HOMEWORK 1

4-1 **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 $).

4-2 **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
```

4-3 **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.**

4-4 **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?**

4-5 **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.

Submission – Compressed file : source code and report

Mail title: [COMP-HW1]student id_name

Compressed file name: student id_name.zip(tar)

Email : will be update an email address on a web-page.

Deadline : April 23, until 23:59:59

You should keep upper form.

★ **Caution**

- **Over the deadline ; after April 23, 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**

1. **Source Code**

   Visual, gcc file, both are ok.

   Make readme file is ok.

2. **Report**
   - **Contain specific explain about code**
   - **Contain screen capture file.**
   - **PDF, DOC, HWP file.**