Introduction to C++

Tools

Visual Studio

- **Integrated Development Environment**
  - Editor
  - Compiler
  - Debugger
  - Related tools
- **Several editions**
  - Express (actually many Express versions)
    - http://www.microsoft.com/express/vc/
  - Professional – for individuals
  - Premium – for teams
  - Ultimate – top end features

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Kinds of Applications

- **C++ can be used to create a huge variety of applications**
  - Windows apps (buttons and controls)
  - Console applications
  - Services
  - Servers
  - Libraries
- **Console applications are the simplest**
  - Write text to the screen
  - Read text from the keyboard
  - No graphics, no controls

Console Application Structure

```cpp
// Hello.cpp : Defines the entry point for the console application.

#include "stdafx.h"
#include <iostream>
#include <string>

int _tmain(int argc, _TCHAR* argv[])
{
  std::cout << "Type your name" << std::endl;
  std::string name;
  std::cin >> name;
  std::cout << "Hello, " << name << std::endl;
  return 0;
}
```

Summary

- **Visual C++ Express is a free tool for building C++ applications**
  - □ You can use any version of Visual Studio
- **Edit your code**
  - □ Errors are pointed out as you go
- **Build (compile and link)**
- **Run (with or without debugging)**
- **Console applications are the simplest to get started with**