# Eclipse, Python, Git, and Vim

## Oh My!

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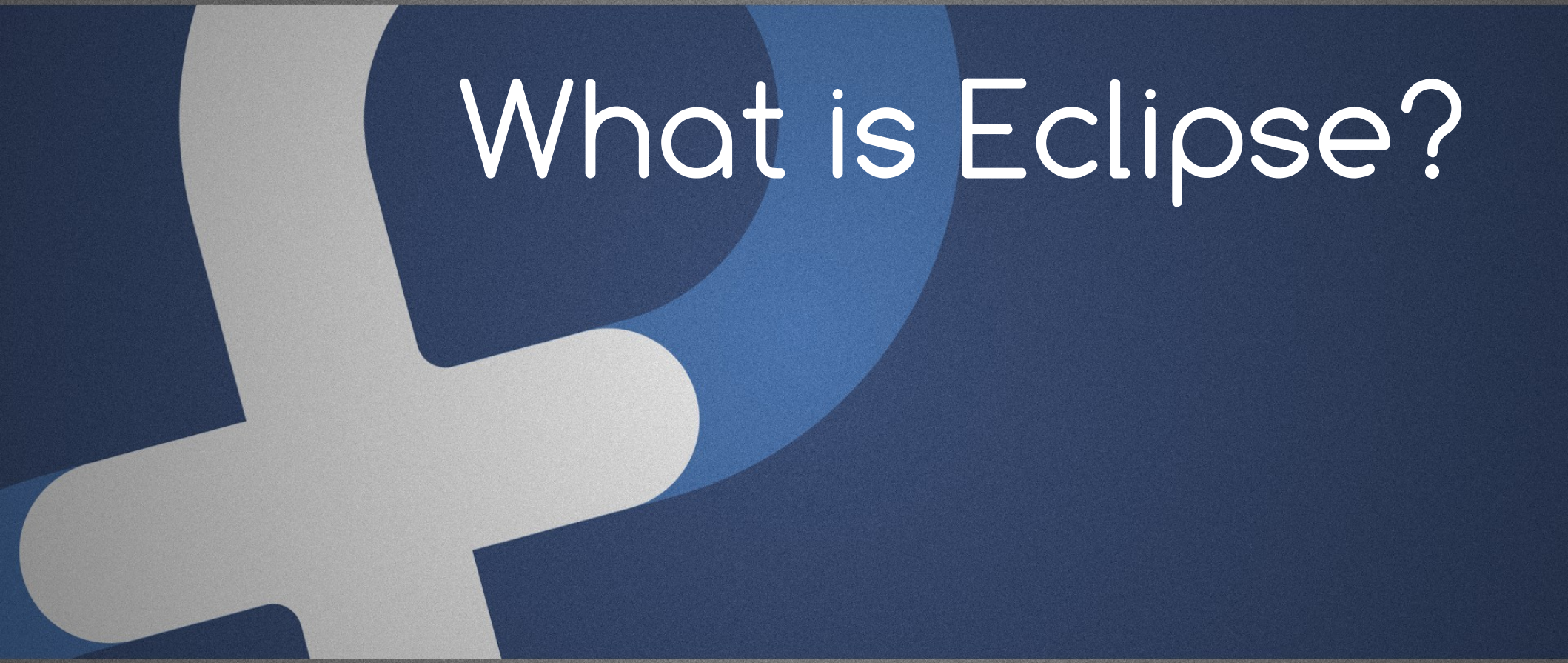
# Today's Topics

