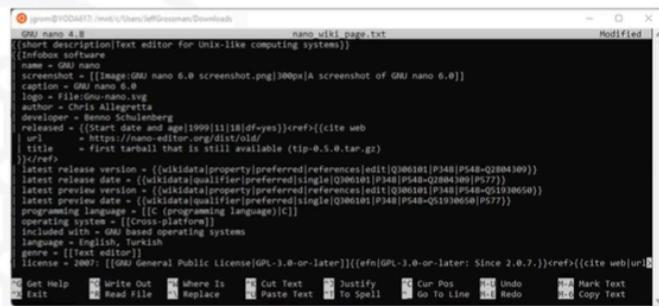


# Creating and Editing Text Files

## Popular text editors

- Command-line text editors:
  - GNU nano
  - vi
  - vim
- GUI-based text editors:



A screenshot of the GNU nano 4.8 text editor. The window title is "nano\_wiki\_page.txt". The text buffer contains a large amount of XML code related to the GNU nano editor, including details like release versions, operating systems, and languages. The bottom of the window shows a toolbar with various editing functions: Get Help, Write Out, Where Is, Cut Text, Justify, Cur Pos, Undo, Mark Text, Exit, Read File, Replace, Paste Text, To Spell, Go To Line, Redo, and Copy Text.

## Popular text editors

- Command-line text editors:
  - GNU nano
  - vi
  - vim
- GUI-based text editors:
  - gedit

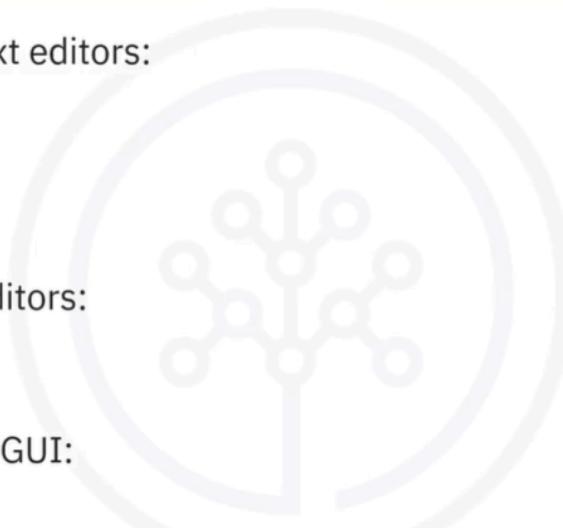


A screenshot of the gedit text editor displaying a C code file named "gedit.c". The code is written in C and includes functions for opening and closing DLLs. The interface shows the file path as "/Downloads/gedit-3.12.2/gedit". The bottom status bar indicates "C" and "Tab Width: 8", with the cursor positioned at "Ln 78, Col 10".

# Popular text editors

---

- Command-line text editors:
  - GNU nano
  - vi
  - vim
- GUI-based text editors:
  - gedit
- Command-line or GUI:
  - emacs
- You use text editors to write code in your Linux environment. There are many editors to choose from and they can be grouped into two main categories: Command-line text editors And GUI text editors Examples of command-line text editors are: GNU nano, a small and friendly modeless text editor vi, a traditional command-line editor originally created for Unix And vim, a powerful mode-based command line-editor based on vi A popular GUI-based editor is gedit, which is the default editor from the GNOME environment. And emacs (e'-max) is another text editor that is one of the oldest free, open source projects still under development. You can use emacs in GUI mode or within a command line.



