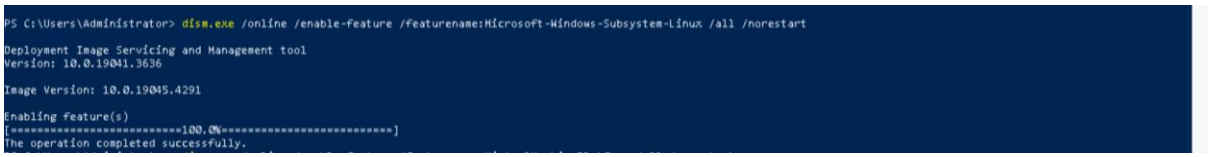
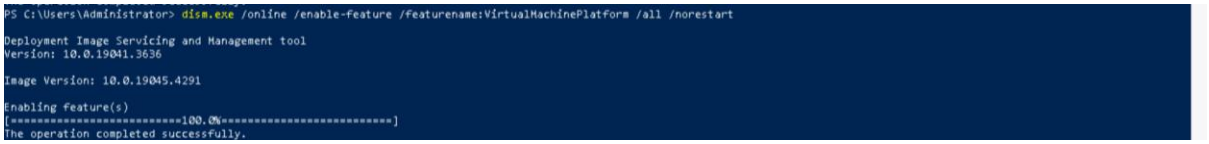
Windows Subsystem for Linux 2 (WSL2)

Step 1: Executed the following commands in a Windows Powershell terminal run as an Administrator.





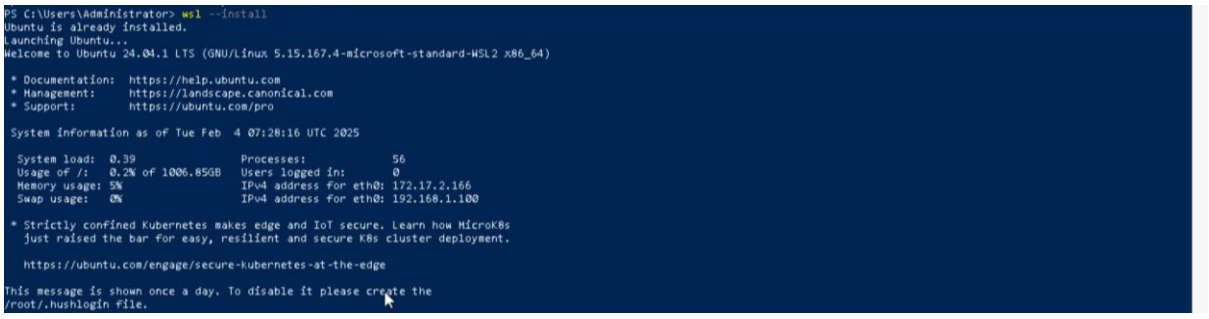
Step 2: Start WSL2 as the default by entering the following command.

Download Linux

Step 3: Display a list of available Linux distros

Launch Linux

Step 4: To install the default Ubuntu 20.04 distro



Update Linux

Step 5: To update Ubuntu applications

Step 6: To upgrade Ubuntu applications

```
root@F304ea52daec59c:~# sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
```

Switch Between WSL1 and WSL2

Step 7: To display the installed Linux distros

```
PS C:\Users\Administrator> wsl --list --verbose
  NAME              STATE           VERSION
* docker-desktop    Stopped         2
  Ubuntu            Stopped         2
```

Step 8: To switch Ubuntu to WSL2,

```
PS C:\Users\Administrator> wsl --set-version Ubuntu 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
Conversion in progress, this may take a few minutes..
```

```
PS C:\Users\Administrator> wsl --set-version Ubuntu 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
Conversion in progress, this may take a few minutes.
The distribution is already the requested version.
```

Step 9: To switch back to WSL1

```
PS C:\Users\Administrator> wsl --set-version Ubuntu 1
Conversion in progress, this may take a few minutes.
The operation completed successfully.
```

Set a Default Linux Distribution

Step 10: List Linux installations

```
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
docker-desktop (Default)
Ubuntu
```