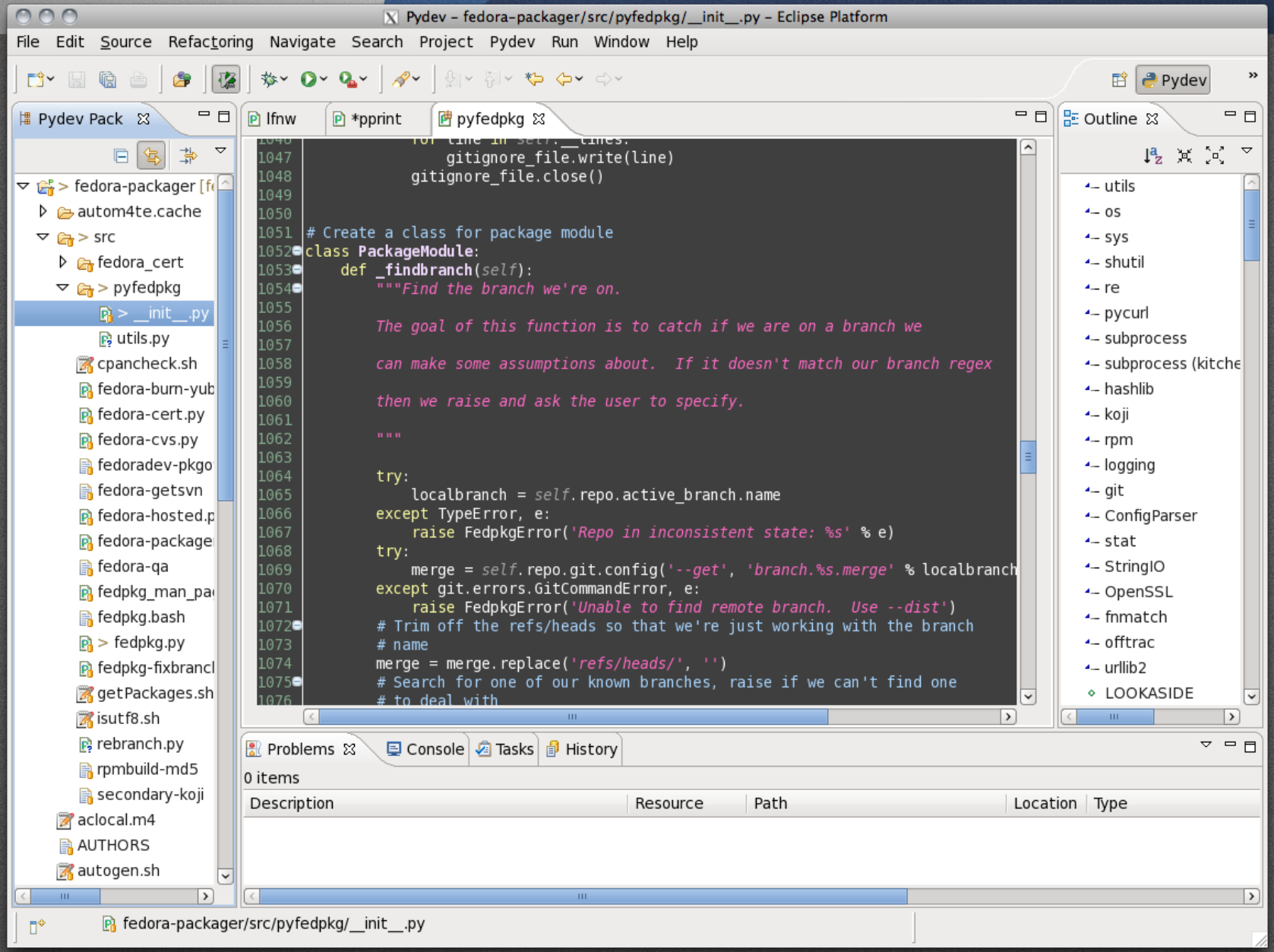
- What is Eclipse?
- Developing Python in Eclipse
- Interacting with git in Eclipse
- Using Vim with Eclipse


What is Eclipse?

