

Jython

Introduction to Jython programming

Introductions

Introduction

- Security auditor
 - 2 years at Wells Fargo; 3 years with DoD
- 31 years database development and administration
 - 10 years database administrator (Oracle, Sybase, and SQL Server)
 - 15 years C programming (CP/M, MS-DOS, Windows, VAX/VMS, and UNIX with Oracle, Ingres, Sybase, Informix, etc.)
- System administration (VAX/VMS)
- Many years scripting experience (UNIX shells - bash, Korn, awk, Perl, and Python)



Agenda and course structure

Agenda

- Module 1 - Introduction to Jython
- Module 2 - Jython language and semantics
- Module 3 - Data types
- Module 4 - Regular expressions
- Module 5 - Functions, debugging, modules, and packages
- Module 6 - Objects, classes and exceptions
- Module 7 - Java integration
- Module 8 - Testing
- Module 9 - System programming
- Module 10 - Conclusion

Jython implementation

- We will be learning using Jython version 2.5
- Jython version 2.7 was in beta when I began writing the course
 - Version 2.7 is final May 2015

Course structure

Modules

- I have divided the course into several modules
- Each module will be about 1 hour or longer in length
 - Q & A at the end of each module
- Two scheduled breaks
- Lunch
- Take breaks when you need them
- Ask questions when you have them
 - During class
 - During breaks
 - Lunch
 - Before class
 - After class
- I am reserving 1 hour at the end of each day for topics you want more information on

Module structure

- Lecture
 - Describe features of the language
- Demonstrations
 - Show language features
- Quizzes at the end of each module
 - Demonstrate what you have learned
- Exercises (most modules)
 - Coding - the best way to learn a language is to write code

Environment

My environment

- Mac OS X 10.10.3
- Java 1.8.0_45-b14
- Jython 2.5.3
- Jython 2.7.0
- Eclipse Luna (4.4.2)
 - PyDev 4.0.0.201504132356

Prerequisites

Software installation

- I sent a list of software to install prior to the first day. This software should be installed at this time.

Software install

- Java installed
 - Version 1.8
- Downloaded and install Jython
 - Version 2.5.3
 - Version 2.7.0
- Installed a text editor or IDE
 - Eclipse Luna
 - PyDev plugin
 - jEdit
 - Other

```

cerro-colorado:jython rereidy$ env | egrep '^J(YTHON|AVA)|^HOME'
JAVA_HOME=/Library/Java/JavaVirtualMachines/jdk1.8.0_40.jdk/Contents/Home
HOME=/Users/rereidy
cerro-colorado:jython rereidy$ java -version && pwd && ls -l
java version "1.8.0_40"
Java(TM) SE Runtime Environment (build 1.8.0_40-b27)
Java HotSpot(TM) 64-Bit Server VM (build 25.40-b25, mixed mode)
/Users/rereidy/jython
total 0
drwxr-xr-x  21 rereidy  staff   714 Apr 21 16:49 jython2.5.3
drwxr-xr-x  18 rereidy  staff   612 Apr 24 17:29 jython2.7b4
cerro-colorado:jython rereidy$