Step 11: Set a default

```
PS C:\Users\Administrator> wsl --setdefault Ubuntu
The operation completed successfully.
```

Run Linux as a Specific User

Step 12: To run your default distribution as a specific user

```
PS C:\Users\Administrator> wsl --user ankita
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 5.15.167.4-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Tue Feb  4 09:56:05 UTC 2025

  System load:  0.44               Processes:             50
  Usage of /:   0.2% of 1006.85GB  Users logged in:       0
  Memory usage: 5%                 IPv4 address for eth0: 172.17.2.166
  Swap usage:   0%                 IPv4 address for eth0: 192.168.1.100

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

This message is shown once a day. To disable it please create the
/home/ankita/.hushlogin file.
ankita@F304ea52daec59c: /mnt/c/Users/Administrator$
```

Move or Clone Your Linux Disk Image

Step 13: Make a directory

```
ankita@F304ea52daec59c: /mnt/c/Users/Administrator$ mkdir D:\backup
mkdir: cannot create directory 'D:backup': File exists
ankita@F304ea52daec59c: /mnt/c/Users/Administrator$ mkdir D:\backup1
```

Step 14: Export one by name to a backup .tar file and Unregister that distro to remove it

```
ankita@F304ea52daec59c: /mnt/c/Users/Administrator$ wsl.exe  --export Ubuntu D:\backup1\ubuntu.tar
E
PS C:\Users\Administrator> wsl --unregister Ubuntu
Unregistering.
The operation completed successfully.
```

Step 15: Enter wsl –list to verify the distro has been removed.

Step 16: Import the backup into a new WSL2 distro at another location

Step 17: To revert to your own account

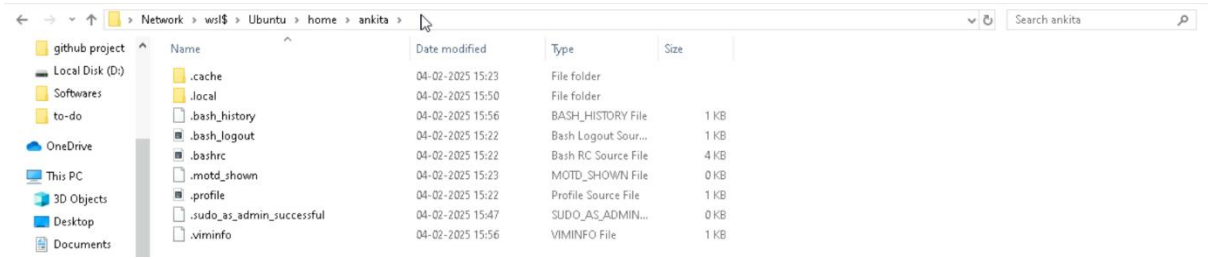
Step 18: Define a user by logging on to the distro and creating/editing /etc/wsl.conf