# Features of gedit

A general-purpose editor, easy to use with a clean, simple GUI:

- Integrated file browser
- Undo and redo
- Search and replace
- Extensibility



# Features of gedit

## Syntax color coding

The screenshot shows the gedit XML editor window. The title bar reads "gedit.resource.xml" and "gedit-3.12.2/gedit". The main area displays XML code with syntax highlighting. The code includes XML declarations, processing instructions, and various XML elements like <file> and <resource>. The editor interface includes standard windows controls, a toolbar, and status bars at the bottom indicating the file path, tab width, and current position (Line 1, Col 1).

```
<?xml version="1.0" encoding="UTF-8"?>
<resources>
    <resource prefix="/org/gnome/gedit/ui">
        <file preprocess="xml-stripblanks">gedit-menu.ui</file>
        <file preprocess="xml-stripblanks">gedit-encodings-dialog.ui</file>
        <file preprocess="xml-stripblanks">gedit-preferences-dialog.ui</file>
        <file preprocess="xml-stripblanks">gedit-replace-dialog.ui</file>
        <file preprocess="xml-stripblanks">gedit-print-preview.ui</file>
        <file preprocess="xml-stripblanks">gedit-print-preferences.ui</file>
        <file preprocess="xml-stripblanks">gedit-progress-info-bar.ui</file>
        <file preprocess="xml-stripblanks">gedit-status-menu-button.ui</file>
        <file preprocess="xml-stripblanks">gedit-tab-label.ui</file>
        <file preprocess="xml-stripblanks">gedit-view-frame.ui</file>
        <file preprocess="xml-stripblanks">gedit-highlight-mode-dialog.ui</file>
        <file preprocess="xml-stripblanks">gedit-highlight-mode-selector.ui</file>
        <file preprocess="xml-stripblanks">gedit-window.ui</file>
        <file preprocess="xml-stripblanks">gedit-statusbar.ui</file>
    </resource>
</resources>
```

- Gedit is a popular, modern text editor that comes preinstalled on most Linux distros. It's designed as a general-purpose text editor and in keeping with the philosophy of the GNOME project, it emphasizes simplicity and ease of use, with a clean and simple GUI. Gedit provides many features to enhance your text editing experience, including: An integrated file browser Undo and redo functionality Search and replace functions with support for regular

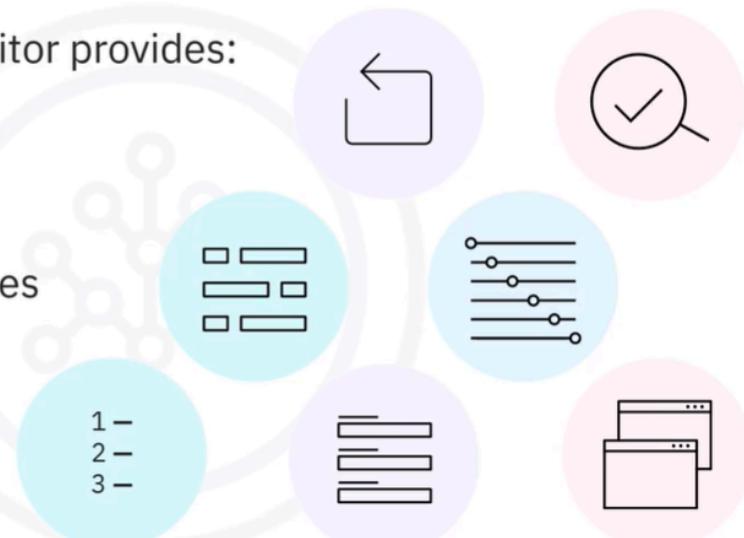
expressions in the search string And extensibility using plugins from the gedit-plugins package.

- The text editor uses syntax color coding to help you interpret and focus on different aspects of your code

## Features of GNU nano

A command-line text editor provides:

- Undo and redo
- Search and replace
- Syntax highlighting
- Indenting groups of lines
- Line numbers
- Line-by-line scrolling
- Multiple buffers



- GNU nano is a command-line text editor that provides: Undo and redo features Search and replace with support for regular expressions in the search string Syntax highlighting Automatic indentation of code Line numbering Line-by-line scrolling And multiple buffers so you can work with many files at the same time To open a text file in nano, type nano followed by the filename to open.

