A (very brief) intro to Eclipse

http://eclipse.org

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The Goals

What we all want is a level of integration that magically blends separately developed tools into a well designed suite. And it should be simple enough that existing tools can be moved to the platform without using a shoehorn or a crowbar.

The platform should be open, so that users can select tools from the best source and know that their supplier has a voice in the development of the underlying platform.

It should be simple to understand, yet robust enough to support integration without a lot of extra glue.

It should provide tools that help automate mundane tasks. It should be stable enough so that industrial strength tools can build on top of it. And it should be useful enough that the platform developers can use it to build itself.

These are all goals of Eclipse. [...]

[Eclipse Plug-in Developer Guide]
Requirements

• Java 2
• A reasonably recent machine (more memory helps)
• A large display (seriously)
• Eclipse SDK
• Optionally: C/C++ Development Tools (CDT/Europa), Eclipse Modeling Framework (EMF), many others
Terminology

• Integrated Development Environment (IDE)
  – Workbench
  – Perspectives: JDT, CDT, Debug, Team (cvs or svn), …
  – Views: editor, navigator, type hierarchy, error log, content outline, …
  – Action sets and actions: run, build, debug, open, …

• Plugins and extension points

• Everything is customizable
Eclipse Workbench (C++)

Eclipse Workbench (Python with Pydev)
Managing Eclipse

- Help ➔ Software Updates ➔ Available Software

- Specify an update site, if available
- Download plugins and install them locally

- Help ➔ Software Updates ➔ Installed Software can be used to manage installed features, i.e., enable/disable/uninstall plugins.

- Help ➔ Welcome shows any new tutorials or examples that may be available with new plugins

Open the 'Automatic Updates' preference page to set up an automatic update schedule.
What languages are available?

- **Java**: comes with the standard Eclipse distribution, no extra plugins needed
- **C/C++ (CDT)**, must be installed separately, update site available
- **Fortran**: see the Photran project
  - [http://www.eclipse.org/photran/](http://www.eclipse.org/photran/) (must download, no update site)
- **Python**: see the PyDEV project (free + nonfree extensions)
- **Future work related to interpreted languages in general**, see the Dynamic Language Toolkit (DTK):
- **Anything else**: searching eclipse.org or google usually gives good results (e.g., google for “<my favorite thing> Eclipse plugin”)
Debugging

• Nice overview at:
Some Version Control Plugins

- CVS (supported with standard Eclipse distribution)
- Subversion
  - http://subclipse.tigris.org/
- Visual SourceSafe
  - http://sourceforge.net/projects/vssplugin/
Eclipse Tutorials

• Eclipse website

• IBM documentation

• http://www.horstmann.com/bigj/help/eclipse/ (general intro)

• https://eclipse-tutorial.dev.java.net/ (for Java application development)

• http://www.cs.umanitoba.ca/~eclipse/ (getting started and working with the SWT)