Lecture 6: Programming Using C++

Why C++?

- ❏ One of the most popular programming languages.

- ❏ One of the most powerful programming languages.

- ❏ After you learn C++ you may find other languages like Java, Perl and even JavaScript and Flash ActionScript easier to learn.

Syntax:

- ❏ The C++ code you write is called the SOURCE CODE or the SYNTAX.

- ❏ Syntax is a mixture of:

    - ❑ C++ keywords like int, for and return.

    - ❑ Constants and variables

    - ❑ Operators like + (addition), || (or), etc.

- ❏ Note that C++ is CASE SENSITIVE! For example, words like cat, Cat, cAt and CAT are all considered different from one another.

- ❏ Also, the amount of white/blank space you use in a C++ program does not affect the way it's compiled. Use extra spaces and line breaks to make your programs more readable.

- ❏ Indentation of code is very common. Obviously, you can NOT put spaces or line breaks in the middle of keywords like this: str uct.

Your First Program:

```
#include<iostream>

using namespace std;

main() {

        cout<<"Hello  World!\n"      ;

    }
```

#include:

- ❑ When the preprocessor finds #include it looks for the file specified and replaces #include with the contents of that file. This makes the code more readable and easier to maintain if you needed to use common library functions.

#include <iostream>

iostream is the file name. This type of files are called header files.

The main Function:

- ❑ All C++ programs must have a main function.

- ❑ The program always start with the main function and ends when the end of main is reached.

Statement:

- ❑ The entire line including keywords, arguments, parentheses, and a semicolon (;) is called a statement.

- ❑ Each statement must end with a semicolon (;).

cout:

- ❑ It prints the given arguments to the screen.

- ❑ It is not Cout.

- ❑ It is cout.

cout<<"Hello world";

cout<<"My Name is Brown";

Special Characters:

- ❑ \n   newline. Cursor goes to next line.

- ❑ \t   horizontal tab. Cursor moves to the next tab.

- ❑ \r   carriage return. Cursor moves to the beginning of the same line.

- ❑ \a   alert. It produces a sound.

- ❑ \\   write backslash.

- ❑ \"   write double quote.