Step 19: Add the following lines to the file

Step 20: restart the distro in a Powershell terminal

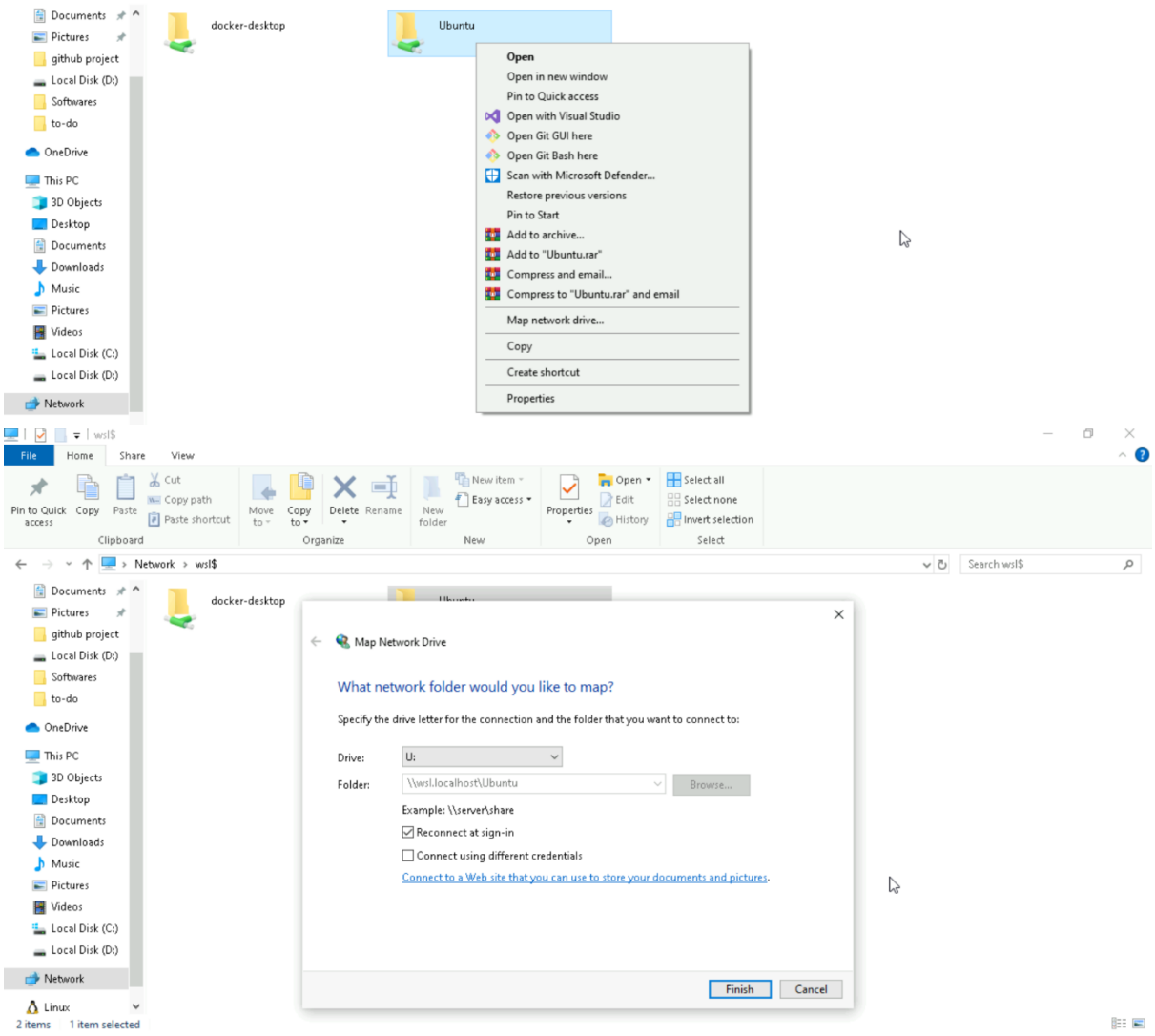
Access Linux Files from Windows

Step 21: Personal Linux files are typically be stored at



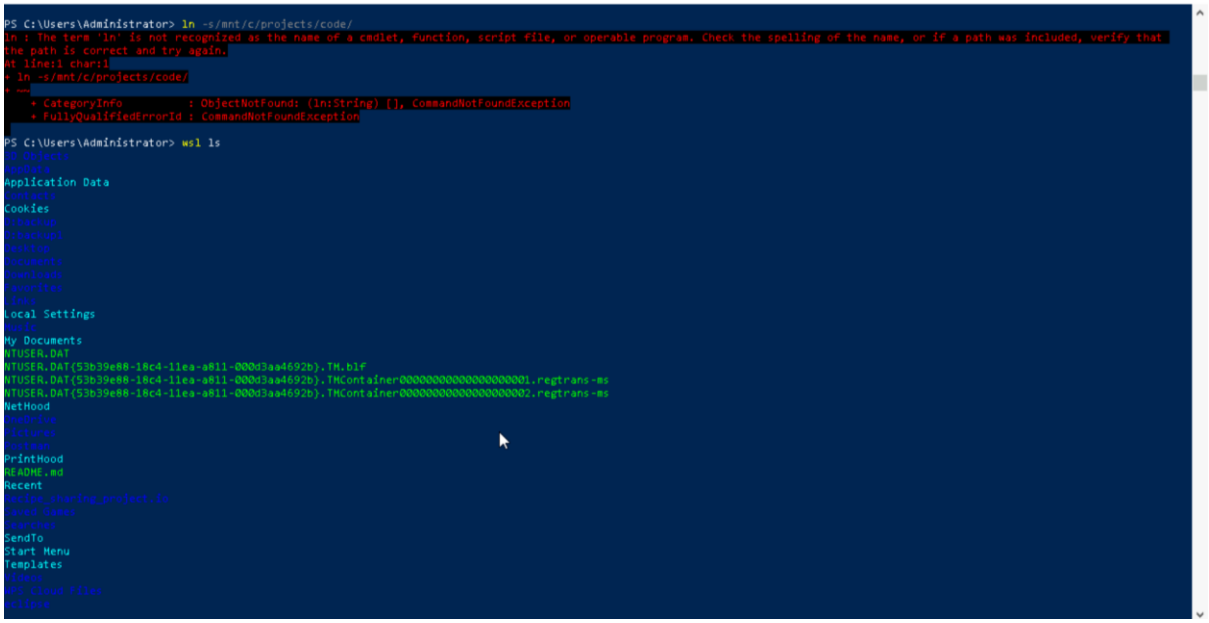
Map a Network Drive

Step 22:



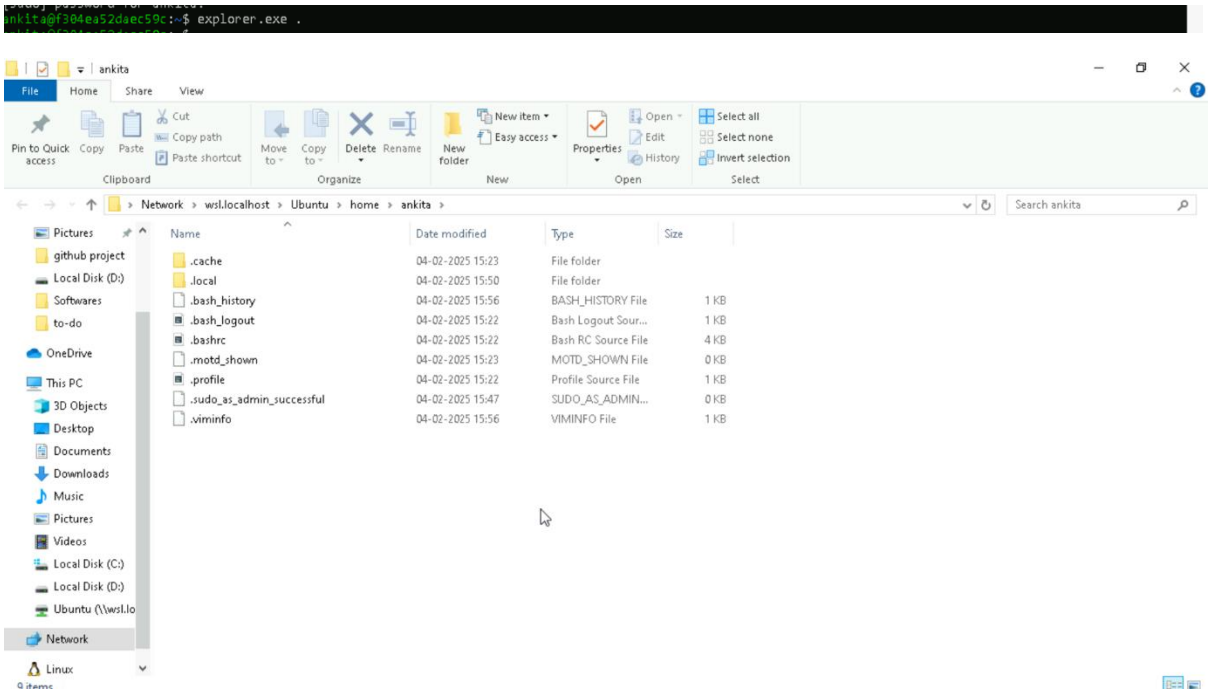
Run Linux Commands from Windows

Step 23: Any Linux (bash) shell command can be run from a Windows Powershell



Run Windows Applications from Linux

Step 24: Launch Windows applications like Notepad



Install Applications

Step 25: Git on Ubuntu is installed

```
ankita@f304ea52daec59c:~$ git config --global core.autocrlf input
ankita@f304ea52daec59c:~$ sudo apt update
[sudo] password for ankita:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [615 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [118 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8972 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [803 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [171 kB]
```

```
ankita@f304ea52daec59c:~$ sudo apt install git-all
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils cvs cvsps git git-cvs git-doc git-email git-gui git-man git-mediawiki git-svn gitk gitweb
  libalgorithm-c3-perl libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64 libauthen-sasl-perl libb-hooks-endofscope-perl
  libb-hooks-op-check-perl libcgi-fast-perl libcgi-pm-perl libclass-c3-perl libclass-c3-xs-perl libclass-data-inheritable-perl libclass-inspector-perl
  libclass-method-modifiers-perl libclass-singleton-perl libclass-xsaccessor-perl libclone-perl libcommon-sense-perl libdata-dump-perl libdata-optlist-perl
  libdatetime-format-builder-perl libdatetime-format-iso8601-perl libdatetime-format-strptime-perl libdatetime-locale-perl libdatetime-perl
  libdatetime-timezone-perl libdbd-sqlite3-perl libdbi-perl libdevel-callchecker-perl libdevel-caller-perl libdevel-lexalias-perl libdevel-stacktrace-perl
  libdigest-bubblebabble-perl libdigest-hmac-perl libdynaloader-functions-perl libemail-valid-perl libencode-locale-perl libeval-closure-perl
