

# Emacs

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# Agenda

- Introduction
- Installation
- Configuration
- Emacs Lisp
- Useful Packages
- Conclusion
- Questions
- Demonstration

# Introduction

- **What is Emacs?**
  - Emacs is an advanced customizable text editor.
- **What is the latest version?**
  - Version 21.1
- **Official Website:**
  - <http://www.gnu.org/software/emacs/>

# Installation

- **Download from:**
  - `ftp://ftp.gnu.org/gnu/windows/emacs/latest/`
- **Download file:**
  - `emacs-21.1-fullbin-i386.tar.gz`
- **Extract files to preferred directory**
- **Execute `addpm.exe`**

# Configuration

- **Create `_emacs` configuration file in home directory (C:\ is default)**
- **Change “HOME” environment variable to change home directory**
- **Use ‘site-lisp’ directory to store add-on packages**

# Installing the JDE

- **Download and install the Java 2 SDK**
  - <http://java.sun.com/>
- **Download and unzip in add-on directory**
  - <http://jdee.sunsite.dk/jde-latest.zip>
  - <http://cedet.sf.net/speedbar.shtml>
  - <http://cedet.sf.net/semantic.shtml> (v1.4beta5 or better)
  - <http://cedet.sf.net/eieio.shtml>
  - <http://jdee.sunsite.dk/elib-1.0.zip>

# Installing the JDE, cont.

- **Append lines to `_emacs` file**

- `(add-to-list 'load-path (expand-file-name "site-lisp/jde/lisp"))`
- `(add-to-list 'load-path (expand-file-name "site-lisp/semantic"))`
- `(add-to-list 'load-path (expand-file-name "site-lisp/speedbar"))`
- `(add-to-list 'load-path (expand-file-name "site-lisp/elib"))`
- `(add-to-list 'load-path (expand-file-name "site-lisp/eieio"))`
- `(require 'jde)`

# Keyboard Shortcuts

<u>Command</u>	<u>Description</u>
● Ctrl-x Ctrl-c	Quit Emacs
● Ctrl-x k	Kills the current buffer
● Ctrl-x Ctrl-f	Open a file
● Ctrl-x Ctrl-s	Save a file
● Ctrl-_	Undo
● Ctrl-s	Forward search

# Emacs Lisp

- Fully-functional Lisp interpreter
- Lisp = LISt Processor
- Most of Emacs written in Lisp
- Easy to extend Emacs using Lisp
- Lots of parentheses
- All configuration done in Lisp
- Add-on packages written in Lisp

# Emacs Lisp, cont.

- **Sample code**

- `(unless (functionp 'c-guess-basic-syntax)\`  
  `(autoload 'c-guess-basic-syntax "cc-engine"))`
- `(* 2 2)`

- **Ctrl-x e**                    **Evaluate Lisp code**

- **Lisp can be inserted and evaluated anywhere**

# Useful Packages

- File manager
- Psychiatrist
- Games
- Calendar
- vi emulation
- Mail/News clients
- Transparent FTP editing
- tex Editing
- Diary
- Todo lists
- Regular expression editor
- Spellcheck
- Calculator
- Encryption

# Version Control

- **RCS, CVS, SCCS**
- **Supports multiple users**
  - Very handy for team projects
- **Allows merging of documents**

# Version Control

- **Registering a file in VC**
  - Ctrl-x v l
  - Enter a log message
  - Ctrl-x Ctrl-q

# Version Control

- **Commands of interest for normal manipulation:**
  - Ctrl-x Ctrl-q
  - Ctrl-x v VersionNumber
  - Ctrl-u Ctrl-x v filename RET oldvers RET newvers RET
- **Status commands**
  - Ctrl-x v l                      History
  - Ctrl-x v u                      Revert
  - Ctrl-x v c                      Remove last change from master

# Version Control

- **Branching in VC, Merging**
- **Allows multiple paths to be pursued, and then combined at completion.**
  - **Ctrl-u- Ctrl-x Ctrl-q**
  - **Ctrl-x v m (vc-merge)**

# Version Control

- **Snapshots of a project**

- **Ctrl-x v s name RET**      **“Takes” the snapshot**
- **Ctrl-x v r name RET**      **Looks at currently directly and below**

- **Changing logs**

- **Ctrl-x v a**      **New entries**
- **Ctrl-u Ctrl-x v a**      **Only files open currently in buffer**

# Code Support

- Packages available to support nearly any language
- CC mode supports Java, C, C++ and others standard
- JDEE for extended Java support

# Code Support

- **CC Mode**
- **Standard in Emacs**
- **Supports C, C++, Objective-C, Java, CORBA IDL(Interface Definition Language), and Pike code**
- **CS 1-4 uses these abilities**

# Code Support

- **“Minor” modes**
  - AutoNewline
  - Hungry-Delete
- **Individualized style standards**
  - Indentation
  - Spacing
  - Coloring
  - Directory Paths
  - Menus

# Code Support

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- **JDEE**
- **<http://jdee.sunsite.dk>**
- **Compile, run, debug, build, browse, project, help commands.**
- **Code completion**

# Conclusion

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# Questions?