# Using the GNU nano text editor

- To open a text file in GNU nano from the command prompt, type:

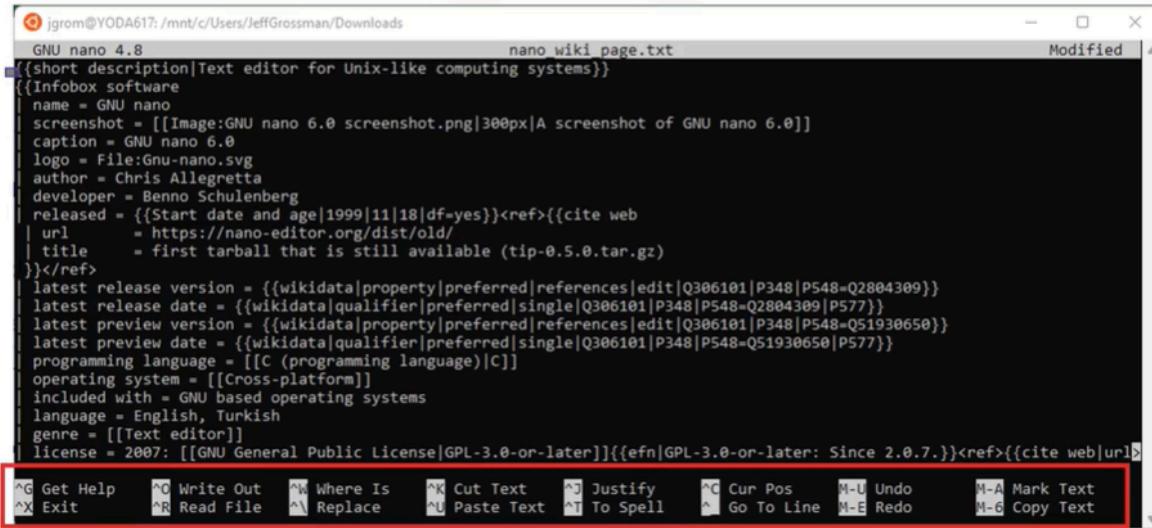
```
nano <filename>
```

## Using the GNU nano text editor



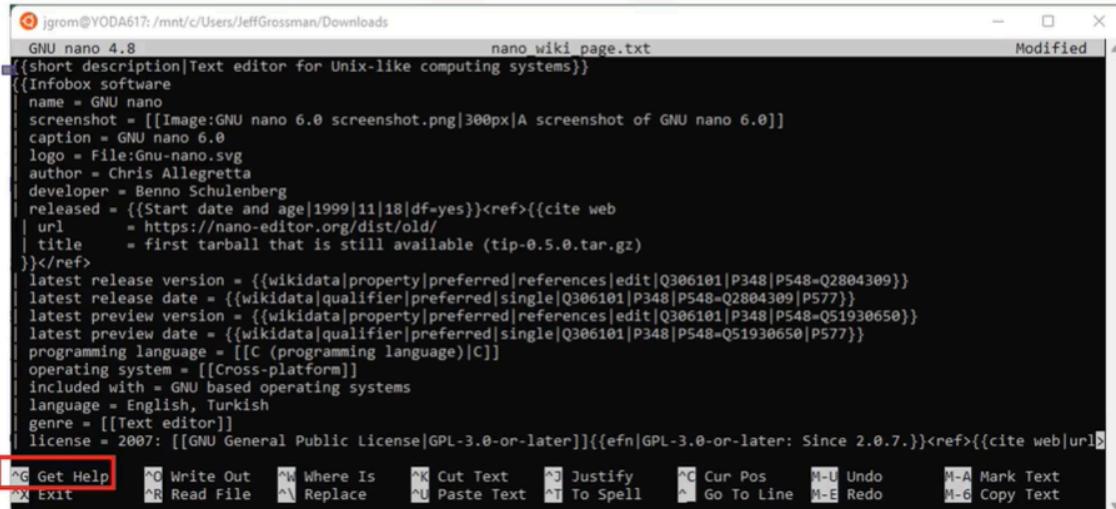
```
jgrom@YODA617: /mnt/c/Users/JeffGrossman/Downloads          nano wiki_page.txt      Modified
GNU nano 4.8
{{short description|Text editor for Unix-like computing systems}}
[[Infobox software
|name = GNU nano
|Screenshot = [[Image:GNU nano 6.0 screenshot.png|300px|A screenshot of GNU nano 6.0]]
|Caption = GNU nano 6.0
|Logo = File:Gnu-nano.svg
|Author = Chris Allegretta
|Developer = Benno Schulenberg
|Released = {{Start date and age|1999|11|18|df=yes}}<ref>{{cite web
|url = https://nano-editor.org/dist/old/
|title = first tarball that is still available (tip-0.5.0.tar.gz)
}}</ref>
|Latest Release Version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548=Q2804309}}
|Latest Release Date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548=Q2804309|P577}}
|Latest Preview Version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548=Q51930650}}
|Latest Preview Date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548=Q51930650|P577}}
|Programming Language = [[C (programming language)|C]]
|Operating System = [[Cross-platform]]
|Included With = GNU based operating systems
|Language = English, Turkish
|Genre = [[Text editor]]
|License = 2007: [[GNU General Public License|GPL-3.0-or-later]]{{efn|GPL-3.0-or-later: Since 2.0.7.}}<ref>{{cite web|url
|^G Get Help    ^O Write Out   ^W Where Is   ^X Cut Text   ^J Justify   ^C Cur Pos   M-U Undo   M-A Mark Text
^X Exit       ^R Read File   ^I Replace    ^U Paste Text  ^T To Spell   ^G Go To Line  M-E Redo   M-B Copy Text
```

