C-basics

**Declarations:**

* The modulus (%) operator can only be used on integer types. We have to use fmod() function in math.h for float values.
* 6.68 is double.  
  6.68L is long double constant.  
  6.68f is float constant.  
  6.68LF is not allowed in c.
* we can use long double; if double range is not enough.
* float = 4 bytes.  
  double = 8 bytes.
* we can find the size of short integer and long integer using the sizeof() operator
* The range of double is -1.7e+308 to 1.7e+308
* Depending on the operating system/compiler/system architecture you are working on, the range of data types can vary.
* The range of float is -3.4e+38 to 3.4e+38.
* function may have several declarations, but only one definition
* Variable names in C are made up of letters (upper and lower case) and digits. The underscore character ("\_") is also permitted. Names must not begin with a digit.
* whenever there is a conflict between local variable and global variable, local variable gets the highest priority

Functions:

* A function cannot be defined inside another function, but a function can be called inside another function.
* A function cannot return more than one value at a time. because after returning a value the control is given back to calling function.
* The default return type for a function is int.
* Any function including main() can be called recursively.
* A function can be called either call by value or call by reference.
* Call by value means c = sub(a, b); here value of a and b are passed.
* Call by reference means c = sub(&a, &b); here address of a and b are passed.
* A function may have any number of return statements each returning different values and each return statements will not occur successively.
* If two function are declared in a same name, it gives "Error: Multiple declaration of function\_name())".
* If a function return type is declared as void it cannot return any value.
* If a function contains two return statements successively, the compiler will generate "Unreachable code" warnings.
* C can accept upto 127 maximum number of arguments in a function.

Pointers

* (void\*)0 is null pointer
* The macro "NULL" is defined in locale.h, stddef.h, stdio.h, stdlib.h, string.h, time.h, and wchar.h.
* near=2, far=4 and huge=4 pointers exist only under DOS. Under windows and Linux every pointers is 4 bytes long.
* a[i][j][k][l] == \*(\*(\*(\*(a+i)+j)+k)+l)

Input/output

* C string is a character sequence stored as a one-dimensional character array and terminated with a null character('\0', called NULL in ASCII).
* The ftell() function shall obtain the current value of the file-position indicator for the stream pointed to by stream.
* g = strcmp(s1, s2); returns 0 when the strings are equal, a negative integer when s1 is less than s2, or a positive integer if s1 is greater than s2