Eclipse

Quick Review

- scp piF17.c from /home/CS300Public/2017 to the CS300 directory on your local machine
- Rename piF17.c to piPUNetID.c (use YOUR punetid)
  mv piF17.c PUNetID.c
- From the command line, compile your program
  gcc piPUNetID.c
- Execute your program
  ./a.out
- Create a tarball
  tar czf piPUNetID.tar.gz piPUNetID.c
- scp the tarball to your directory Documents/CS300 on zeus
  scp piPUNetID.tar.gz PUNetID@zeus.cs.pacificu.edu:~/Documents/CS300
- Go to zeus and extract the tarball
  tar xzf piPUNetID.tar.gz
- Compile and run the program to make sure it still works
- Submit your tarball
  submit cs300f17 piPUNetID.tar.gz

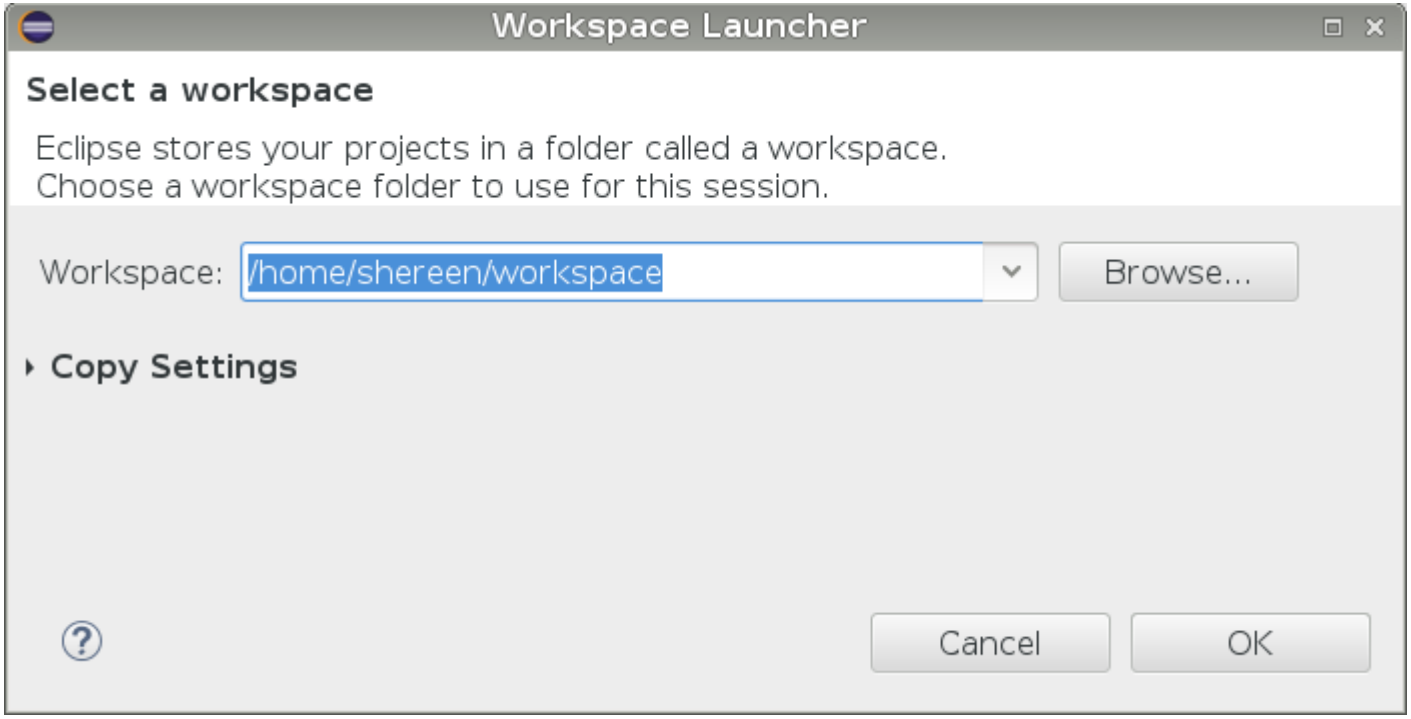
Eclipse

- Integrated Development Environment (IDE)
- Has a plugin architecture to add features
  - support for C development is via a plugin, CDT
  - http://www.eclipse.org/cdt/
- Can use the gcc compiler and gdb debugger
- Requires a Java Runtime Environment
- http://www.eclipse.org/downloads
  - Eclipse IDE for C/C++ Developers