# Using the GNU nano text editor



The screenshot shows a terminal window titled "jgrom@YODA617: /mnt/c/Users/JeffGrossman/Downloads". Inside the window, the file "nano wiki page.txt" is being edited. The content of the file is the source code of a Wikipedia page about the "GNU nano" text editor. The text includes details like the name, developer, release date, and license information. The cursor is positioned at the beginning of the file. The bottom of the window shows the standard nano command-line interface with various keyboard shortcuts for navigation and editing.

# Using the GNU nano text editor

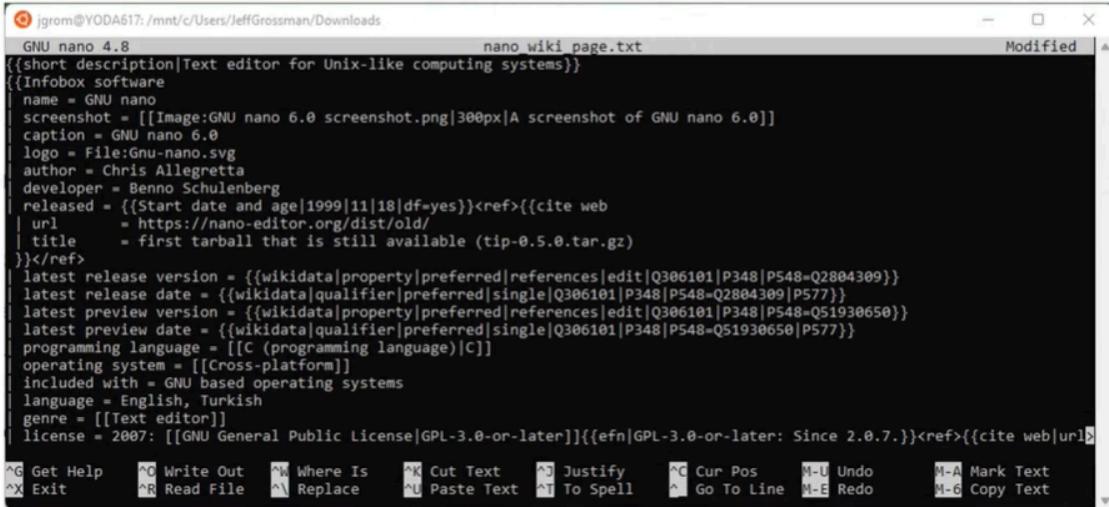


This screenshot is identical to the one above, showing the same terminal window and nano editor interface. The file "nano wiki page.txt" contains the same source code from the GNU nano Wikipedia page. The cursor is again at the start of the file, and the bottom of the window shows the nano command-line interface.