# Eclipse is...

- not a cheesy vampire book
- not a Japanese sports car
- not a pack of gum
- an Integrated Development Environment
- (eclipse.org is much bigger than just the IDE)

# A quick tour


Pydev – fedora-packager/src/pyfedpkg/__init__.py – Eclipse Platform
File Edit Source Refactoring Navigate Search Project Pydev Run Window Help
Pydev
Pydev Pack
fedora-packager
autom4te.cache
src
fedora_cert
pyfedpkg
__init__.py
utils.py
cpancheck.sh
fedora-burn-yub
fedora-cert.py
fedora-cvs.py
fedoradev-pkgo
fedora-getsvn
fedora-hosted.p
fedora-package
fedora-qa
fedpkg_man_pa
fedpkg.bash
fedpkg.py
fedpkg-fixbrancl
getPackages.sh
isutf8.sh
rebranch.py
rpmbuild-md5
secondary-koji
aclocal.m4
AUTHORS
autogen.sh
lfnw
*pprint
pyfedpkg
gitignore_file.write(line)
gitignore_file.close()
# Create a class for package module
class PackageModule:
def _findbranch(self):
"""Find the branch we're on.
The goal of this function is to catch if we are on a branch we
can make some assumptions about. If it doesn't match our branch regex
then we raise and ask the user to specify.
"""
try:
localbranch = self.repo.active_branch.name
except TypeError, e:
raise FedpkgError('Repo in inconsistent state: %s' % e)
try:
merge = self.repo.git.config('--get', 'branch.%s.merge' % localbranch
except git.errors.GitCommandError, e:
raise FedpkgError('Unable to find remote branch. Use --dist')
# Trim off the refs/heads so that we're just working with the branch
# name
merge = merge.replace('refs/heads/', '')
# Search for one of our known branches, raise if we can't find one
# to deal with
Outline
utils
os
sys
shutil
re
pycurl
subprocess
subprocess (kitche
hashlib
koji
rpm
logging
git
ConfigParser
stat
StringIO
OpenSSL
fnmatch
offtrac
urllib2
LOOKASIDE
Problems
Console
Tasks
History
0 items
Description
Resource
Path
Location
Type
fedora-packager/src/pyfedpkg/__init__.py

# Features

- Editor
- Multiple Perspectives
- Execution Testing
- Debugging
- Team (source control) Interaction
- Plugins to add lots more!

# Editor

- Multiple tabs
- Language colors
- Code Completion
- Whitespace management
- (near) Real Time error checking
- Code folding/collapsing
- Spell checking
- Much more

