Research in
Integrated Development Environments
(IDEs)

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What Is an IDE?

• Integrated collection of tools.

• Basic components are:
  - source code editor
  - compiler/interpreter
  - debugger
Advanced IDE Features

• multi-language support

• code browsing

• graphical views

• testing

• integrated version control
Earliest IDEs

• Lisp environments of the 1970s.

• First terminal-based, then GUI.
Research Heyday

- Mid-1980s.

- Pioneering environments like BALSA and PECAN.
Productization

- 1990s and 2000s have seen many commercial and open source products.

- Eclipse is noteworthy.
Latest Research

• Focus on expanding IDE scope.

• Areas include:
  
  o hypermedia
  
  o collaborative work
  
  o ubiquitous computing