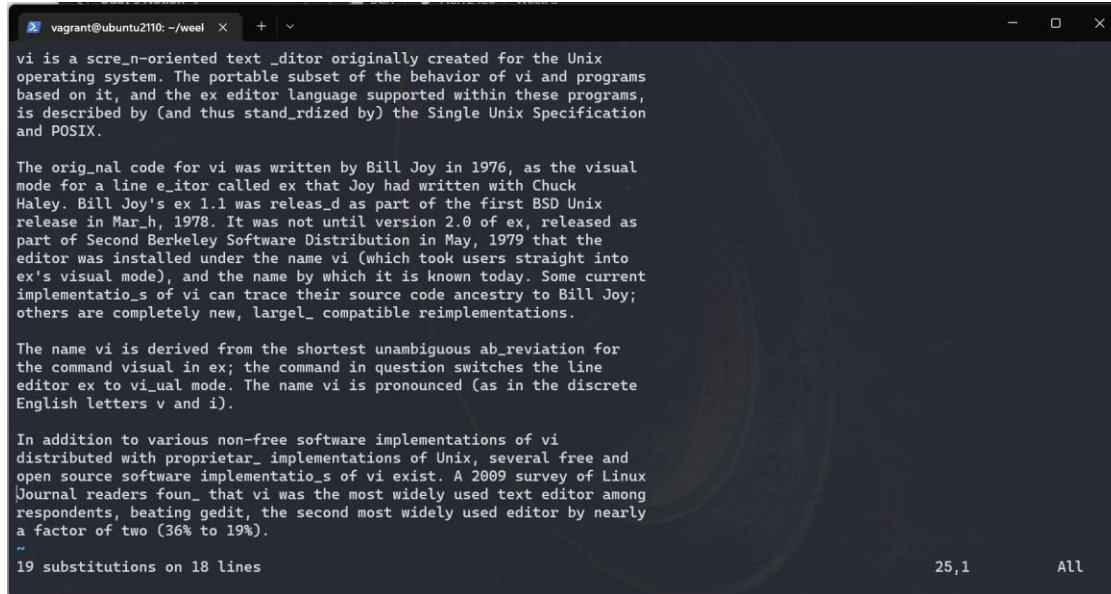


## Lab 3

### Part One

Replacing all the instances of '=' with `:%s/=//g`



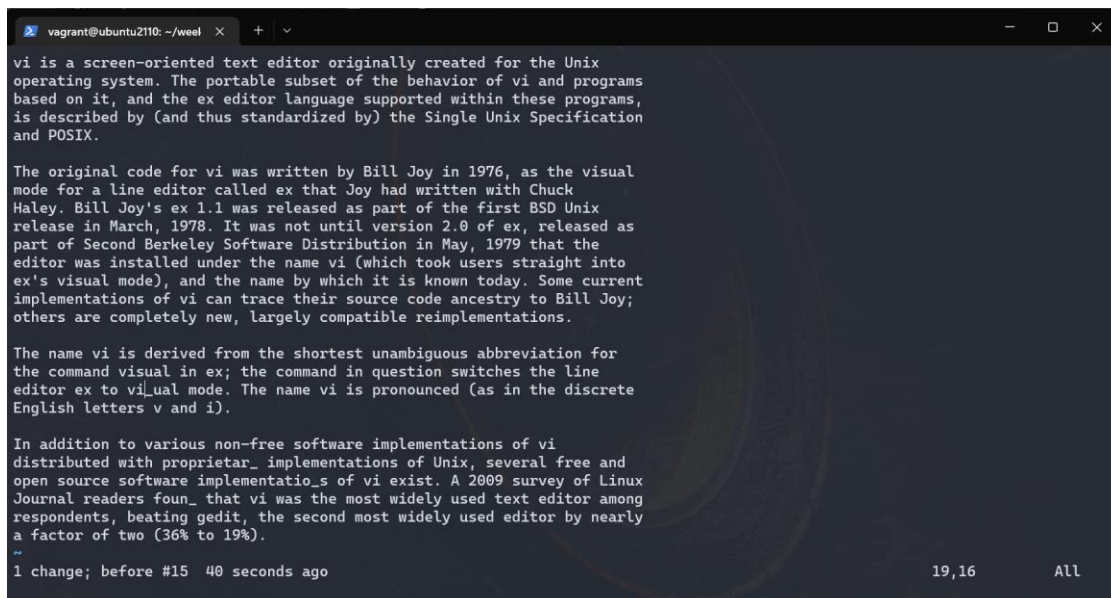
```
vagrant@ubuntu2110: ~/weel x + v
vi is a screen-oriented text editor originally created for the Unix
operating system. The portable subset of the behavior of vi and programs
based on it, and the ex editor language supported within these programs,
is described by (and thus standardized by) the Single Unix Specification
and POSIX.

The original code for vi was written by Bill Joy in 1976, as the visual
mode for a line editor called ex that Joy had written with Chuck
Haley. Bill Joy's ex 1.1 was released as part of the first BSD Unix
release in March, 1978. It was not until version 2.0 of ex, released as
part of Second Berkeley Software Distribution in May, 1979 that the
editor was installed under the name vi (which took users straight into
ex's visual mode), and the name by which it is known today. Some current
implementations of vi can trace their source code ancestry to Bill Joy;
others are completely new, largely compatible reimplementations.

The name vi is derived from the shortest unambiguous abbreviation for
the command visual in ex; the command in question switches the line
editor ex to visual mode. The name vi is pronounced (as in the discrete
English letters v and i).

In addition to various non-free software implementations of vi
distributed with proprietary implementations of Unix, several free and
open source software implementations of vi exist. A 2009 survey of Linux
Journal readers found that vi was the most widely used text editor among
respondents, beating gedit, the second most widely used editor by nearly
a factor of two (36% to 19%).
~
19 substitutions on 18 lines                                     25,1      All
```