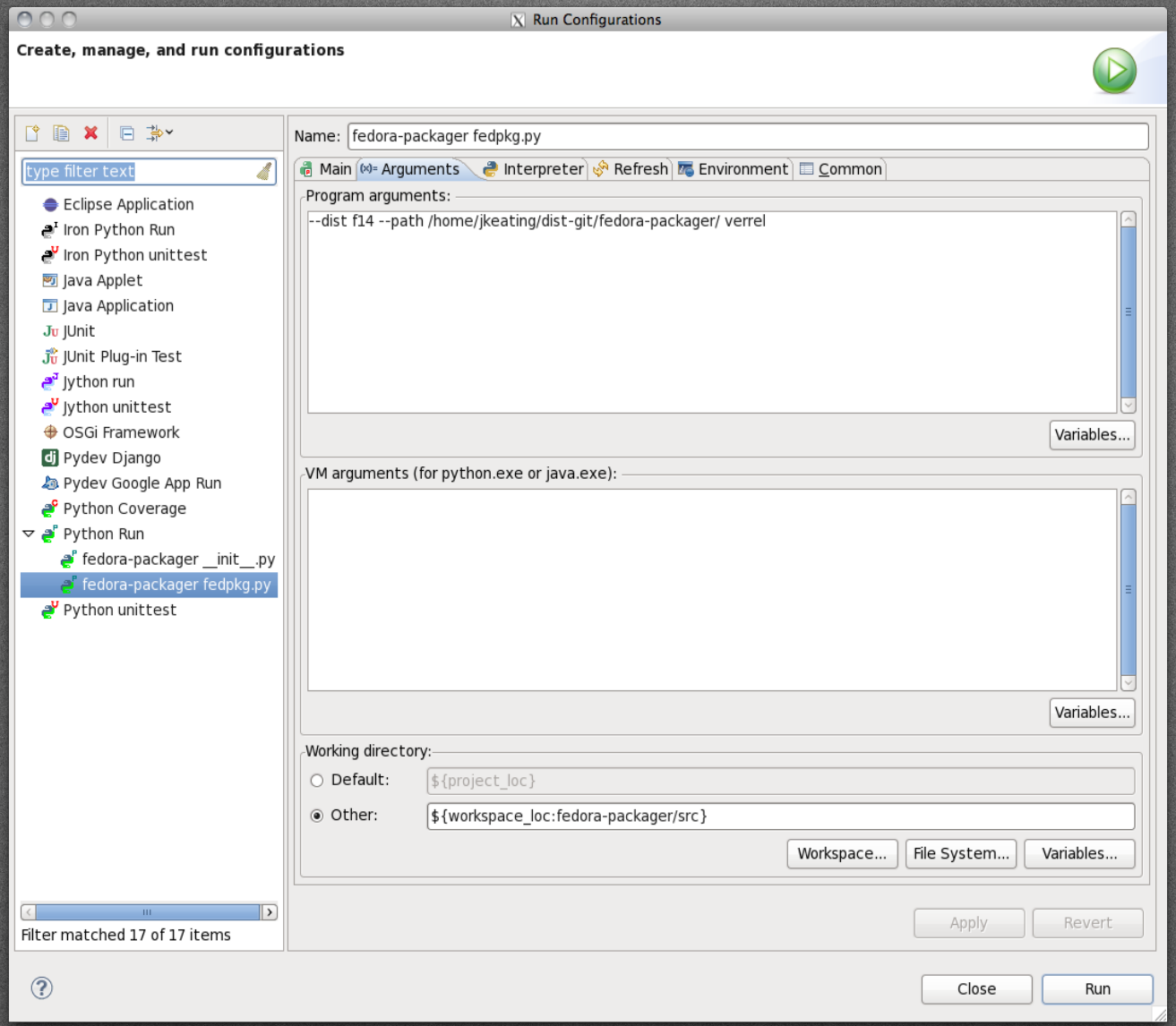
# Pydev Perspective Views

- Navigation and information
  - Project explorer
  - Source file outline
  - Errors
  - Console
  - History
- Can be on their own or stacked
- Can minimize or maximize

# Execution Testing

- Multiple configurations
- Custom app / interpreter arguments
- Console output
- Support for code coverage
- Support for Google App Run
- More with plugins

