

## Text Editors

### 1. Text Editors

#### 1.1 Introduction

# CSCI 330 UNIX and Network Programming

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Online Unit  
Text Editors



## 1.2 Editor Concepts

### Editor Concepts

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- Editing a file is to modify the content of a file
- Text editor:
  - Enter and modify text in a text file
- Word processor:
  - Enter, modify and format text in a document
- Line editor:
  - Edit file one line at a time
  - Unix examples: ex, ed and sed
- Full screen editor
  - Shows a whole screen of text at a time

## 1.3 Editor features

### Editor features

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- enter text
- search and replace
- copy, cut and paste
- undo and redo
- importing and exporting text
- save and cancel

## 1.4 Text files

### Text files

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- Unix file name does not require file extension
  - Unix file system does not consider the extension when treating files
- However, some extensions are commonly used
  - Program source code: .c .h .cc .cpp .f .f77 .f95
  - Compiled object code: .o .a .so .sa
  - Compressed files: .gz .zip .bz2
  - Archive files: .tar .tgz
  - Web site source code: .html .css .shtml .php
  - Text files that will be moved to Windows: .txt
- Executable files typically have no extension

## 1.5 Unix Text editors

### Unix Text editors

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- vi
- pico, nano
- GUI editors
  - gedit, xedit
  - geany
  - mousepad
  - emacs

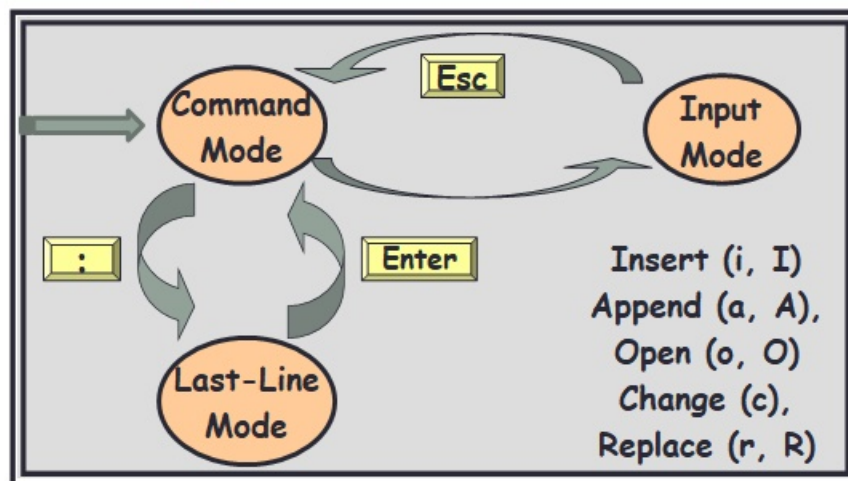
## 1.6 The vi Editor

### The vi Editor

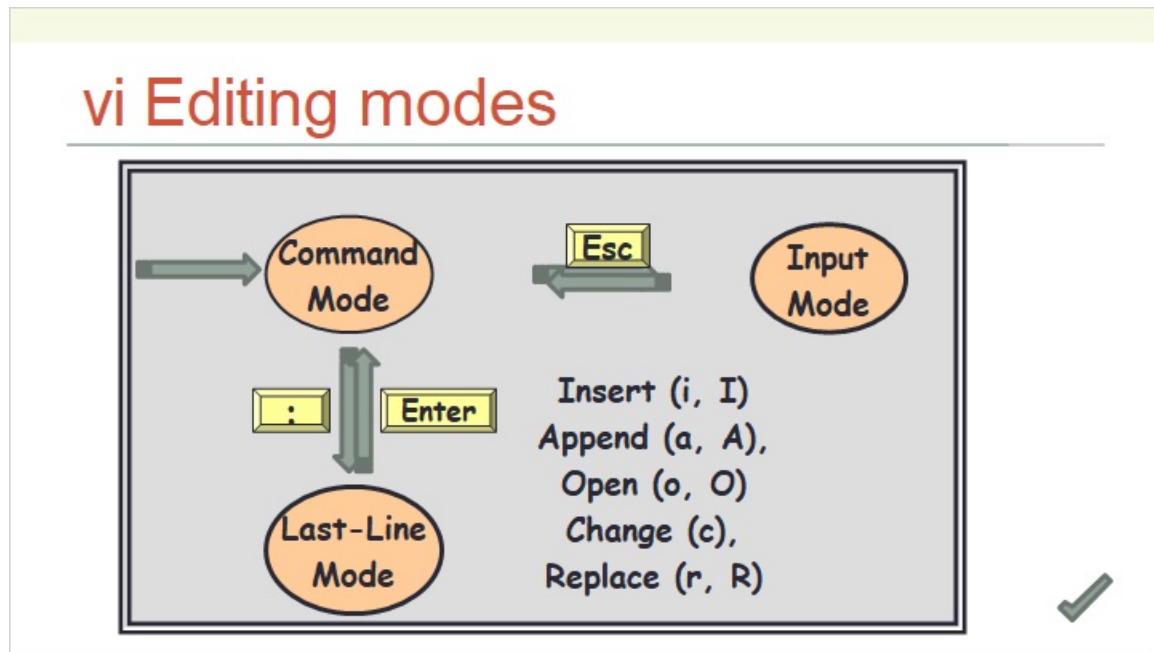
- short for: visual editor
- available on all UNIX systems
  - original vi part of BSD Unix
    - written by Bill Joy in 1976
  - many derived, improved versions available
  - open source
    - vi (actually vim short for “vi improved”)
    - is part of GNU/Linux
- vi has multiple modes of operation:
  - input mode, command mode, last-line mode

## 1.7 vi Editing modes

### vi Editing modes



## 1.8 vi modes illustrated



## 1.9 vi tutorial



### 1.10 The emacs editor

## The emacs editor

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- originally started as editor macros in 1976
- Gosling emacs available for Unix in 1981
- GNU emacs created by Richard Stallman in 1984
  - very popular editor on Unix until recently
  - history: editor war: emacs vs. vi
- uses lisp-like macro language for powerful features and extensions:
  - programming language sensitive editing
  - email client
  - news reader

### 1.11 The pico editor

## The pico editor

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- part of the popular pine mail utility on UNIX
  - developed by the University of Washington
- pico = pine email composer
- nano is open source clone of pico on GNU/Linux
  - very intuitive operation
  - on-screen guide and help
  - preferred by UNIX beginners

## 1.12 GUI Editors

### GUI Editors

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- editors that use onscreen direct manipulation via mouse pointer and menus
  - xedit, gedit (i.e. "Text Editor")
  - geany
  - also: LibreOffice (formerly OpenOffice)
- editors on turing/hopper (needs X11 window server)
  - xedit, gedit, mousepad
  - geany, emacs

## 1.13 Summary

### Summary

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- many text editors available for UNIX
  - vi
  - nano
- GUI editors
  - gedit
  - geany