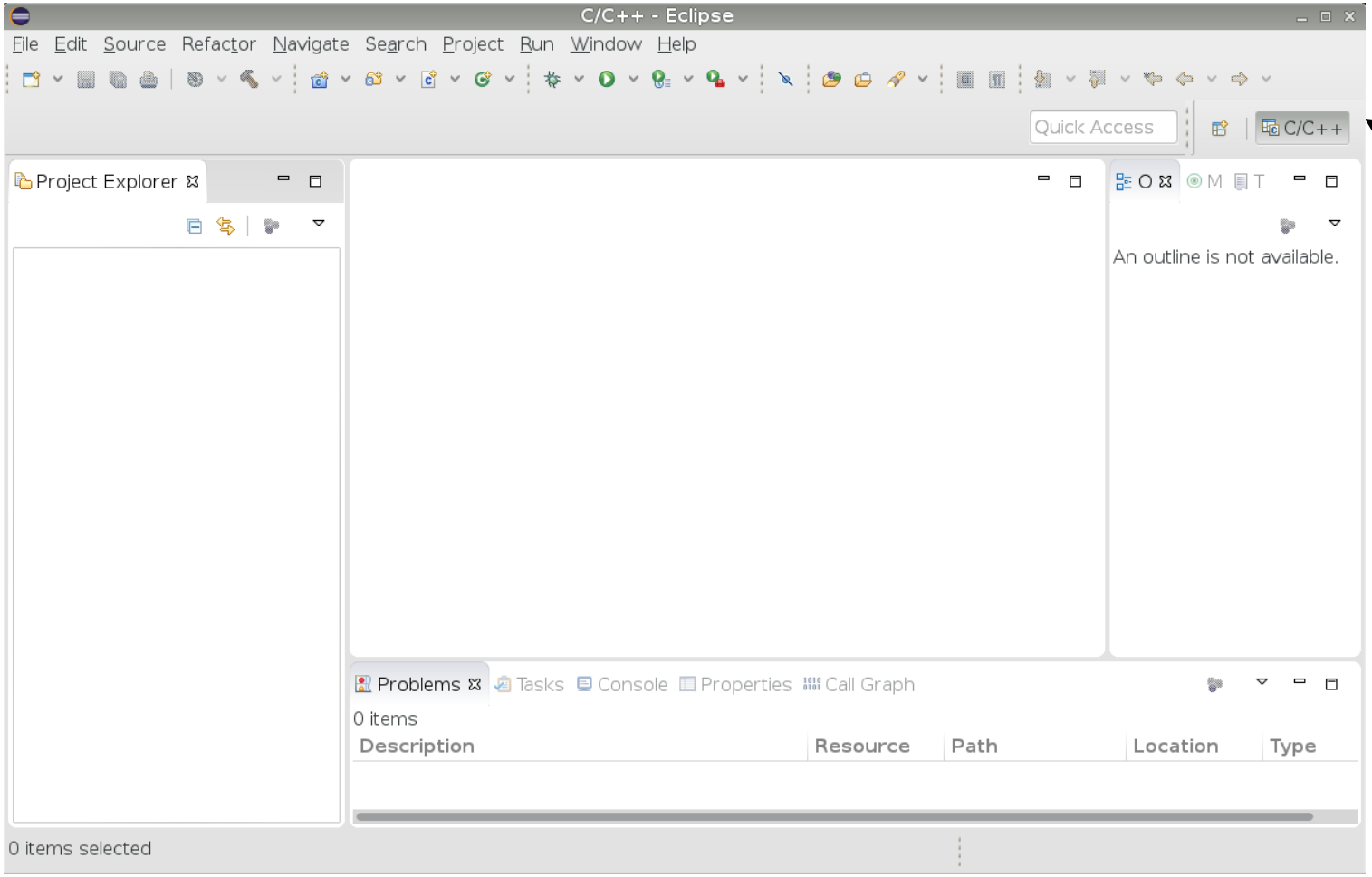
DANGER!

