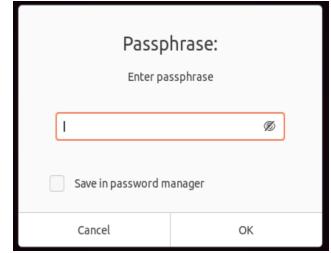


gpg (-c) file_name - This setting is used to encrypt a file. If the user has a file that needs inscription, by using the command gpg -c with the file name they want after that, the new file will appear with .gpg afterwards. For example, the file named “webpage.html” would then become “webpage.html.gpg” in the directory of the users choosing. Additionally, the user will be asked for a passphrase for the inscription after the command is used (see the image to the right). The command gpg followed by the .gpg file incrypts it. This is the main option in addition to several commands involving “public” and “secret keys” which to be honest I can’t fully understand even using “man gpg”.



Examples:

```
thomas@thomas-VirtualBox:~$ ls
Desktop      Documents  hello.py  Pictures  random.bytes  Templates  typescript  webpage.html
directories.txt  Downloads  Music    Public    snap          text.py    Videos
thomas@thomas-VirtualBox:~$ gpg -c webpage.html
thomas@thomas-VirtualBox:~$ ls
Desktop      Documents  hello.py  Pictures  random.bytes  Templates  typescript  webpage.html
directories.txt  Downloads  Music    Public    snap          text.py    Videos    webpage.html.gpg
thomas@thomas-VirtualBox:~$
```

Below is what happens when you try and open the .gpg file in nano: (its encrypted)



free - The free command shows the total memory of the system in addition to what portion of that is actually free and what is being used. Additionally, it shows the amount that is being used which is also shared. The way to use the command is just from the home folder to type “free” to see the output. Some options include adding -h afterwards to make the file sizes readable or -b, -k, -m, and -g, to show the sizes in bytes, kibibytes, mebibytes, and gibibytes. Additionally putting -v after shows the same information as typing “man free”.

Examples:

```
thomas@thomas-VirtualBox:~$ free
      total        used        free      shared  buff/cache   available
Mem:   4030432       896756     2066600        15508      1067076    2884480
Swap:  945416          0       945416
thomas@thomas-VirtualBox:~$ free -h
      total        used        free      shared  buff/cache   available
Mem:   3.8Gi       875Mi     2.0Gi        15Mi      1.0Gi     2.8Gi
Swap:  923Mi        0B     923Mi
thomas@thomas-VirtualBox:~$
```

Above the free command is used and then free -h to make the text usable to humans.

cal - Calendar is a pretty easy command with a couple of main uses. Just typing cal will bring up the calendar with the days date outlined in white. This can be seen on the right. The command “cal -j” shows the date of Easter for the year. “-m name_of_moth” will show the user the calendar for the month of the year of the users choosing. Finally the “ncal” program has the says of the week on the left and the dates going horizontal. The usefulness of this is questionable but knowing the dates calendar is likely useful for programs or just in general.

```
thomas@thomas-VirtualBox:~$ cal
  February 2021
Su Mo Tu We Th Fr Sa
  1  2  3  4  5  6
  7  8  9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28
```

Examples:

```
thomas@thomas-VirtualBox:~$ cal -j
  February 2021
Su Mo Tu We Th Fr Sa
  32 33 34 35 36 37
  38 39 40 41 42 43 44
  45 46 47 48 49 50 51
  52 53 54 55 56 57 58
  59

thomas@thomas-VirtualBox:~$ cal -m march
  March 2021
Su Mo Tu We Th Fr Sa
  1  2  3  4  5  6
  7  8  9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

thomas@thomas-VirtualBox:~$ ncal
  February 2021
Su 7 14 21 28
Mo 1 8 15 22
Tu 2 9 16 23
We 3 10 17 24
Th 4 11 18 25
Fr 5 12 19 26
Sa 6 13 20 27
thomas@thomas-VirtualBox:~$
```

hostname - This command is useful for showing or setting the system's host name. The command "hostname" just shows the user logged in. Using "hostname -a" shows if there is any alias for the user (if you look in the example below it is blank because there is no alias set for me at this time). Following hostname with -i shows the location of the address for the hostname and -I (capital i) shows the user the ip address for all the hosts.

Examples:

```
thomas@thomas-VirtualBox:~$ hostname
thomas-VirtualBox
thomas@thomas-VirtualBox:~$ hostname -a

thomas@thomas-VirtualBox:~$ hostname -i
127.0.1.1
thomas@thomas-VirtualBox:~$ hostname -I
10.0.2.15
thomas@thomas-VirtualBox:~$
```

gzip - gzip folders are commonly used to compress and decompress web files. Using the command gzip followed by the files name, the file then becomes zipped, has .gz added after the file name, and appears in red when listing the files. Then using the "gunzip" command the user can then unzip the folder after sending it somewhere or to someone. Additionally, a file can be opened using nano, however the inside looks the same as the encrypted file above.

Example:

```
thomas@thomas-VirtualBox:~$ ls
Desktop      Documents  hello.py  Pictures  random.bytes  Templates  typescript  webpage.html
directories.txt  Downloads  Music    Public    snap          text.py    Videos
thomas@thomas-VirtualBox:~$ gzip webpage.html
thomas@thomas-VirtualBox:~$ ls
Desktop      Documents  hello.py  Pictures  random.bytes  Templates  typescript  webpage.html.gz
directories.txt  Downloads  Music    Public    snap          text.py    Videos
thomas@thomas-VirtualBox:~$ nano webpage.html.gz
thomas@thomas-VirtualBox:~$ gunzip webpage.html.gz
thomas@thomas-VirtualBox:~$ ls
Desktop      Documents  hello.py  Pictures  random.bytes  Templates  typescript  webpage.html
directories.txt  Downloads  Music    Public    snap          text.py    Videos
thomas@thomas-VirtualBox:~$
```

Above is an example of the user zipping, and then unzipping the file