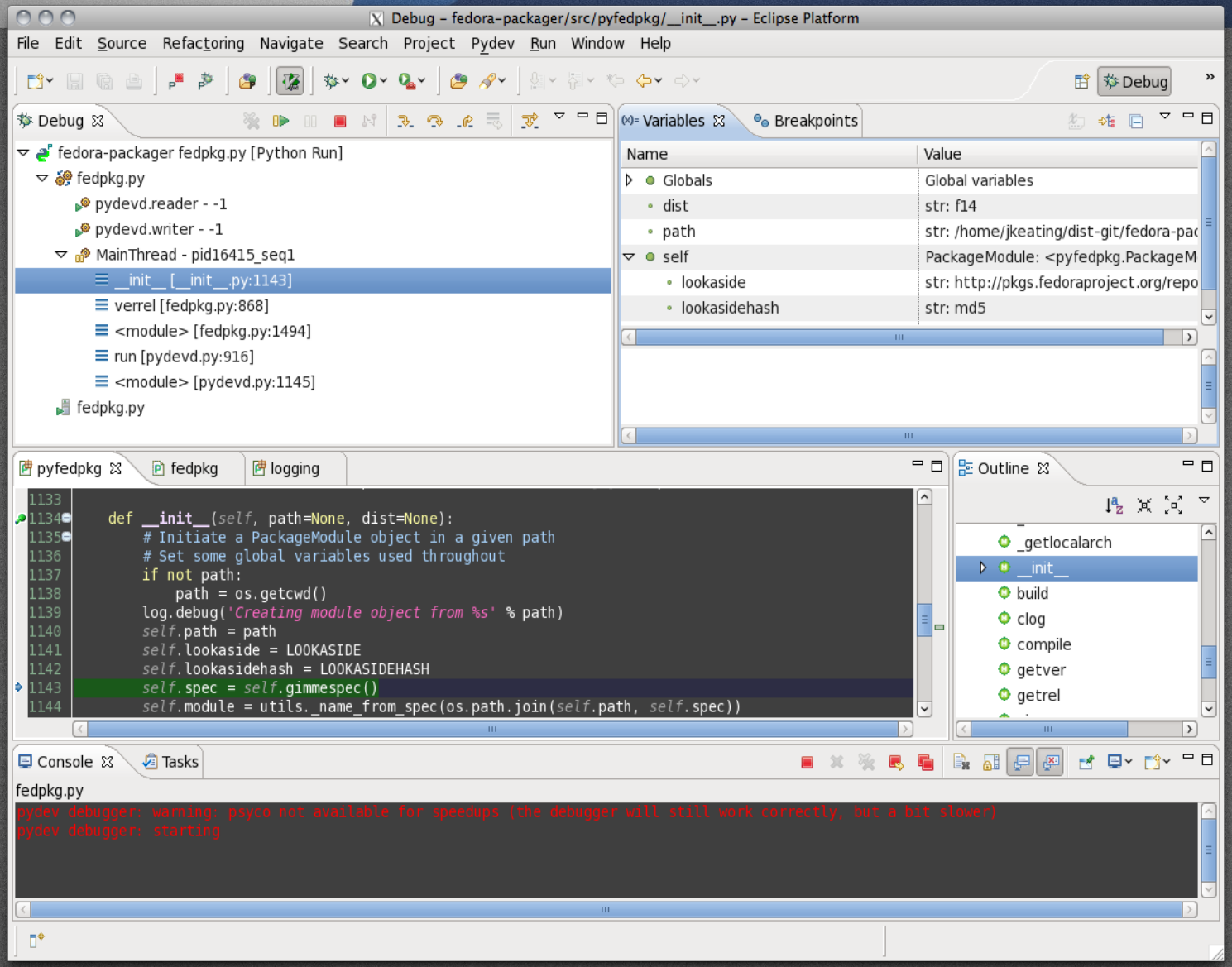
# Execution Testing



# Debug Perspective

- Set breakpoints
- Inspect stack data
- Step into, over, return
- Manually pause, resume
- Multiple configurations (linked with run)
- More with plugins