- Does Eclipse run on Windows?
  - Yes
- Can I write C code on Windows?
  - Yes, with the Cygwin suite installed
- Can I write C code on Windows for this class?
  - No

Start Eclipse



Select the perspective for coding

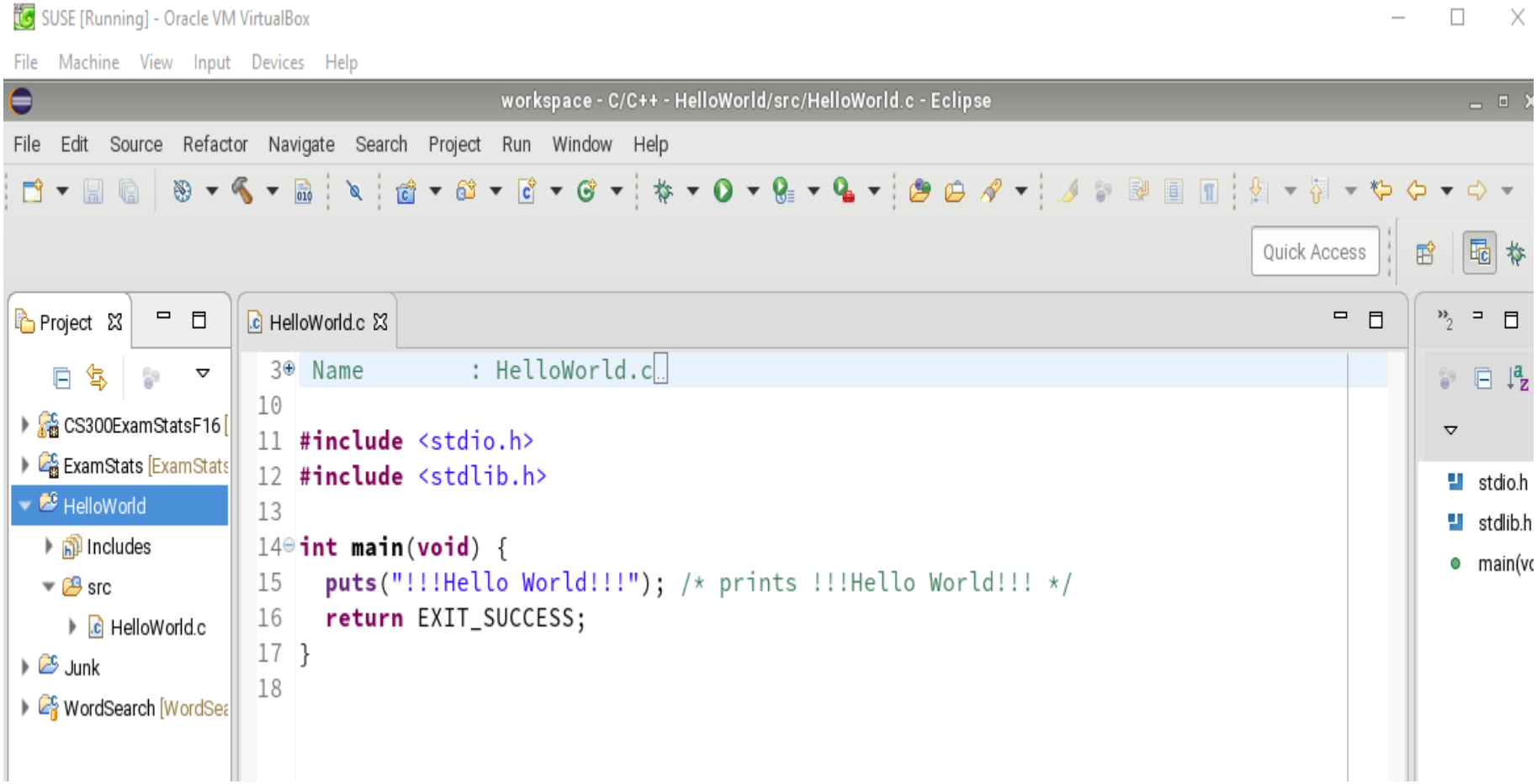


