Taming a Professional IDE for the Classroom

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Java at Intro Level

• Widespread, great for OO

• But, lots of complexity...
  • Syntax
  • Command Line, Classpath
  • Console I/O
  • public static void main(String[] args)
IDEs Can Help

- Help with language syntax
- Easy compile / run buttons
Pedagogic IDEs

• Great for Intro:
  • Simple and interactive
  • Limited features
  • No plug-ins

DrJava
Professional IDEs

- Many advanced features
- Plug-ins (Eclipse)
- Bad for Intro:
  - Complex UI
  - Console I/O, main

Eclipse
Modify Eclipse

- Improve for intro level
- Why not use a Pedagogic IDE?
  - Other educational plug-ins
  - Consistent IDE across curriculum
  - Easy transition to advanced tools
DrJava Plug-in for Eclipse

- Simplify Eclipse’s interface
- Add Interactions Pane
Interactions Pane

- On-the-fly evaluation
- No need for `main`, console I/O
- Lecture demos, student tinkering
Vs. Eclipse Scrapbook

- Can evaluate code outside `main`, but...
- All-at-once evaluation
- Less convenient, powerful, intuitive
Demo
Related Plug-ins

- Gild, Penumbra
- Further simplify Eclipse’s interface
- Courseware integration
Result

- Eclipse + DrJava: ready for Intro Level
- Effective on-the-fly evaluation
- Integrate with other plug-ins
- Easy path for growth