to print a quotation from the famous Oprah Winfrey on the screen in the following manner.

```

"Be thankful for what you have;
you'll end up having more.
If you concentrate on what you don't have,
you will never, ever have enough."

(Oprah Winfrey)

```

- Re-write the program in (3) using one `printf()` statement only.

5. Write a program to print another quotation from Oprah Winfrey in the following manner.

```
\-----By Oprah Winfrey-----%  
  
    Do the one thing you think you cannot do.  
    Fail at it.  
  
    Try again.  
                Do better the second time.  
  
    The only people who never tumble are those  
    who never mount the high wire.  
  
    This is your moment. Own it.  
  
%-----\
```

6. Re-write the program in (5) using one `printf()` statement only.

7. Write a program to print the following message on the screen.

```
Review Chapter 3 --- Introduction to C Programming!  
  
We have learned:  
1.  How to write comments  
2.  How to linefeed  
3.  How to continue a line  
4.  How to use tab  \t,  and beep  \a  
5.  How to print special characters %, \, ', and ".  
  
If you have trouble in understanding those topics,  
Please ask your lecturer ASAP (as soon as possible)
```

8. Re-write the program in (7) using one `printf()` statement only.