  libexception-class-perl libfcgi-bin libfcgi-perl libfcgi0t64 libfile-listing-perl libfile-sharedir-perl libfont-afm-perl libhtml-form-perl
  libhtml-format-perl libhtml-parser-perl libhtml-tagset-perl libhtml-tree-perl libhttp-cookies-perl libhttp-daemon-perl libhttp-date-perl
  libhttp-message-perl libhttp-negotiate-perl libidn12 libio-html-perl libio-socket-ssl-perl libjson-perl libjson-xs-perl liblua5.4-0
  liblwp-mediatypes-perl liblwp-protocol-https-perl libmailtools-perl libmediawiki-api-perl libmodule-implementation-perl libmodule-runtime-perl
  libmro-compat-perl libnamespace-autoclean-perl libnamespace-clean-perl libnet-dns-perl libnet-dns-sec-perl libnet-domain-tld-perl libnet-http-perl
  libnet-libidn-perl libnet-smtp-ssl-perl libnet-ssleay-perl libpackage-stash-perl libpackage-stash-xs-perl libpadwalker-perl libparams-classify-perl
  libparams-util-perl libparams-validate-perl libparams-validationcompiler-perl libperl4-corelibs-perl libreadonly-perl libref-util-perl
  libref-util-xs-perl librole-tiny-perl libserf-1-1 libspecio-perl libsub-exporter-perl libsub-exporter-progressive-perl libsub-identify-perl
  libsub-install-perl libsub-name-perl libsub-quote-perl libsvn-perl libsvn1 libtcl8.6 libterm-readkey-perl libtimedate-perl libtk8.6 libtry-tiny-perl
  libtypes-serialiser-perl liburi-perl libutf8proc3 libvariable-magic-perl libwww-perl libwww-robotrules-perl libxft2 libxss1 libxstring-perl
  libyaml-libyaml-perl libyaml-perl perl-openssl-defaults ssl-cert tcl tcl8.6 tk tk8.6
```

```
ankita@f304ea52daec59c:~$ sudo apt-get install build-essential
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu cpp-x86-64-linux-gnu dpkg-dev fakeroot g++ g++-13 g++-13-x86-64-linux-gnu g++-x86-64-linux-gnu gcc gcc-13
  gcc-13-base gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libaom3 libasan8