Make sure the perspective is C/C++ not Java

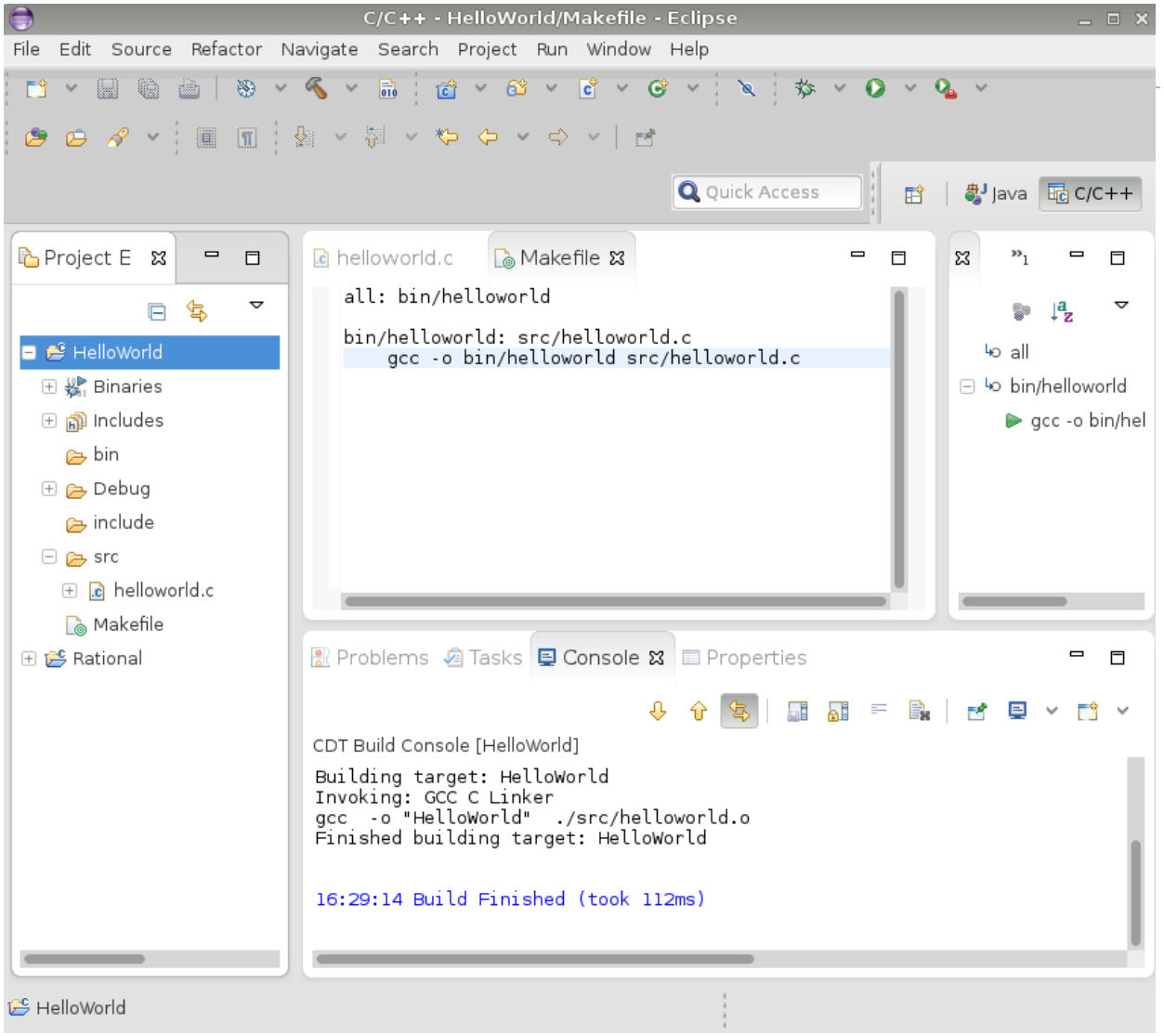
Create a new **`HelloWorld`** project

- File → New → C Project
- Executable → Hello World ANSI C Project → Linux GCC
- Name it "HelloWorld"
- Then click Next
- Then click Finish

