HOMEWORK 2

1. C++ can also represent uppercase letters, lowercase letters and a considerable variety of special symbols. C++ uses small integers internally to represent each different character. The set of characters a computer uses and the corresponding integer representations for those characters are called that computer's **character set**. You can print a character by enclosing that character in single quotes, as with the following:

    ```
    cout<<'A';//print an uppercase A
    ```

    You can print the integer equivalent of a character using static_cast as follows:

    ```
    cout << static_cast< int >( 'A' ); // print 'A' as an integer
    ```

    This is called a **cast** operation. When the preceding statement executes, it prints the value 65 (on systems that use the **ASCII character set**). Write a program that prints the integer equivalent of a character typed at the keyboard. Store the input in a variable of type char. Test your program several times using uppercase letters, lowercase letters, digits and special characters (like $).

2. Write a program that inputs a five-digit integer, separates the integer into its individual digits and prints the digits separated from one another by three spaces each. [*Hint:* Use the integer division and modulus operators.] For example, if the user types in 42339, the program should print:

    ```
    4 2 3 3 9
    ```

3. Create a class called Employee that includes three pieces of information as data members—a first name (type string), a last name (type string) and a monthly salary (type int). Your class should have a constructor that initializes the three data members. Provide a *set* and a *get* function for each data member. If the monthly salary is not positive, set it to 0. Write a test program that demonstrates class Employee's capabilities. Create two Employee objects and display each object's *yearly* salary. Then give each Employee a 10 percent raise and display each Employee's yearly salary again.

4. Write a program that prints the powers of the integer 2, namely 2, 4, 8, 16, 32, 64, etc. Your while loop should not terminate (i.e., you should create an infinite loop). To do this, simply use the keyword true as the expression for the while statement. What happens when you run this program?

5. A mail order house sells five different products whose retail prices are: product 1—$2.98, product 2—$4.50, product 3—$9.98, product 4—$4.49 and product 5—$6.87.Write a program that reads a series of pairs of numbers as follows:

    a) product number
    b) quantity sold

    Your program should use a switch statement to determine the retail price for each product. Your program should calculate and display the total retail value of all products sold. Use a sentinel-controlled loop to determine when the program should stop looping and display the final results.

Please Keep These Submission Format!!

Submission format:

 Mail title:

   [COMP-HW2]student id_NAME

  (ex: [COMP-HW2]2016-12345_JEESOOMIN)

 Compressed filename:

  student id_NAME.zip(tar)

  (ex: 2016-12345_JEESOOMIN)

 Source code file name:

  HW2P1.cpp, HW2P2.cpp, HW2P3.cpp, HW2P4.cpp, HW2P5.cpp

  (Please check, source code file of each problem has correct name.)

Submit:

 Compressed file: 5 source code files and report

 Email: cp2016s@gmail.com

 Deadline: May 04, until 23:59:59

1. Source code

 Make readme file is ok.

 gcc file is ok.

 ***** If you are working on Window environment such as Visual studio, please make sure that your program can be compiled and run on linux environment!!!**

2. Report

 - **Contain specific explain about code**

 - **Contain screen capture file.**

 - **PDF, DOC, HWP file.**

★ Caution

 - **Over the deadline; after May 4, 23:59:59 – minus 20% score**

 - **2days late, 0 point**

- **Do not keep the upper form – minus 20% score**

- **Compile error question – 0 point**

- **Check a code copy using Clone Checker – related students 0 point**

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