Using `r` to replace characters:



```
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operating system. The portable subset of the behavior of vi and programs
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respondents, beating gedit, the second most widely used editor by nearly
a factor of two (36% to 19%).
~
1 change; before #15 40 seconds ago                             19,16     All
```

All edits complete:

```
vagrant@ubuntu2110: ~/week x + v
vi is a screen-oriented text editor originally created for the Unix
operating system. The portable subset of the behavior of vi and programs
based on it, and the ex editor language supported within these programs,
is described by (and thus standardized by) the Single Unix Specification
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Journal readers found that vi was the most widely used text editor among
respondents, beating gedit, the second most widely used editor by nearly
a factor of two (36% to 19%).
..
25,20 All
```

Part two

```
vagrant@ubuntu2110:~/week-three$ vi index.html
```

```
vagrant@ubuntu2110: ~/week x + v
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
</head>
<body>
  <div>
    <p>one</p>
  </div>
  <div>
    <p>two</p>
  </div>
</body>
</html>
..
..
..
..
..
4 substitutions on 4 lines
18,2 All
```

Removed all the comment files by using regex:

```
:%s/<!--.*//g
```

### Part three:

```
vagrant@ubuntu2110:/etc$ ls
adduser.conf          fuse.conf             locale.alias          papersize             subgid
alternatives          fwupd                locale.gen            passwd               subgid-
apache2              gai.conf             localtime            passwd-             subuid
apm                  ghostscript          logcheck              perl                 subuid-
apparmor             groff                login.defs            pki                  sudo.conf
apparmor.d           group                logrotate.conf        pm                   sudoers
apport               group-               logrotate.d           polkit-1             sudoers.d
apt                  grub.d              lsb-release           pollinate            sudo_logsrvd.conf
bash.bashrc          gshadow              ltrace.conf           profile              sysctl.conf
bash_completion      gshadow-            lvm                    profile.d             sysctl.d
bash_completion.d    gss                  machine-id            protocols            sysstat
bindresvport.blacklist hdparm.conf          magic                  python3               systemd
binfmt.d             host.conf            magic.mime             python3.9             terminfo
byobu                hostname             manpath.config        rc0.d                thermald
ca-certificates      hosts                mdadm                  rc1.d                timezone
ca-certificates.conf hosts.allow           mime.types             rc2.d                tmpfiles.d
ca-certificates.conf.dpkg-old hosts.deny            mke2fs.conf            rc3.d                ubuntu-advantage
console-setup        ifplugd              modprobe.d             rc4.d                ucf.conf
cron.d               ImageMagick-6        modules                rc5.d                udev
cron.daily           init                  modules-load.d          rc6.d                udisks2
cron.hourly          init.d               motd                    rcS.d                ufw
cron.monthly         initramfs-tools      mtab                    resolv.conf           updatedb.conf
crontab              inputrc              multipath                rmt                   update-manager
cron.weekly           iproute2             multipath.conf          rpc                   update-motd.d
cryptsetup-initramfs iscsi                 needrestart             rsyslog.conf          update-notifier
crypttab             issue                netconfig              rsyslog.d             UPower
dbus-1               issue.net            netplan                 screenrc              usb_modeswitch.conf
debconf.conf         kernel               network                 security              usb_modeswitch.d
debian_version       landscape            networkd-dispatcher    selinux               vagrant_box_build_time
default              ldap                 networks                 sensors3.conf         vim
deluser.conf         ld.so.cache          newt                     sensors.d             vmware-tools
depmod.d             ld.so.conf           nsswitch.conf           services              vtrgb
dhcp                 ld.so.conf.d         opt                      shadow                w3m
dpkg                 legal                os-release              shadow-               wgetrc
e2scrub.conf         libaudit.conf        overlayroot.conf        shells                 X11
environment          libblockdev           PackageKit              skel                   xattr.conf
ethertypes           libnl-3               pam.conf                sos                    xdg
fonts                libpaper.d            pam.d                   ssh                    zsh_command_not_found
fstab                lighttpd              pam.d                   ssl
```