```

```

cerro-colorado:jython2.5.3 rereidy$ ./jython
Jython 2.5.3 (2.5:c56500f08d34+, Aug 13 2012, 14:48:36)
[Java HotSpot(TM) 64-Bit Server VM (Oracle Corporation)] on java1.8.0_45
Type "help", "copyright", "credits" or "license" for more information.
>>>

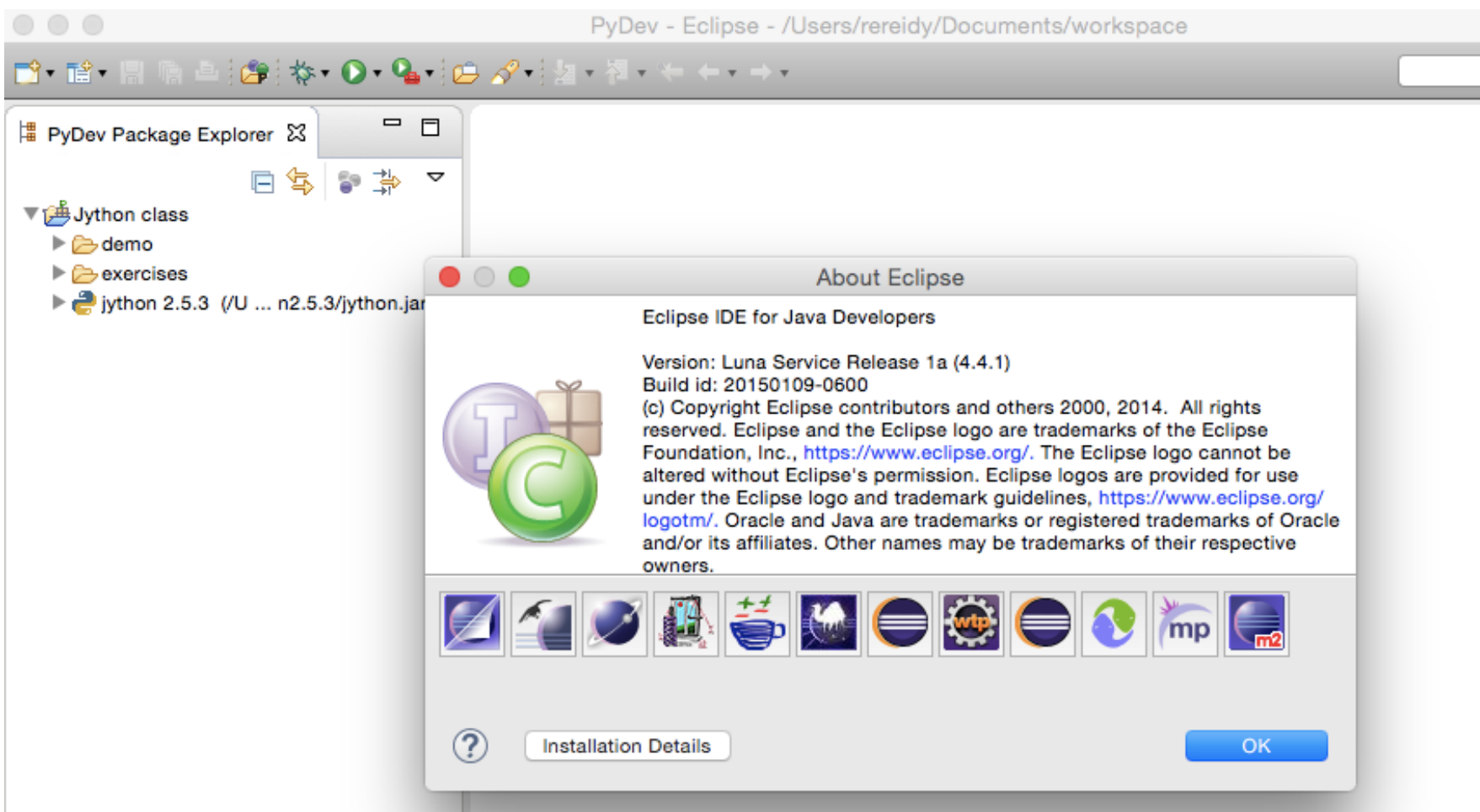
```

Name
▶ jython2.5.3
▶ jython2.7.0

```

cerro-bravo:jython2.7.0 rereidy$ java -jar jython.jar
Jython 2.7.0 (default:9987c746f838, Apr 29 2015, 02:25:11)
[Java HotSpot(TM) 64-Bit Server VM (Oracle Corporation)] on java1.8.0_31
Type "help", "copyright", "credits" or "license" for more information.
>>>

```

Eclipse Installation Details

Installed SoftwareInstallation HistoryFeaturesPlug-insConfiguration

type filter text

Name	Version	Id	Provider
▶ Eclipse IDE for Java Developers	4.4.1.20150109-0740	epp.package.java	
▶ EPIC	0.6.57	org.epic.feature.main.feature.group	Epic Project
▶ PyDev for Eclipse	3.9.2.201502050007	org.python.pydev.feature.feature.group	Aptana
▶ Pydev Mylyn Integration	0.4.0	org.python.pydev.mylyn.feature.feature.group	Fabio Zadrozny

Q & A