- This opens a new text editor window in which you can edit the file. Here is what the nano app looks like. The main area displays the text of the open file, which in this case is the source text from the nano Wikipedia page. The cursor is currently located at the beginning of the file, but you can navigate within the text using the arrow keys, page up and down keys, or 'home' and 'end' keys. Any text you type is entered at the cursor. You can also delete text using the

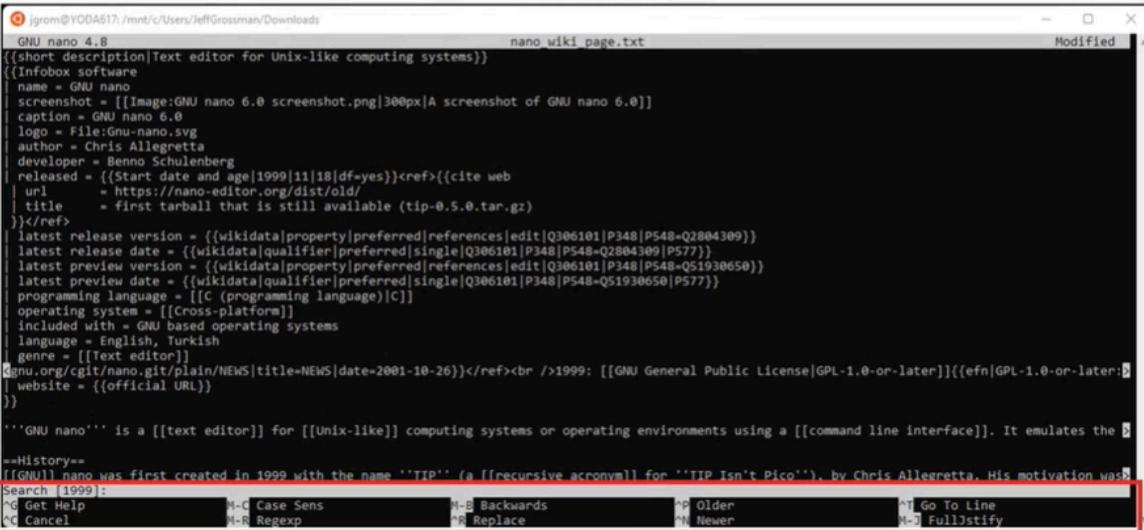
Delete and Backspace keys. Pressing Enter starts a new line. At the bottom of the nano window there is a list of commands that you can use in the editor. To access the commands, simultaneously press 'control' and the letter for the command. For example, to Get Help, press the 'control' and 'G' keys.

## Using nano to search for a string



```
jgrom@YODA617:/mnt/c/Users/JeffGrossman/Downloads
GNU nano 4.8                                              nano wiki_page.txt
{{short description|Text editor for Unix-like computing systems}}
{{Infobox software
| name = GNU nano
| screenshot = [[Image:GNU nano 6.0 screenshot.png|300px|A screenshot of GNU nano 6.0]]
| caption = GNU nano 6.0
| logo = File:Gnu-nano.svg
| author = Chris Allegretta
| developer = Benno Schulenberg
| released = {{Start date and age|1999|11|18|df=yes}}<ref>{{cite web
| url      = https://nano-editor.org/dist/old/
| title    = first tarball that is still available (tip-0.5.0.tar.gz)
}}</ref>
| latest release version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548-Q2804309}}
| latest release date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548-Q2804309|P577}}
| latest preview version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548-Q51930650}}
| latest preview date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548-Q51930650|P577}}
| programming language = [[C (programming language)|C]]
| operating system = [[Cross-platform]]
| included with = GNU based operating systems
| language = English, Turkish
| genre = [[Text editor]]
| license = 2007: [[GNU General Public License|GPL-3.0-or-later]]{{efn|GPL-3.0-or-later: Since 2.0.7.}}<ref>{{cite web|url=
^G Get Help   ^O Write Out   ^W Where Is   ^X Cut Text   ^J Justify   ^C Cur Pos   M-U Undo   M-A Mark Text
^X Exit      ^R Read File   ^R Replace   ^U Paste Text  ^T To Spell   ^G Go To Line  M-E Redo   M-G Copy Text
```

