

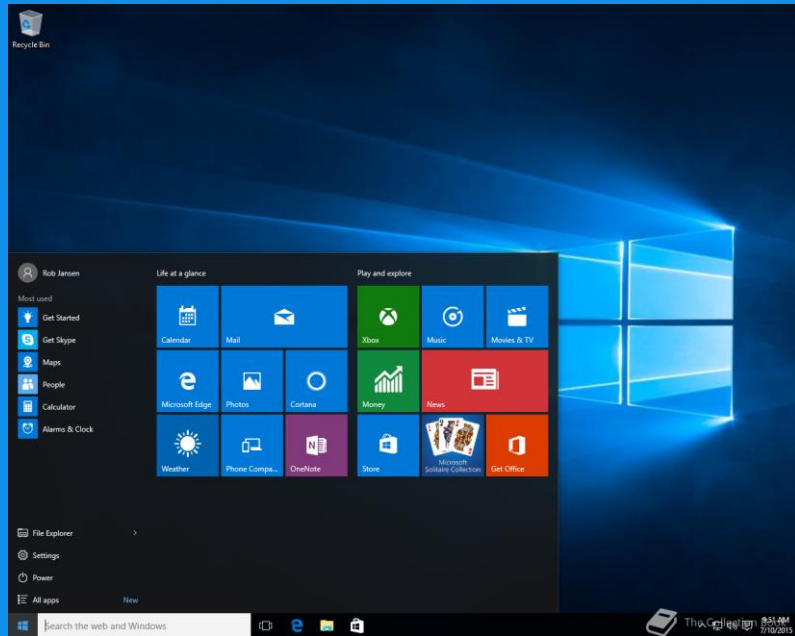
Metodi Computazionali per la Fisica

Linux e Uso del Terminale

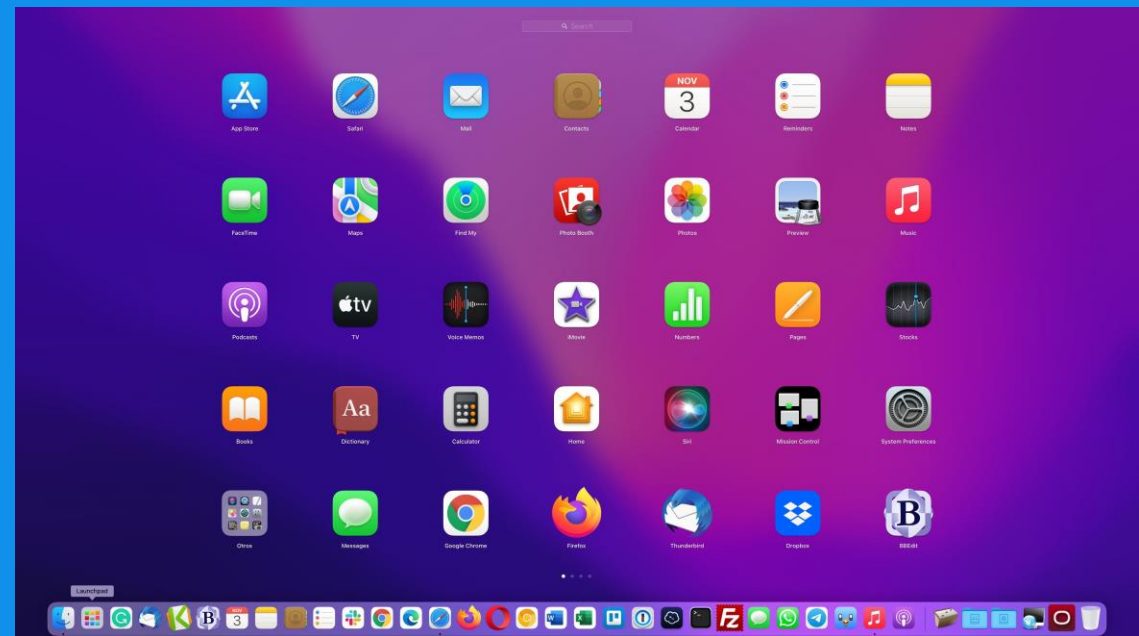
S. Germani – stefano.germani@unipg.it

