**TUTORIAL 8**

**Question 1**

Write a program to test the difference between the %d and %i conversion specifiers when used in scanf statements. Ask the user to enter two integers separated by a space. Use the statements

scanf( "%i%d", &x, &y );

printf( "%d %d\n", x, y );

to input and print the values. Test the program with the following sets of input data:

10 10

-10 -10

010 010

0x10 0x10

**Question 2**

Write a printf or scanf statement for each of the following:

1. Print unsigned integer 40000 left justified in a 15-digit field with 8 digits.
2. Read a hexadecimal value into variable hex.
3. Print 200 with and without a sign.
4. Print 100 in hexadecimal form preceded by 0x.
5. Read characters into array s until the letter p is encountered.
6. Print 1.234 in a 9-digit field with preceding zeros.
7. Read a time of the form hh:mm:ss, storing the parts of the time in the integer variables hour, minute and second. Skip the colons (:) in the input stream. Use the assignment suppression character.

**Question 3**

Write a program that converts integer Fahrenheit temperatures from 0 to 212 degrees to floating-point Celsius temperatures with 3 digits of precision. Perform the calculation using the formula

celsius = 5.0 / 9.0 \* ( fahrenheit - 32 );

The output should be printed in two right-justified columns of 10 characters each, and the Celsius temperatures should be preceded by a sign for both positive and negative values.

**Question 4**

Write a program that asks the user to input integer values 0-9 for 3 times and have those values appear at the front of the input statement.

*9 is the integer entered*

*8 is the integer entered*

*3 is the integer entered*

**Question 5**

Write a program that has the following output using the field width printing.

5

454

34543

2345432

123454321