  libatomic1 libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libde265-0 libdpkg-perl libfakeroot libfile-fcntllock-perl libgcc-13-dev libgd3
  libgomp1 libheif-plugin-aomdec libheif-plugin-aomenc libheif-plugin-libde265 libheif1 libhwasan0 libisl23 libitm1 liblsan0 libmpc3 libquadmath0
  libstdc++-13-dev libtsan2 libubsan1 libxpm4 linux-libc-dev lto-disabled-list make manpages-dev rpcsvc-proto
Suggested packages:
  bzip2-doc cpp-doc gcc-13-locales cpp-13-doc debian-keyring g++-multilib g++-13-multilib gcc-13-doc gcc-multilib autoconf automake libtool flex bison gdb
  gcc-doc gcc-13-multilib gdb-x86-64-linux-gnu glibc-doc bzr libgd-tools libheif-plugin-x265 libheif-plugin-ffmpegdec libheif-plugin-jpegdec
  libheif-plugin-jpegenc libheif-plugin-j2kdec libheif-plugin-j2kenc libheif-plugin-rav1e libheif-plugin-svtenc libstdc++-13-doc make-doc
The following NEW packages will be installed:
  build-essential bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu cpp-x86-64-linux-gnu dpkg-dev fakeroot g++ g++-13 g++-13-x86-64-linux-gnu g++-x86-64-linux-gnu
  gcc gcc-13 gcc-13-base gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libaom3
  libasan8 libatomic1 libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libde265-0 libdpkg-perl libfakeroot libfile-fcntllock-perl libgcc-13-dev
  libgd3 libgomp1 libheif-plugin-aomdec libheif-plugin-aomenc libheif-plugin-libde265 libheif1 libhwasan0 libisl23 libitm1 liblsan0 libmpc3 libquadmath0
  libstdc++-13-dev libtsan2 libubsan1 libxpm4 linux-libc-dev lto-disabled-list make manpages-dev rpcsvc-proto
0 upgraded, 54 newly installed, 0 to remove and 82 not upgraded.
Need to get 71.3 MB of archives.
After this operation, 242 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

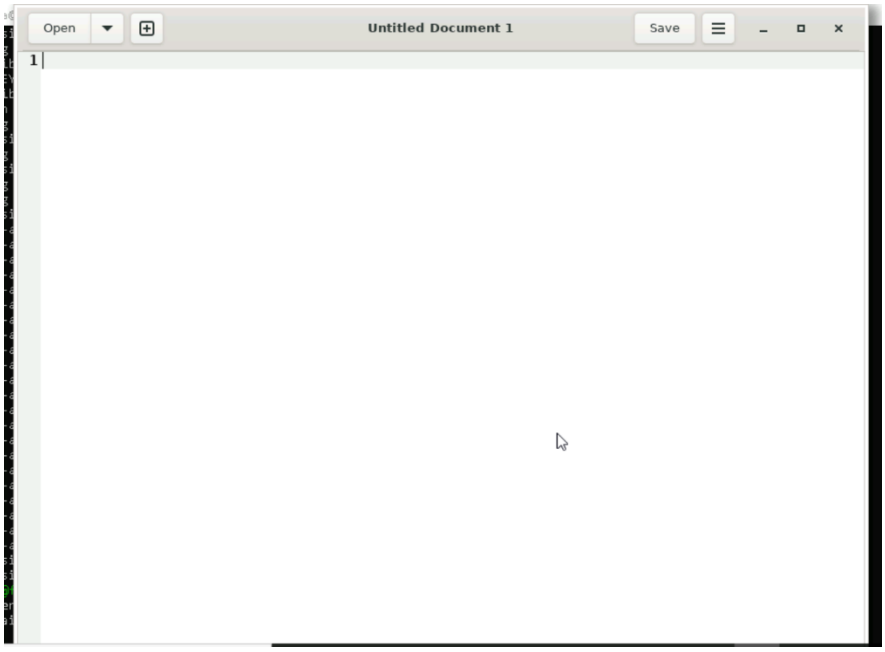
Installing Graphical Linux Applications

Step 26: Install any graphical application from the Linux terminal.

