Practice Problems: Week 3

Code a C program that asks the user to enter integers repeatedly until a zero is entered.

The program will display one of the following messages after the user has entered an integer (except zero):

- “positive and even” if the integer is positive and even (e.g. 8),

- “positive and odd” if the integer is positive and odd (e.g. 765),

- “negative, less than -333” if the integer is negative and less than -333 (e.g. -9999),

- “negative, greater than 333” if the integer is greater than -333 (e.g. -258),

- “negative” if the integer value is -333.

Finally the program will display the total number of positive and negative integers that the user has entered. (Note: A zero is neither positive nor negative.)

2. Code a C program that asks the user to enter 500 integers. The program will stop asking the user to enter an integer if one has entered -1234. (Note: You must use **a flag** to exit the loop. Do not use a break statement.) The program displays the sum of all integers (except -1234) before it stops running.

3. a) Explain step by step how the following piece of C code is executed by the computer.

**int k, t, result=100;**

**for (k=1; k<5; k++) {**

**t=k;**

**while ((t%2)== 0){**

**result += t;**

**t += 3;**

**}**

**}**

**printf( “final value of result: %d\n”, result);**

b) What is the final value of result?

Additional Help (video clips)

<https://youtu.be/7OjnIoUwn2M>

<https://youtu.be/x9ncMEZMELk>

<https://youtu.be/SXCst74s254>