Taming a Professional IDE for the Classroom

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Java at Intro Level

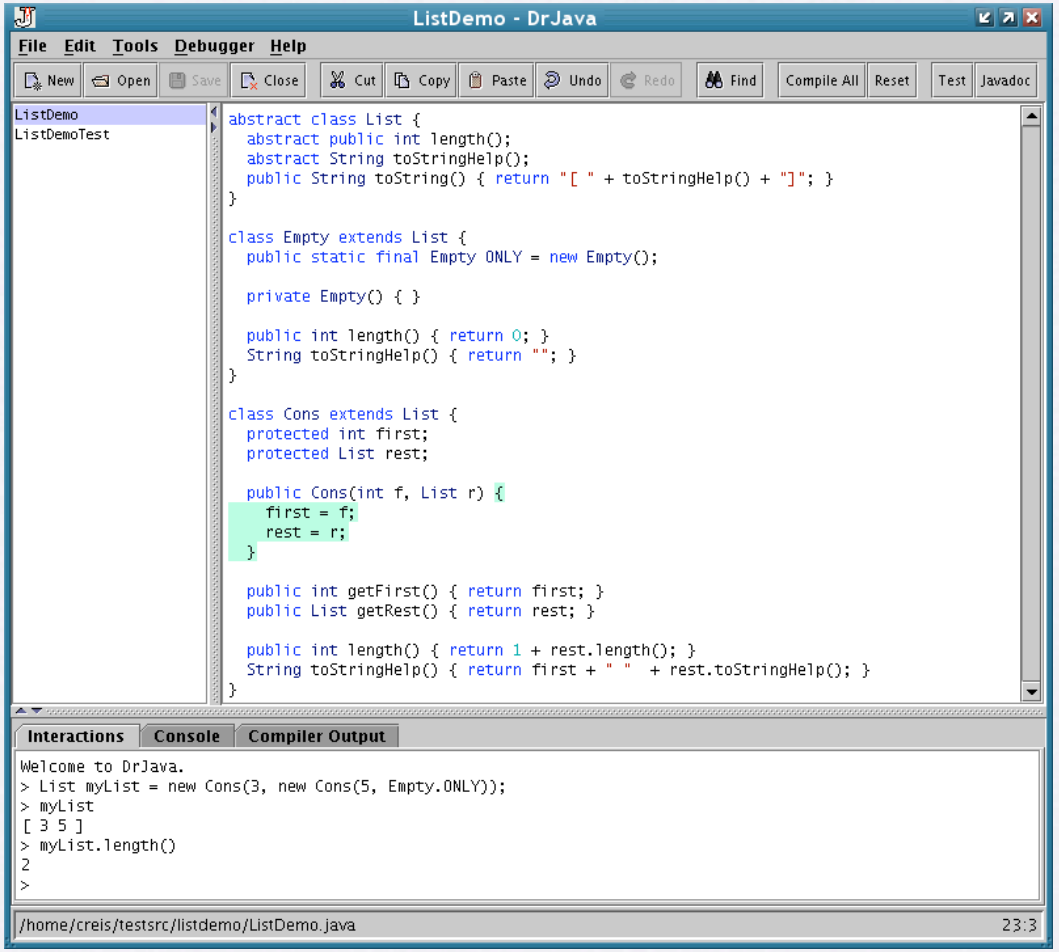
- Widespread, great for OO
- But, lots of complexity...
  - Syntax
  - Command Line, Classpath
  - Console I/O
  - `public static void main(String[] args)`

IDEs Can Help

- Help with language syntax
- Easy compile / run buttons

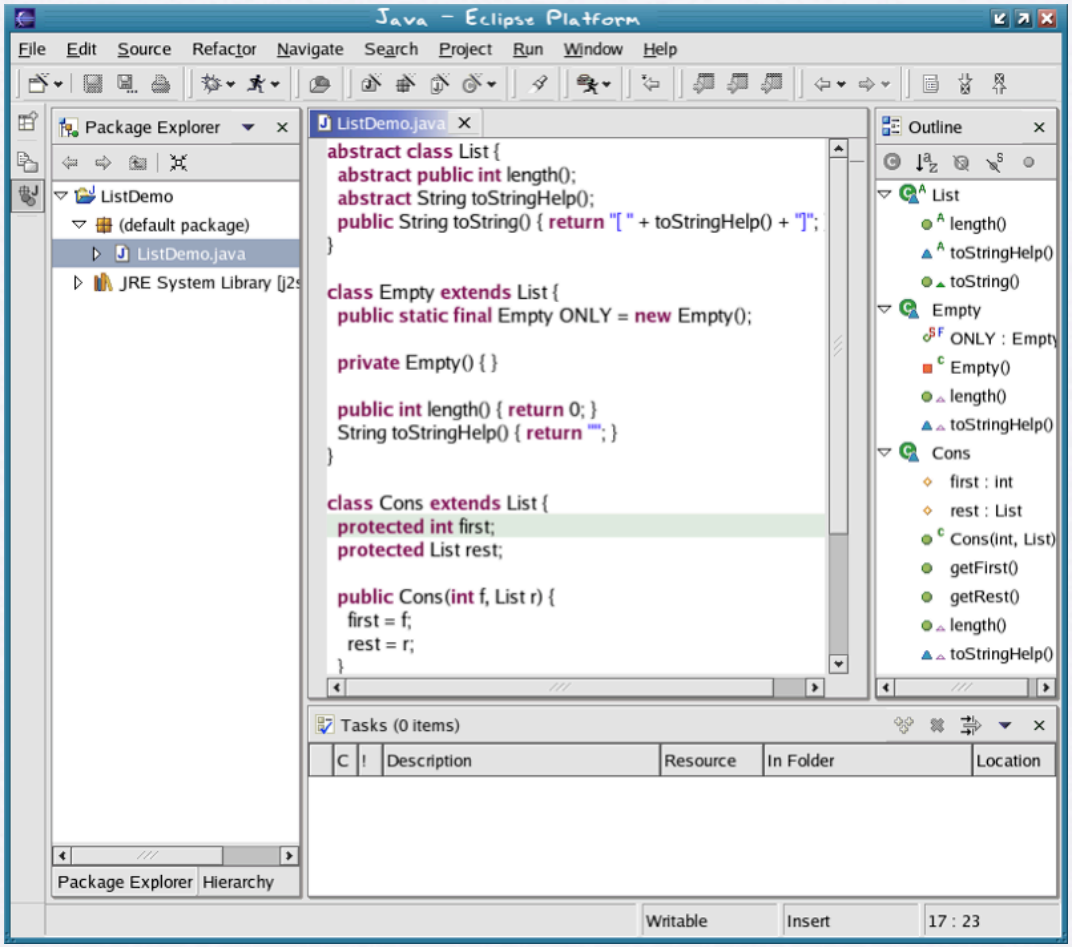
Pedagogic IDEs

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



DrJava

Professional IDEs



Eclipse

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

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