```
ankita@f304ea52daec59c:~$ sudo apt install gedit
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  alsa-topology-conf alsa-ucm-conf aspell aspell-en bubblewrap dictionaries-common docbook-xml emacsen-common enchant-2 gedit-common gir1.2-amtk-5
  gir1.2-atk-1.0 gir1.2-freedesktop gir1.2-gdkpixbuf-2.0 gir1.2-gtk-3.0 gir1.2-gtksource-300 gir1.2-harfbuzz-0.0 gir1.2-pango-1.0 gir1.2-peas-1.0
  gir1.2-tepl-6 glib-networking glib-networking-common glib-networking-services gstreamer1.0-gl gstreamer1.0-plugins-base gstreamer1.0-plugins-good
  gstreamer1.0-x hunspell-en-us libaa1 libadwaita-1-0 libasound2-data libasound2t64 libaspell15 libasyncns0 libavc1394-0 libcaca0
  libcairo-script-interpreter2 libcdparanoia0 libdv4t64 libenchant-2-2 libevdev2 libflac12t64 libgedit-amtk-5-0 libgedit-amtk-5-common
  libgedit-gtksourceview-300-0 libgedit-gtksourceview-300-common libgles2 libgraphene-1.0-0 libgspell-1-2 libgspell-1-common libgstreamer-gl1.0-0
  libgstreamer-plugins-base1.0-0 libgstreamer-plugins-good1.0-0 libgtk-4-1 libgtk-4-bin libgtk-4-common libgtk-4-media-gstreamer libgudev-1.0-0
  libhandy-1-0 libharfbuzz-gobject0 libharfbuzz-icu0 libhunspell-1.7-0 libhyphen0 libiec61883-0 libjavascriptcoregtk-4.1-0 libjson-glib-1.0-0
  libjson-glib-1.0-common libmanette-0.2-0 libmp3lame0 libmpg123-0t64 libncurses6 liboggo libopus0 liborc-0.4-0t64 libpangoxft-1.0-0 libpeas-1.0-0
  libpeas-common libpipewire-0.3-0t64 libpipewire-0.3-common libproxy1v5 libpulse0 librawi394-11 libsecret-1-0 libsecret-common libshout3 libsndfile1
  libsoup-3.0-0 libsoup-3.0-common libspa-0.2-modules libspeex1 libtagio5 libtagio5-vanilla libtepl-6-4 libtepl-common libtheora0 libtwolame0 libv4l-0t64
  libv4lconvert0t64 libvisual-0.4-0 libvorbis0a libvorbisenc2 libvpx9 libwavpack1 libwebkit2gtk-4.1-0 libwebpdemux2 libwebpmux3 libwebrtc-audio-processing1
  libwoff1 libxslt1.1 libxv1 libyelp0 python3-cairo python3-gi-cairo sgml-data xdg-dbus-proxy xdg-desktop-portal xdg-desktop-portal-gtk yelp yelp-xsl
  zenity zenity-common
Suggested packages:
  aspell-doc spellutils wordlist docbook docbook-dssl docbook-xsl docbook-defguide gedit-plugins gvfs hunspell openoffice.org-hunspell
  | openoffice.org-core alsa-utils libasound2-plugins libdv-bin oss-compat libenchant-2-voikko libvisual-0.4-plugins opus-tools pipewire pulseaudio
  libraw1394-doc speex gstreamer1.0-libav gstreamer1.0-plugins-bad gstreamer1.0-alsa perlsgml w3-recs opensp libxml2-utils accountsservice evince
  xdg-desktop-portal-gnome
```

Step 27: Launch it with

```
ankita@f304ea52daec59c:~$ gedit
```


Open
Untitled Document 1
Save
1