Sistemi Operativi

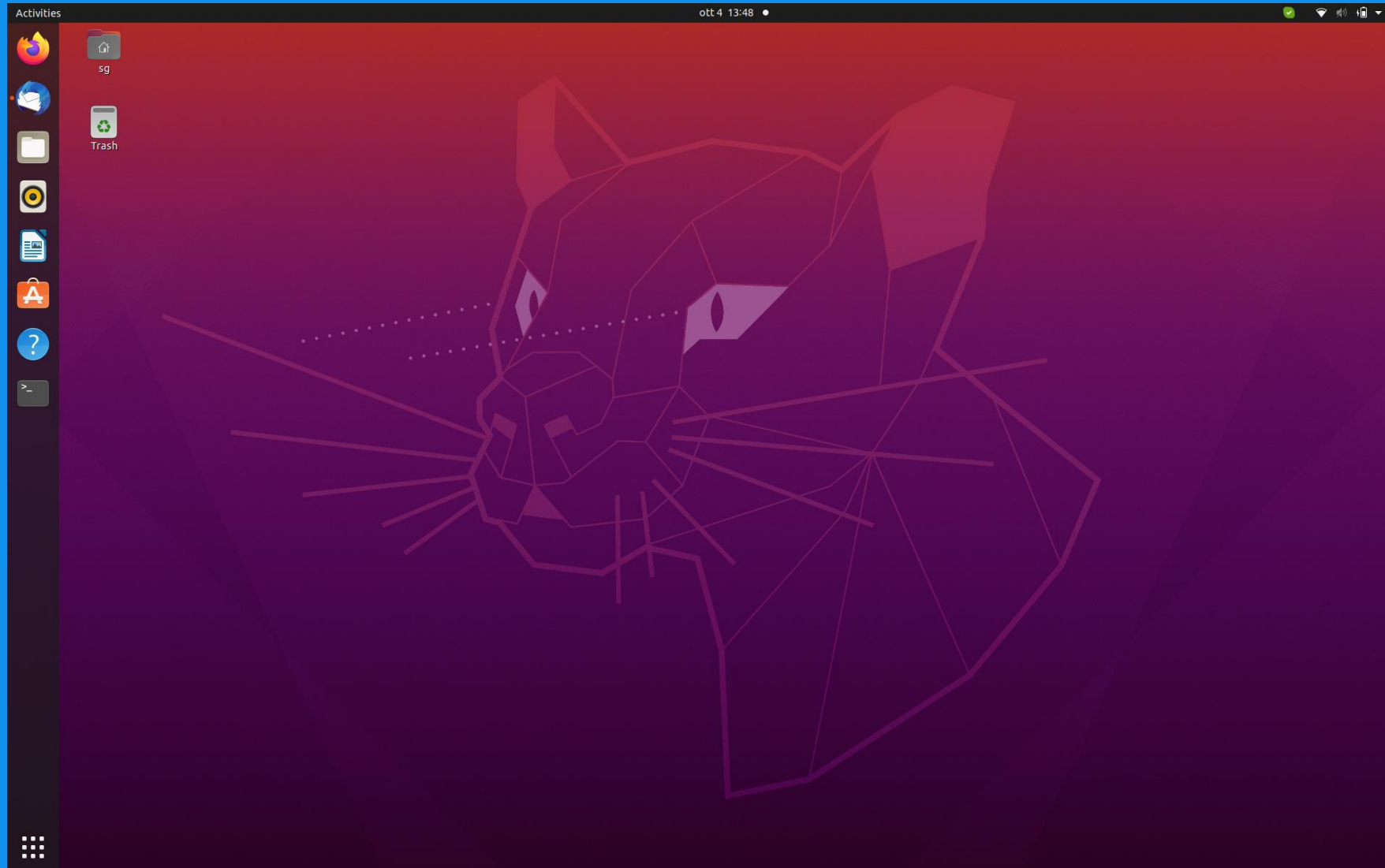
MS Windows



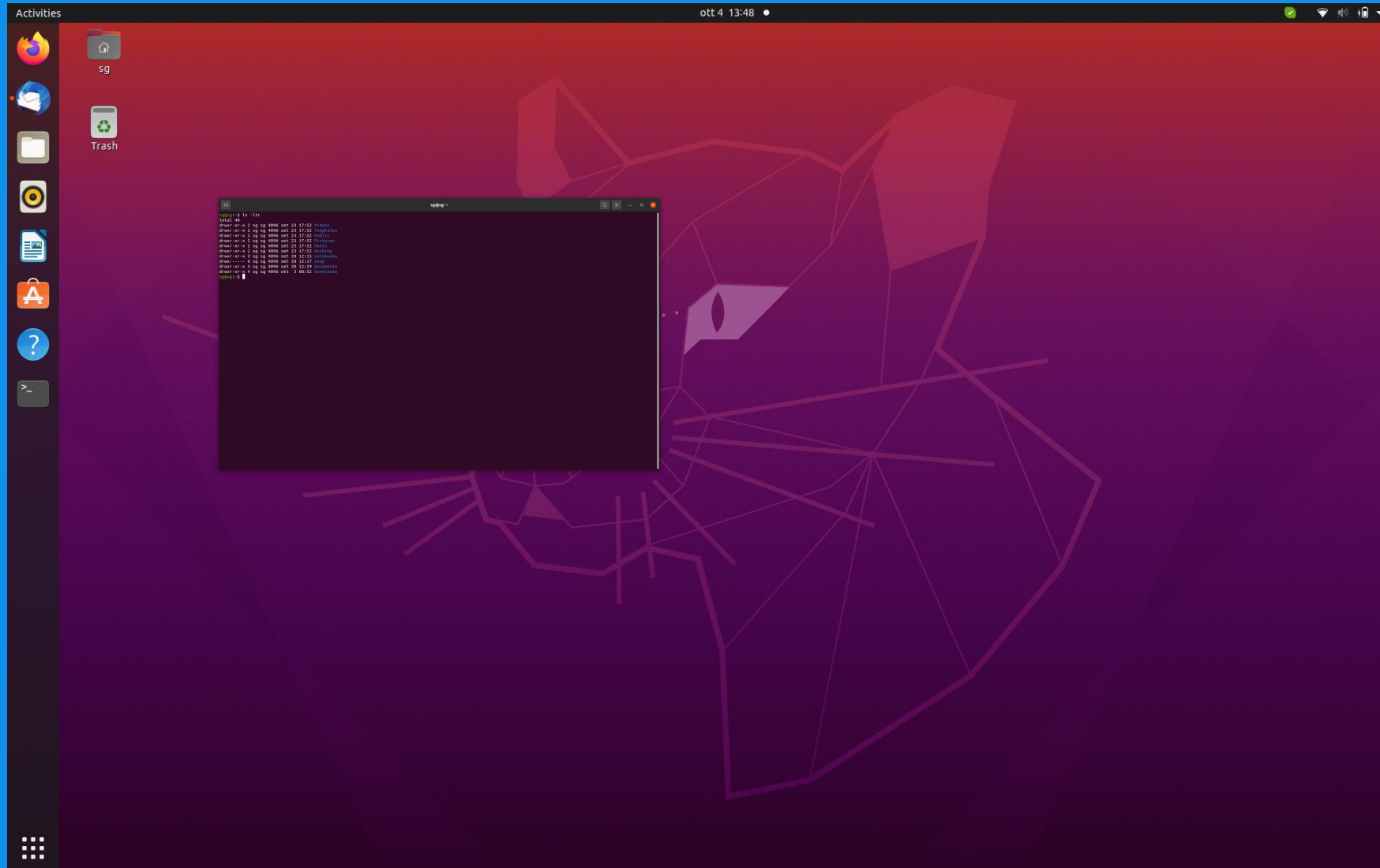
Mac OS



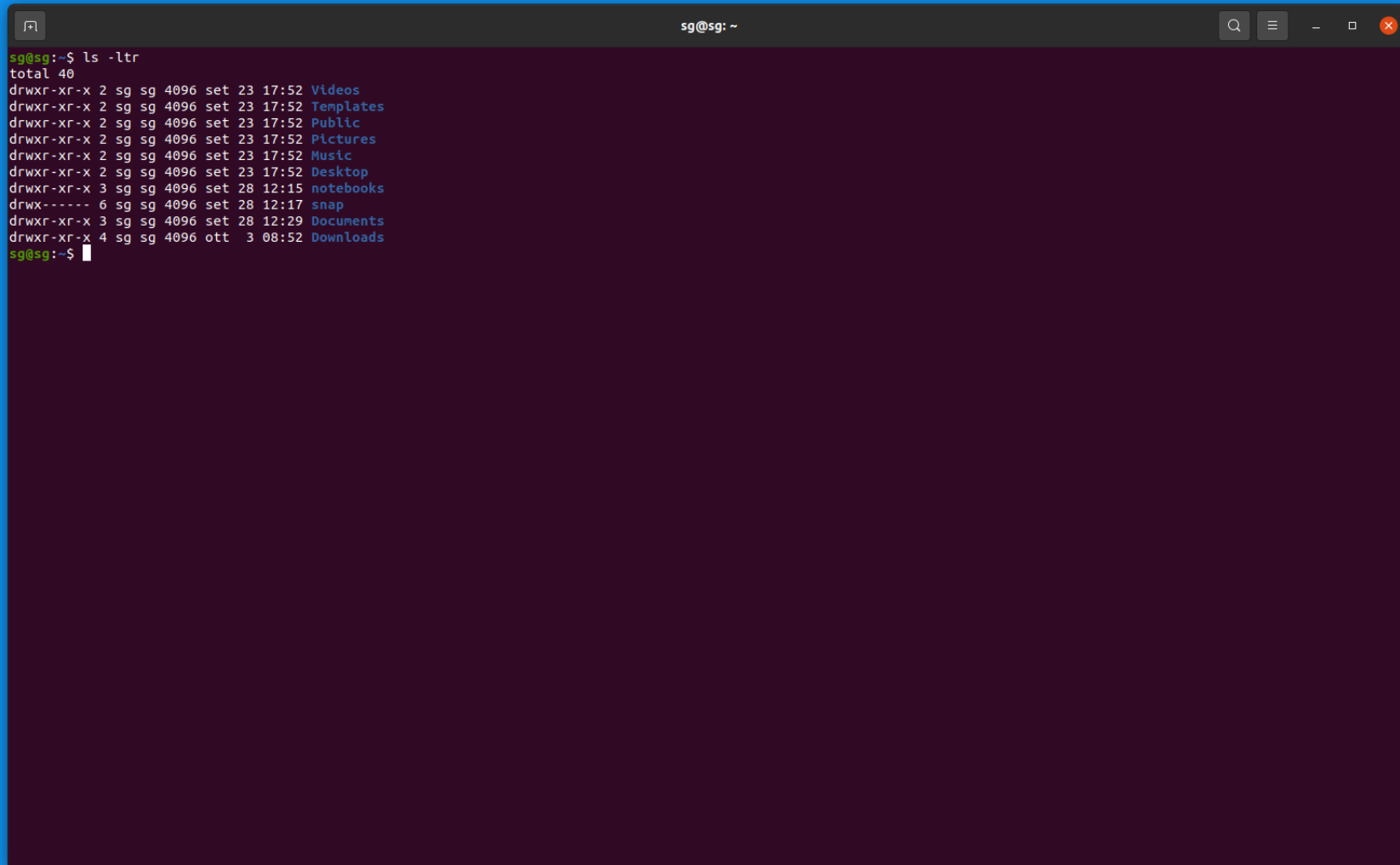
Linux