## Using nano to search for a string



```
jgrom@YODA617:/mnt/c/Users/JeffGrossman/Downloads
GNU nano 4.8                                              nano wiki_page.txt
{{short description|Text editor for Unix-like computing systems}}
{{Infobox software
| name = GNU nano
| screenshot = [[Image:GNU nano 6.0 screenshot.png|300px|A screenshot of GNU nano 6.0]]
| caption = GNU nano 6.0
| logo = File:Gnu-nano.svg
| author = Chris Allegretta
| developer = Benno Schulenberg
| released = {{Start date and age|1999|11|18|df=yes}}<ref>{{cite web
| url      = https://nano-editor.org/dist/old/
| title    = first tarball that is still available (tip-0.5.0.tar.gz)
}}</ref>
| latest release version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548-Q2804309}}
| latest release date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548-Q2804309|P577}}
| latest preview version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548-Q51930650}}
| latest preview date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548-Q51930650|P577}}
| programming language = [[C (programming language)|C]]
| operating system = [[Cross-platform]]
| included with = GNU based operating systems
| language = English, Turkish
| genre = [[Text editor]]
| gnu.org/cgit/nano.git/plain/NEWS|title=NEWS|date=2001-10-26}}</ref><br />1999: [[GNU General Public License|GPL-1.0-or-later]]{{efn|GPL-1.0-or-later:}}
| website = {{official URL}}
}}</ref>

'''GNU nano''' is a [[text editor]] for [[Unix-like]] computing systems or operating environments using a [[command line interface]]. It emulates the X

--History--
[[GNU]] nano was first created in 1999 with the name ''TIP'' (a [[recursive acronym]] for ''TIP Isn't Pico''), by Chris Allegretta. His motivation was
```

## Using nano to search for a string

---

```
Search [1999]:  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

```
Search [1999]: https  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

## Using nano to search for a string

---

```
Search [1999]:  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

```
Search [1999]: https  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

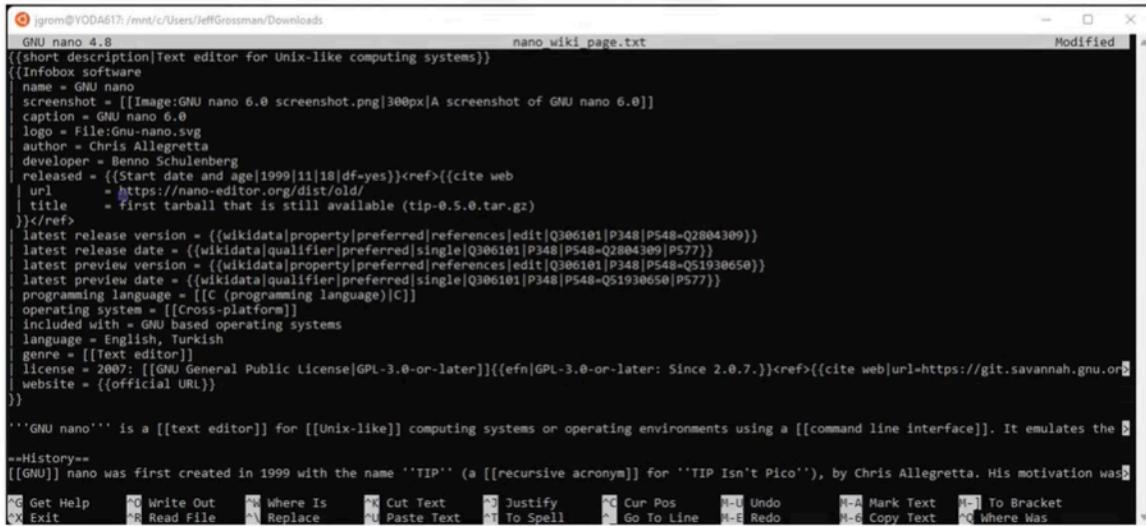
## Using nano to search for a string

---

```
Search [1999]:  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

```
Search [1999]: https  
^G Get Help M-C Case Sens M-B Backwards  
^C Cancel M-R Regexp ^R Replace
```

# Using nano to search for a string