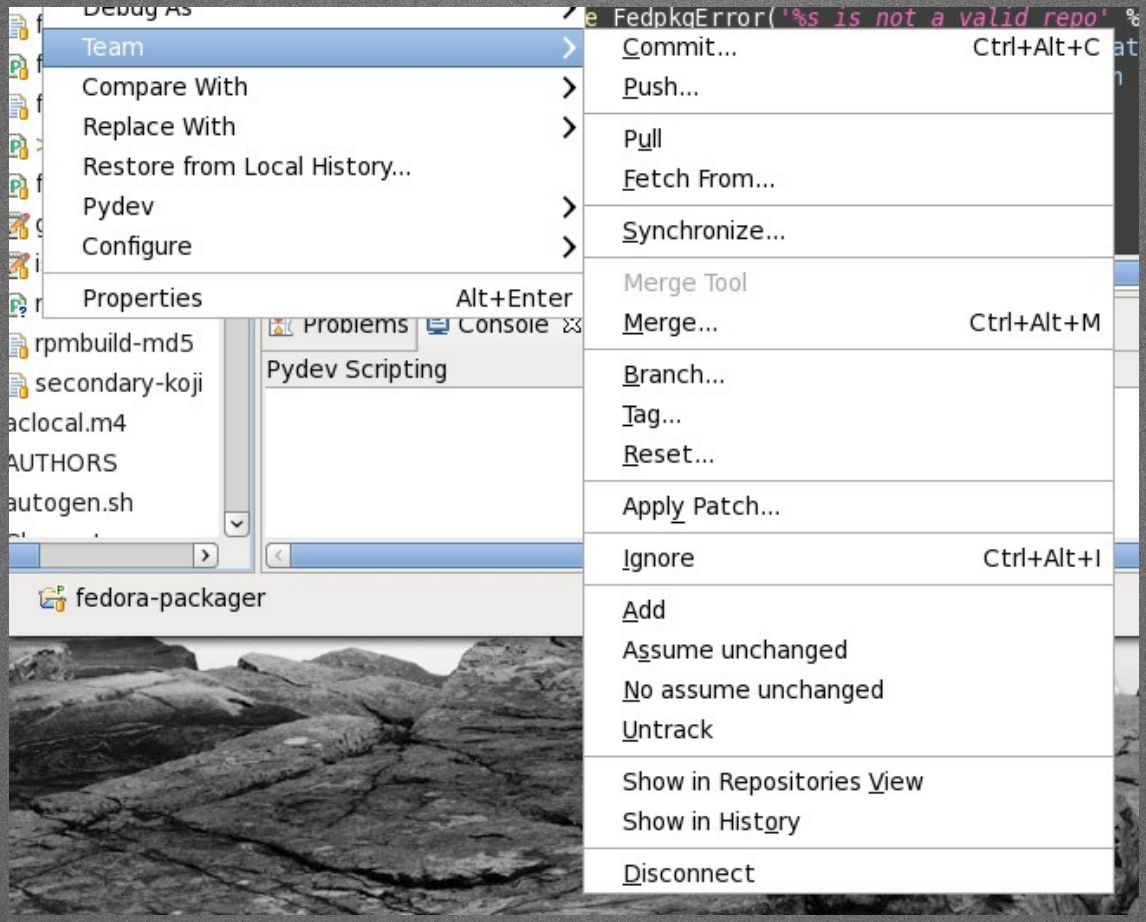
# Debug Perspective



# Team Controls

- Interact with source control
  - commit
  - push
  - merge
  - tag
  - More...
- Support for a variety of SCMs (with plugins)

# Team Controls




Developing Python

# Create a new Project

- Create a pydev project
- Create a new python package within the project
- Create a new module within the package
- Create a the script


