Introduction to C++

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CS270 – Data Structures Using C++

Why Programming

C++ Pioneer

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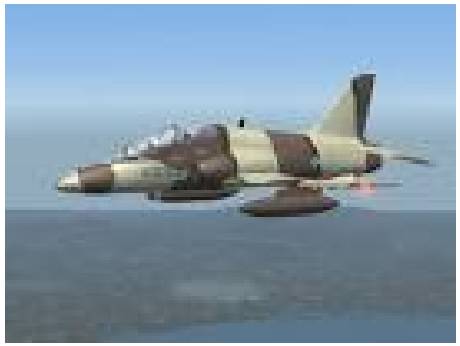
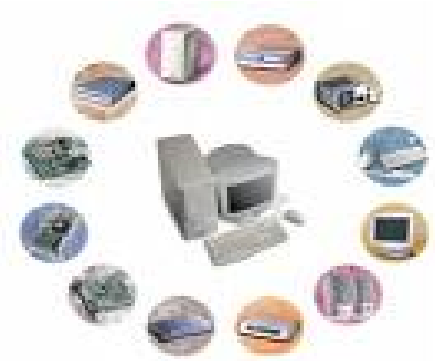
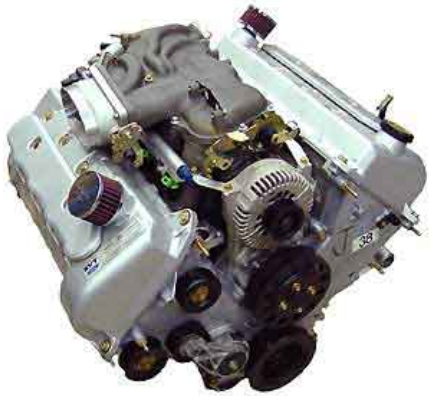
  - The increment operator (++) of the C++ Indicates that C++ is an enhanced version of C

Why C++

- C++ is the most widely used language in engineering areas







Why C++ (Cont')

- C++ is ISO standard, which is universally accepted
- C++ is available on nearly all kinds of computers
- Programming concepts you learn in C++ can be applied in other languages, including Java, C#, etc.

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- Write small C++ programs
- Read much larger programs
- Learn the basics of other languages by yourself
- Take advanced programming language course

After the Course, you'll not yet be

- An expert programmer or C++ language expert

Our First C++ Program

- Open a text editor such as Sublime

Our First C++ Program

Type in the following source code.

```
// directive for input and output
#include <iostream>

int main ()
{
  std::cout<<"Hello World!" <<std::endl;

  return 0;
}
```

// Save the source file as: HelloWorld.cpp

How to Compile

- Open a Console Terminal
- Type:
  g++ -o out HelloWorld.cpp
- Type:
  ls -la to see if the new file ”out” is produced

How to Execute/Run C++ Binary File

- Type:
  ./out where the symbol ./ means the current directory
- Check Results!

How to learn C++

The best way to learn a programming language is to try writing programs and test them on a computer!

Supporting Tools for Writing and Testing a C++ Program

- a text editor such as Sublime Text, or pico, vi, emacs in UNIX, etc.
- a compiler such as g++
- a linker
- a debugger that help diagnose problems

Steps for Writing and Testing C++ Program

- Edit
- Compile (if error, fix the problem)
- Execute (if error, fix the problem)