```
jgrom@YODA617: /mnt/c/Users/jeffGrossman/Downloads          nano wiki_page.txt      Modified
GNU nano 4.8
{{short description|Text editor for Unix-like computing systems}}
{{Infobox software
|name = GNU nano
|screenshots = [[Image:GNU nano 6.0 screenshot.png|300px|A screenshot of GNU nano 6.0]]
|caption = GNU nano 6.0
|logo = File:Gnu-nano.svg
|author = Chris Allegretta
|developer = Benno Schulenberg
|released = {{Start date and age|1999|11|18|df=yes}}<ref>{{cite web
|url = https://nano-editor.org/dist/old/
|title = first tarball that is still available (tip-0.5.0.tar.gz)
}}</ref>
|latest_release_version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548=Q2804309}}
|latest_release_date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548=Q2804309|P577}}
|latest_preview_version = {{wikidata|property|preferred|references|edit|Q306101|P348|P548=Q51930650}}
|latest_preview_date = {{wikidata|qualifier|preferred|single|Q306101|P348|P548=Q51930650|P577}}
|programming_language = [[C (programming language)|C]]
|operating_system = [[Cross-platform]]
|included_with = GNU based operating systems
|language = English, Turkish
|genre = [[Text editor]]
|license = 2007: [[GNU General Public License|GPL-3.0-or-later]]{{efn|GPL-3.0-or-later: Since 2.0.7.}}<ref>{{cite web|url=https://git.savannah.gnu.org/website = {{official URL}}
}}</ref>
}}</ref>
'''GNU nano''' is a [[text editor]] for [[Unix-like]] computing systems or operating environments using a [[command line interface]]. It emulates the [[Pico (text editor)|Pico]] editor and is part of the [[GNOME desktop environment|GNOME]] desktop environment. It is a command-line text editor that is designed to be small and fast. It is a derivative of the [[Pico (text editor)|Pico]] editor, which was created by Chris Allegretta in 1999. The name "TIP" stands for "Text In Pico". The editor is released under the [[GNU General Public License|GPL-3.0-or-later]] license. It is available for download from the [[GNOME desktop environment|GNOME]] website. The editor is currently maintained by the [[GNOME desktop environment|GNOME]] community. The editor is available for download from the [[GNOME desktop environment|GNOME]] website. The editor is currently maintained by the [[GNOME desktop environment|GNOME]] community.

==History==
[[GNU]] nano was first created in 1999 with the name "TIP" (a [[recursive acronym]] for "TIP Isn't Pico"), by Chris Allegretta. His motivation was to create a smaller and faster alternative to the [[Pico (text editor)|Pico]] editor. The editor was released under the [[GNU General Public License|GPL-3.0-or-later]] license. It is available for download from the [[GNOME desktop environment|GNOME]] website. The editor is currently maintained by the [[GNOME desktop environment|GNOME]] community.
```

- Let's see how to use a few of the editing options. To search for a text string, you can press 'control W' to use the 'Where Is' option. This opens a new pane at the bottom of the app window. Here's a closer view of that new pane. Within the square brackets you can see the most recently searched string, which here is 1999. Type the string you want to find, for example 'https', and press Enter. The cursor moves to the first instance of the search string it finds after the current position of the cursor, here. Nano supports many other editing features which you will explore in one of the labs for this course. Vim is a traditional and very powerful command-line editor.

# File editing with vim

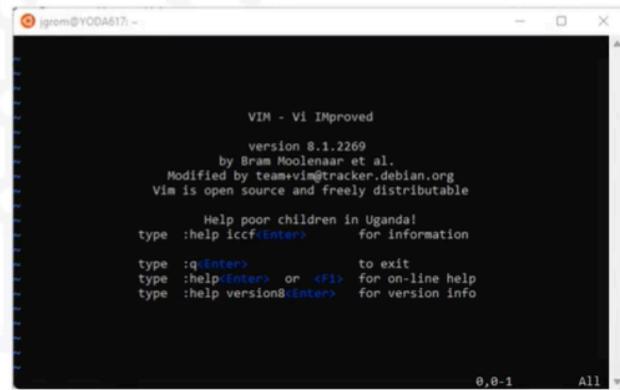
Vim is a traditional and very powerful command-line editor

To start vim, type:

