Programming Session Assignment 01

2017/09/26　by TA 陳俊伸 陳姿玲

REQUIRED FILES

A **.zip file** named **PSA01_b06901XXX.zip** (student ID) that contains the following files:

- ✓ b06901XXX _p1.cpp
- ✓ b06901XXX _p2.cpp
- ✓ b06901XXX _p3.cpp
- ✓ b06901XXX _p4.cpp

Do not submit executable files (.exe). Files with names in wrong format will not be graded. In your .cpp files, we suggest you write comments in detail as possible as you can, that will be good for the TAs to read your code and your future reference and maintaining. (Due date: 9/27 06:00)

PROBLEM DESCRIPTION

1. There're some bugs in the file "PSA01_P1.cpp". Try to fix them until there is no error or warning. Then make it work like this:

```
A:"Hey! May I ask some questions about C\C++."
B:"Sure. C\C++ is very interesting to me.  What's your question?"
A:"The first question is: How to show values using printf ?"
B:"Ok! It's not a difficult question."
B:"Let me show you."

song = 9453

A:"It's the song of 911. (^^)"
A:"Then the second question is: How to use sizeof() in C++?"

sizeof( double )       =       8bytes;
sizeof( float  )       =       4bytes;
sizeof( long double )  =       8bytes.
```

2.

(a) Complete the code fragment in the file "PSA01_P2.cpp" so that the program outputs the following:

```
Seafood is awesome!!
```

Hint: use \b to print the backspace

(b) Please use “printf ” and ASCII code to show the string “NTU NO.1”

```
NTU NO.1
```

3. Please use “cout”or“printf” function to

(a) Show the size of “int8_t”, “int16_t”, “uint8_t”, “uint16_t”

Format : (Hint: 1byte = 8bits)

```
size of int8_t   = xxx bytes
size of int16_t  = xxx bytes
size of uint8_t  = xxx bytes
size of uint16_t = xxx bytes
```

(b) Show the value range of “int8_t”, “int16_t”, “uint8_t”, “uint16_t”

Format : (Hint: You can calculate by yourself and “cout” or “printf” it out.)

```
int8_t   : MIN ~ MAX
int16_t  : MIN ~ MAX
uint8_t  : MIN ~ MAX
uint16_t: MIN ~ MAX
```

4. The namespace usage is :

```
namespace YOUR_NAME{
    //Please declare some variables here...
}

int main(int argc, const char * argv[]) {

    return 0;
}
```

(a) Please name this namespace “EE1004”.

(b) Please declare three variables in “EE1004” called a, b, c with corresponding variable type for values 20, 2.45689, ‘g’. (use “double” for floating point and “int” for integer)

(c) In your main function, you should use “cout” to show these value and size.

Format :

```
a variable: VALUE, SIZE
b variable: VALUE, SIZE
c variable: VALUE, SIZE
```