A HelloWorld project

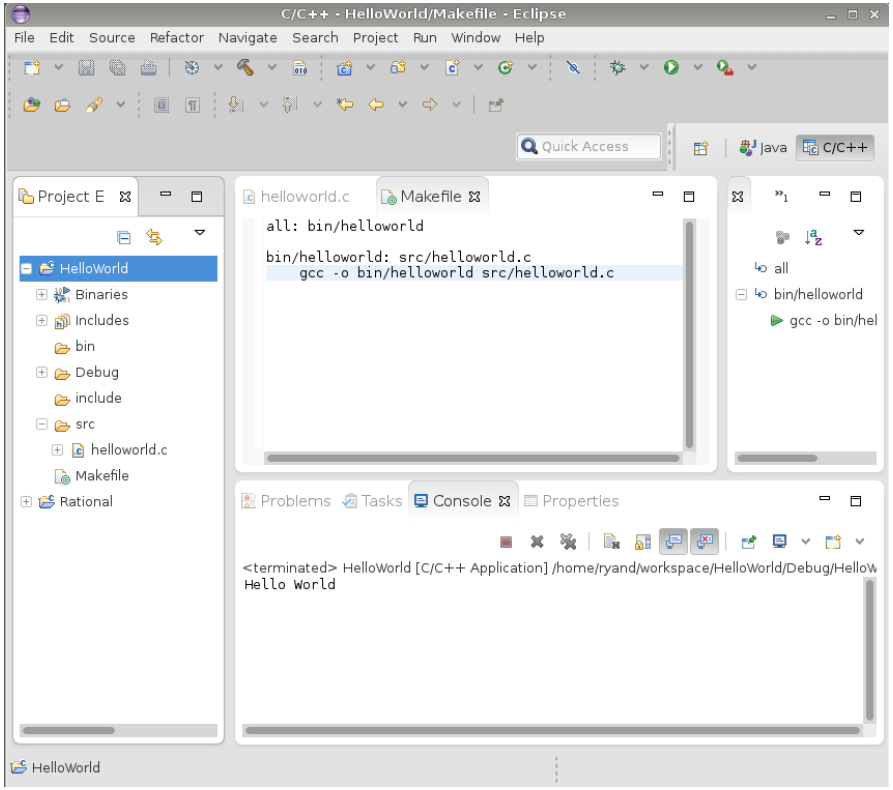


How to build your project ?



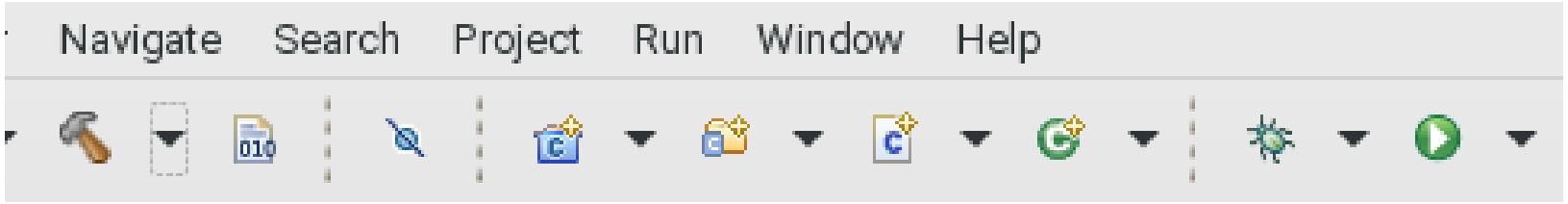
Click on HelloWorld, then Project → Build Project

How to run your program?



Right click on HelloWorld and Run As → Local C/C++ Application. Choose gdb/mi if given the option

Run versus Debug



Build Debug Run

Create helloworld.c

- In HelloWorld project:
  - Build and Run the project
  - Open the file examstats.c from last time
  - Replace the contents of HelloWorld.c with examstats.c
  - Rename HelloWorld.c to examstats.c
  - Rename the project HelloWorld to ExamStats
  - Clean and Rebuild the project
  - Run your program
- Let's look at the code and use the debugger

Coding Standards

- Copy the CodingStandardsProfile CS300PrefsF17.xml from the CS 300Public/2017 directory on zeus
  - Sets tabs, newlines, spacing to match the coding standards
  - Does not fix everything!
- Window | Preferences | C/C++ | Code Style | Formatter | Import
  - Select the CS300PrefsF17.xml file
- C/C++ | Code Style | Formatter | Edit
  - Maximum line width 75 (leaving 5 for output of line #'s)
- Open your .c file, then do one of the following:
  - Source | Format
  - Shift+Control+F

Printing

- Window | Preferences
  - General | Appearance | Colors and Fonts
  - C/C++ | Editor
  - Edit Default … | Use Courier 10 Pitch Regular
- This changes the font on the screen!
  - You may want to change back after printing
- Print doubled sided!

Helpful Commands

- F3 while cursor on function call
  - go to that function
- Control-L
  - go to line
- Control-A
  - select all
- Control-I
  - correct indentation

Be sure to look through the Source and Navigate menu!

Other tips

- Window | Preferences
  - search for template to setup .c and .h file templates
    - you can add the file comment header automatically!
  - search for margin
    - set the print margin column to 75!
  - search for name style
    - to set naming conventions
  - search for code analysis
    - setup error/warnings in code style