```
vim
```

To specify a file to edit, type:

```
vim <filename>
```



The screenshot shows a terminal window with the Vim logo at the top. Below it, the text "VIM - Vi IMproved" and "version 8.1.2269" is displayed. It also includes credits to Bram Moolenaar et al. and a note that Vim is open source and freely distributable. At the bottom, there is help text for navigating Vim, including commands like ":help icc<Enter>" for information and ":q<Enter>" to exit.

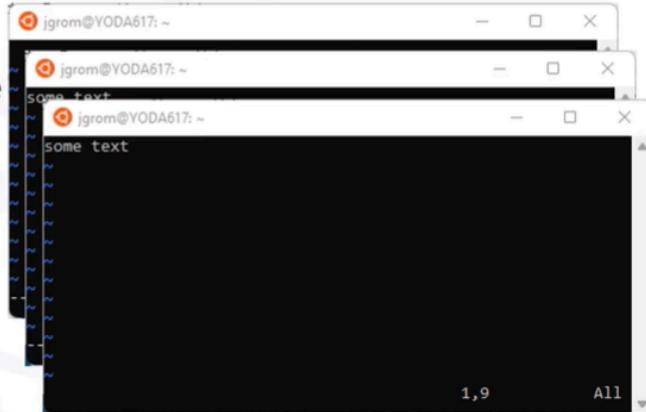
# File editing with vim

Two basic modes:

- **Insert and Command**

## Insert mode:

- Press *i* to enter Insert mode
- Type some text
- Press Esc to exit Insert mode and switch to Command mode
- The text is written to the buffer at the cursor location



The screenshot shows two separate vim sessions running side-by-side in a terminal. Both windows have the title "jgrom@YODA617: ~". In the left window, the text "some text" is visible. In the right window, the text "some text" is also visible. The status bar at the bottom of each window shows "1,9" and "All".

# File editing with vim

- **Command mode:**

- Enter :sav example.txt to create a file and write the buffer to the file
- Enter :w to write the buffer to the file without exiting
- Enter :q to quit vim session
- Enter :q! to quit without saving



- Vim is a traditional and very powerful command-line editor. It takes some time to get accustomed to how it works, but with some practice your fingers will develop the muscle memory to accomplish all of your text editing tasks at speed. Entering vim at the command prompt opens the vim app. You can also specify a filename to edit a new or existing file.
- Vim has two basic modes: Insert mode, where you enter text, and Command mode, where you do everything else. After you start a vim session, press i to enter Insert mode. Type some text, for example "some text," and press the Escape key to exit Insert mode and switch to Command mode. And the text is written to the buffer at the current cursor location.
- Now you are back in Command mode, and you can save your file with a filename using the 'colon save' command along with a filename, such as 'example dot txt'. The buffer is written to the file and a message is displayed, showing the filename, that it is a new file, it has one line with 10 columns, and that it was successfully written. Now that your file already exists, you can use the more common 'colon w' command to write any changes to the file. To quit your vim session, enter 'colon q'. And to quit and discard any changes made since the last write operation, include the 'bang,' or exclamation mark, as in 'colon q bang'. This was a very short introduction to vim. There are many commands that you can use to navigate the text buffer and perform operations

such as searching, copying, pasting, and moving text around. You'll get to practice some of these commands in an upcoming lab.