The /etc directory is where all the configuration files of the system live. These files can't be executable files or binary files. A configuration file is a file that controls the working of a program. The /etc directory also has a lot of subdirectories which also contain more configuration files for the system. From a historical perspective, the /etc directory contained all the files that did not fit into the pre-existing categories like /bin for all the executable binaries or /dev for the devices.

### Part four

```
vagrant@ubuntu2110:/etc$ cd /dev
vagrant@ubuntu2110:/dev$ ls
autofs          dm-0          i2c-0          loop5          port          sda2          tty1          tty2          tty3          tty4          tty5          tty6          ttyS10        ttyS20        ttyS30        uinput        vcs6          vcsu3
block           dma_heap     initctl        loop6          ppp           sda3          tty10         tty20         tty30         tty40         tty50         tty60         ttyS11        ttyS21        ttyS31        urandom       vcsa          vcsu4
bsg             dri          input          loop7          psaux         sg0           tty11         tty21         tty31         tty41         tty51         tty61         ttyS12        ttyS22        ttyS32        ucrlo         vcsa1         vcsu5
brfs-control    ecryptfs    kmsg           loop-control   ptmx          sh            tty12         tty22         tty32         tty42         tty52         tty62         ttyS13        ttyS23        ttyS33        vboxquest     vcsa2         vcsu6
char            fb0          lightnvme      mapper         pts           snapshot      tty13         tty23         tty33         tty43         tty53         tty63         ttyS14        ttyS24        ttyS34        vboxuser      vcsa3         vcsu7
console         fd           log            mcelog        random        snd           tty14         tty24         tty34         tty44         tty54         tty64         ttyS15        ttyS25        ttyS35        vcs           vcsa4         vcsu8
core            full         loop0          mem            rfkill        stderr        tty15         tty25         tty35         tty45         tty55         tty65         ttyS16        ttyS26        ttyS36        vcs1          vcsa5         vcsu9
cpu             fuse         loop1          queue          rtc           stdio         tty16         tty26         tty36         tty46         tty56         tty66         ttyS17        ttyS27        ttyS37        vcs2          vcsa6         vcsu10
cpu_dma_latency hpet        loop2          net            rtc0          stdout        tty17         tty27         tty37         tty47         tty57         tty67         ttyS18        ttyS28        ttyS38        vcs3          vcsa7         vcsu11
cuse            hugepages   loop3          null          sda           tty           tty18         tty28         tty38         tty48         tty58         tty68         ttyS19        ttyS29        ttyS39        vcs4          vcsa8         vcsu12
disk            hwng        loop4          nvram          sda1          tty0          tty19         tty29         tty39         tty49         tty59         tty69         ttyS20        ttyS30        ttyS40        vcs5          vcsa9         vcsu13
vagrant@ubuntu2110:/dev$
```

## Part five

The ubuntu VMs are installed on the sda3 partition of the sda device (physical drive) on the vagrant machine.

```
vagrant@ubuntu2110:/dev$ lsblk -f
```

NAME	FSTYPE	FSVER	LABEL	UUID	FSAVAIL	FSUSE%	MOUNTPOINT
loop0	squashfs	4.0			0	100%	/snap/lxd/23537
loop1	squashfs	4.0			0	100%	/snap/snapd/16292
loop2	squashfs	4.0			0	100%	/snap/snapd/16778
loop3	squashfs	4.0			0	100%	/snap/lxd/21624
loop4	squashfs	4.0			0	100%	/snap/core20/1623
loop5	squashfs	4.0			0	100%	/snap/core20/1611
sda							
├─sda1							
├─sda2	ext4	1.0		c8a0c58b-d006-46e7-a4bf-b0d90b92a985	821.7M	9%	/boot
└─sda3	LVM2_member	LVM2 001		aIfikx-ugAX-5BcP-bmrj-aVy0-LdAj-0AHAbV			
└─ubuntu--vg-ubuntu--lv	ext4	1.0		03cd2630-f61e-4c3a-a602-b7ac11bc9918	53.9G	8%	/

```
vagrant@ubuntu2110:/dev$
```

## Part six

gg = in normal mode, go to the beginning of the file

cc = in normal mode, replace the whole line

cw = in normal mode, replaces the content from the cursor to the end of the word

yy = in normal mode, copy (yank) the current line