1 ☐ **C++: A simple program**

2 ☐

Outline

- Source Code
- IDE and compiler interaction
- Compiling and Running (no IDE)
- Debugging (no IDE)
- Compiling, Running and Debugging with IDE

3 ☐

Source Code – hello.cpp

4 ☐

Something Different– header files

5 ☐

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6 ☐ **IDE and compiler interaction**

7 ☐

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8 ☐ **Compilers**
- see https://en.wikipedia.org/wiki/List_of_compilers#C.2B.2B_compilers

9 ☐ **Getting a compiler**
- Visual C++ - comes with MS compiler, see Readings
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- GCC – depends on OS
  - Linux install build essentials to get GCC

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- •Windows – minGW or Cygwin for GCC
  - •http://www.mingw.org/wiki/HOWTO_Install_the_MinGW_GCC_Compiler_Suite
  - •https://www.cygwin.com/

10 **Compiling/Linking - overview**

11 **Compiling/Linking**

12 **Compiling/Linking – Example 1**

13 **Compiling/Linking – Example 2**

14 **Compiling/Linking – Example 2**

15 **Compiling/Linking – Example 2**

16 **Compiling/Linking – Example 2**

17

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18 **Debugging**

19

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20 **Compiling/Linking – Using an IDE**
- •Let Integrated Development Environment (IDE) handle all details
- •(build settings still there just using default project settings)

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- Create C++ project
- Copy 3 files from example 2 to it
- Build it
- Here are some key shortcuts

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21 **Running**

- Its an Executable! (no virtual machine)
- Can run from command line or IDE
- Fast Demo Various bits of IDE

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22 **What have we learned**

- C++ has lots of similarities to Java (more as we go)
- How to write a simple C++ program
- How to compile using command line
- How to use an IDE to create a program
- For this class and most likely professionally, let the IDE manage your builds.
- Basic IDE usage (Debug/release build, variables, breakpoints etc)
- How to run a program
- PRACTICE PLEASE

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