Sling some Code

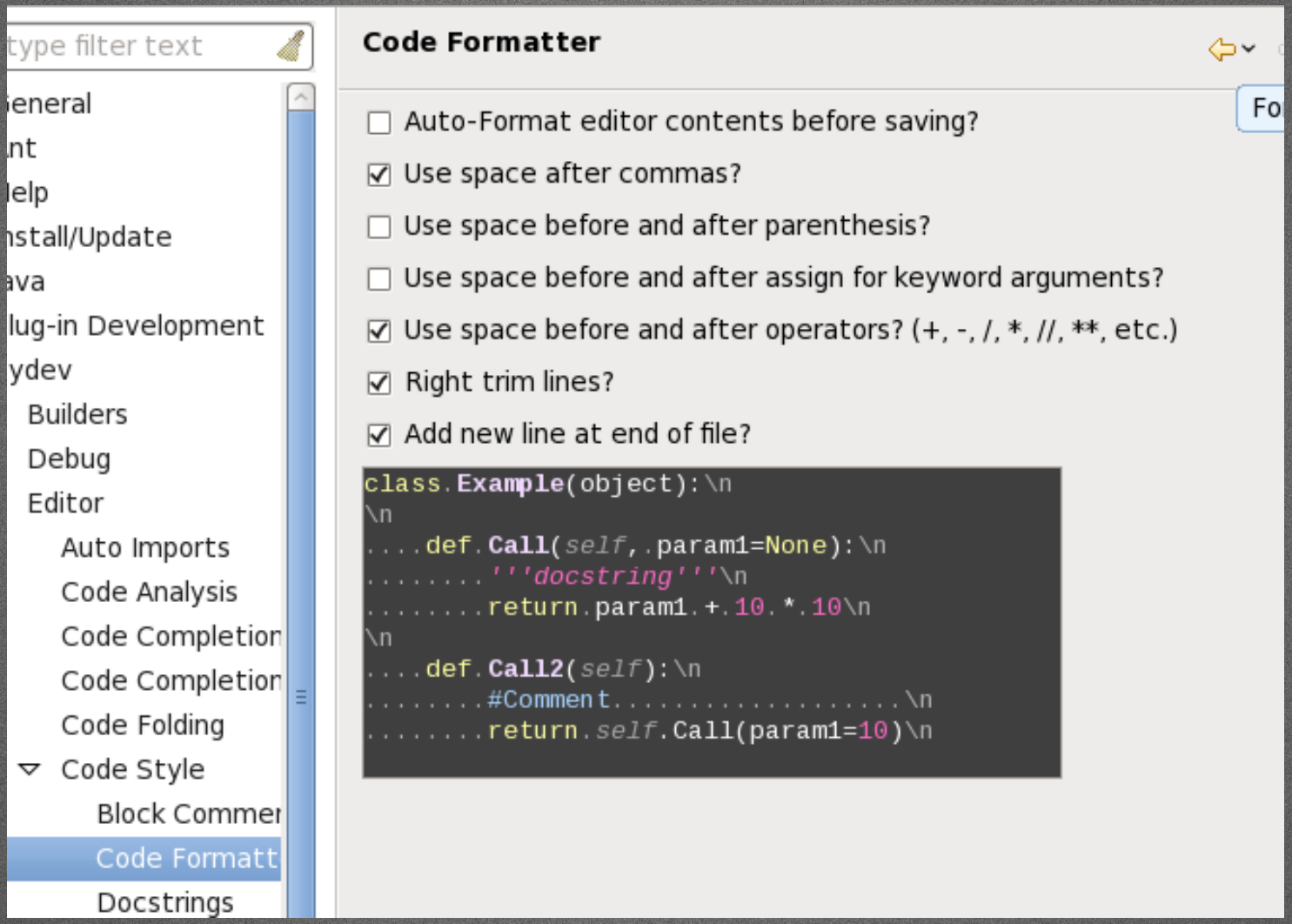
# Setup a run

- Make sure script is the active tab
- “Console” view tab will automatically focus when output happens

# Setup a debug

- Breakpoints are vitally important
  - Cannot be on a blank line (lost lots of time to this one...)
  - Do not have to save the file after adding a break point
- Debug perspective will automatically launch as soon as a breakpoint is encountered
- Can use console to evaluate statements

# Code Formatting



# Diffing

- Can diff against local history
- Could diff against previous SCM commits
- Can revert all or parts

# Refactoring

- Rename items
- Create new methods from existing code
- Inline / extract a variable

# Interactive Console

- Use a fresh python prompt
- Send selected code to the console
- Get execfile sent to console to continue playing with symbols

# Code Testing

- Support for code unittests
  - Pydev test runner
  - Nose
  - py.test
- Support for code coverage
- Support for pylint


Interacting with git

# git Interaction

- Can create new repo from existing project
- Can create new project from existing repo
- Can link existing project to existing repo

# Create a git repo from project

- Share Project
- Choose git
- Create a new repository
- Profit!

# Commit files to git

- No files exist in the repo by default, they have to be added/committed

# Using git to aid development

- Create branches for topic work
- Diffing / committing
- Creating patches
- Resetting work
- History and repository viewing
- Merging
- Tagging


Using Vim

# vrapper

- Wraps the current editor with vim like keybindings, rather than embedding vim itself
- Easy to turn on/off without restarting eclipse
- Still has command/insert modes
- Not all commands or key sequences work though, and a few bugs.

# Some quick vrapper features

- Navigation (arrows or k,j,h,l)
- Searching (/,?,n,N)
- Change {word,line,etc} (c{w,$,G,gg})
- Undo / redo (u,R)
- Repeat (.)
- Yank / paste (y{...},{p,P})
- Visual mode (v)
- Command mode (:)

# Some quick vrapper features

- Config file (.vrapperrc)
- Macros (q[a-z])
- Marks (m[a-z])

# What's missing?

- Search and replace
- Regex searching
- Vim plugins

# Summary

- Eclipse is a useful IDE
- Developing python in Eclipse is awesome
- Using git within Eclipse is handy
- Using vim within Eclipse is a godsend!

# Questions?

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