Linux

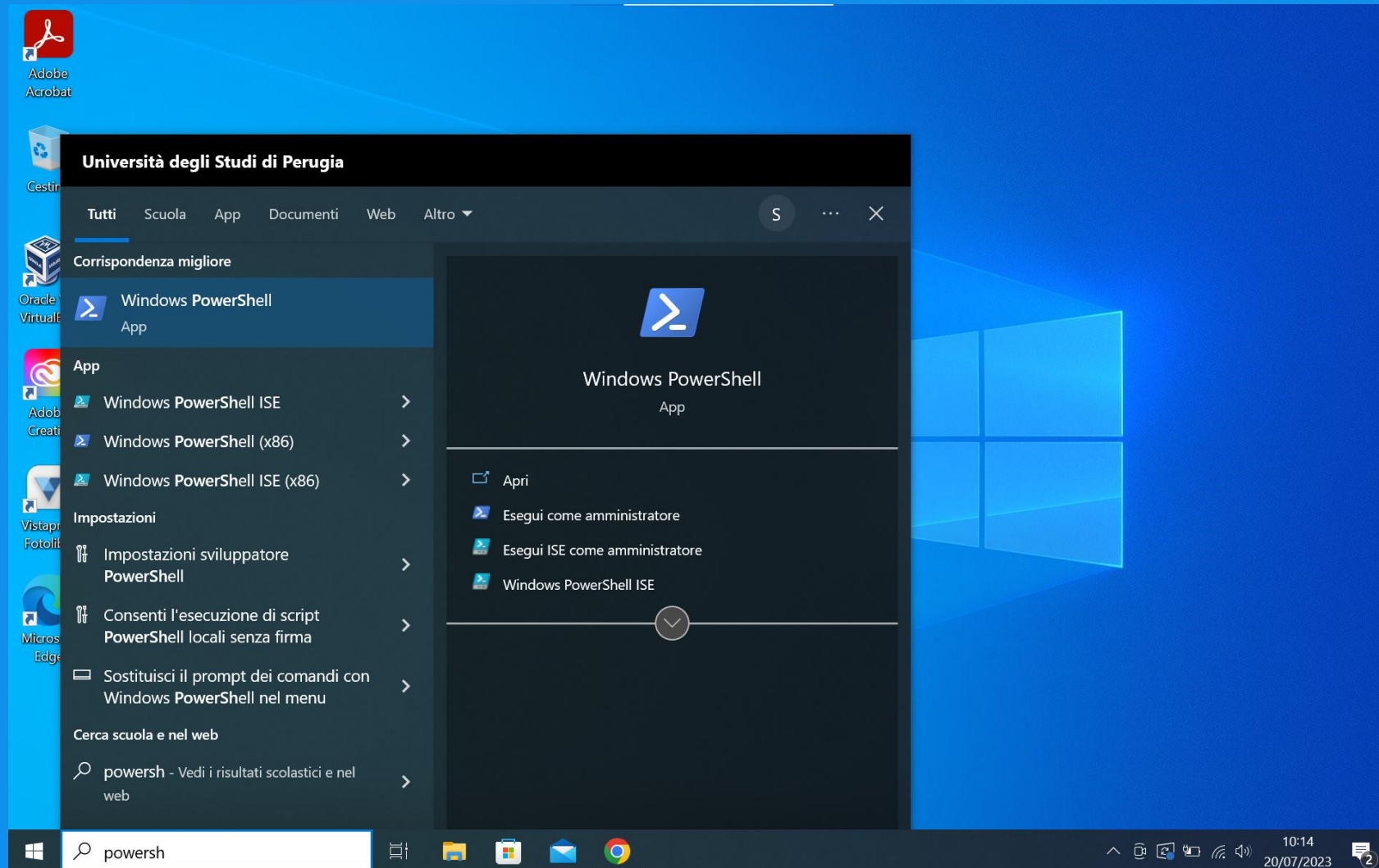


Terminale – Linux / Mac OS

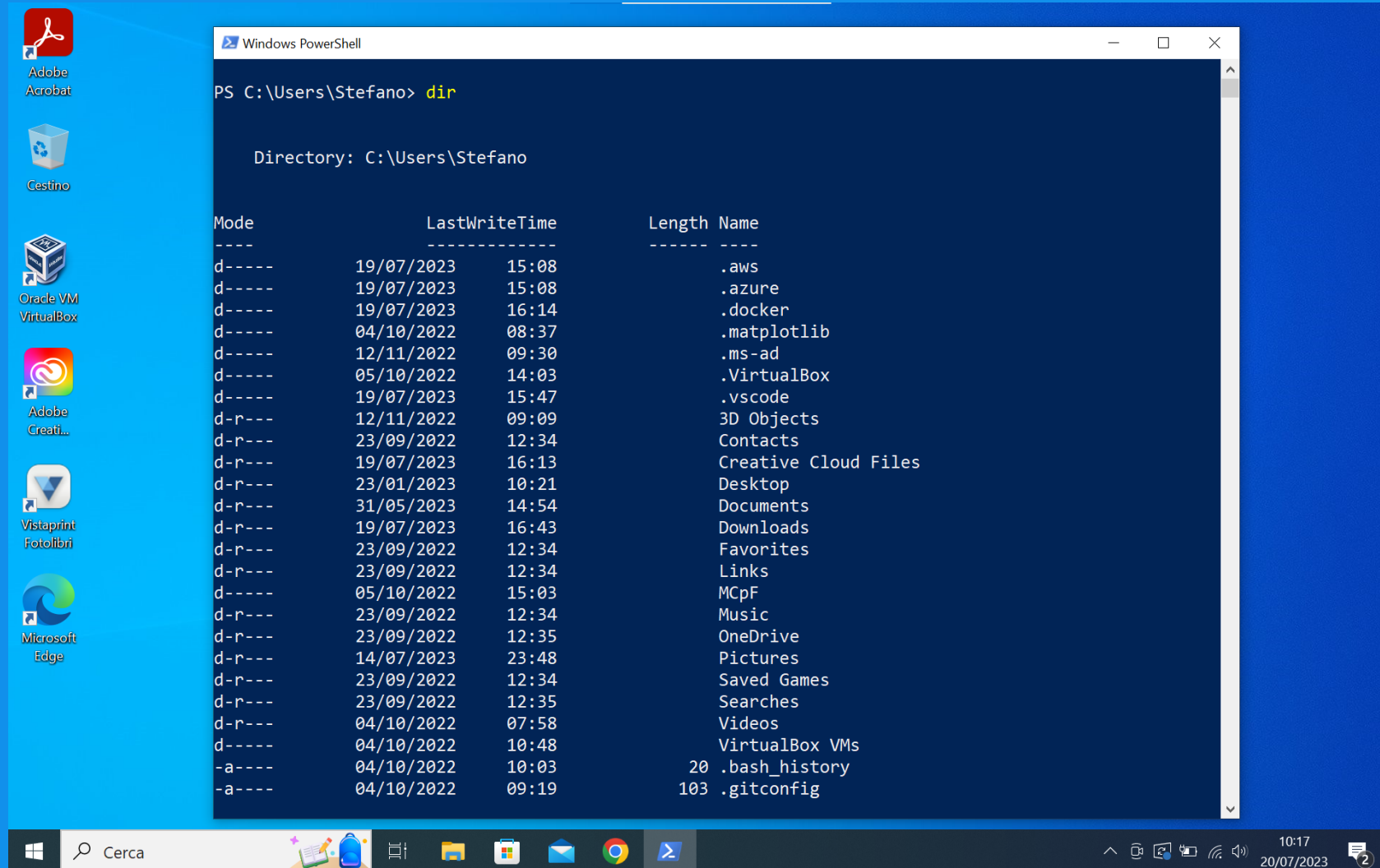


```
sg@sg: ~  
sg@sg:~$ ls -ltr  
total 40  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Videos  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Templates  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Public  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Pictures  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Music  
drwxr-xr-x 2 sg sg 4096 set 23 17:52 Desktop  
drwxr-xr-x 3 sg sg 4096 set 28 12:15 notebooks  
drwx----- 6 sg sg 4096 set 28 12:17 snap  
drwxr-xr-x 3 sg sg 4096 set 28 12:29 Documents  
drwxr-xr-x 4 sg sg 4096 ott  3 08:52 Downloads  
sg@sg:~$
```

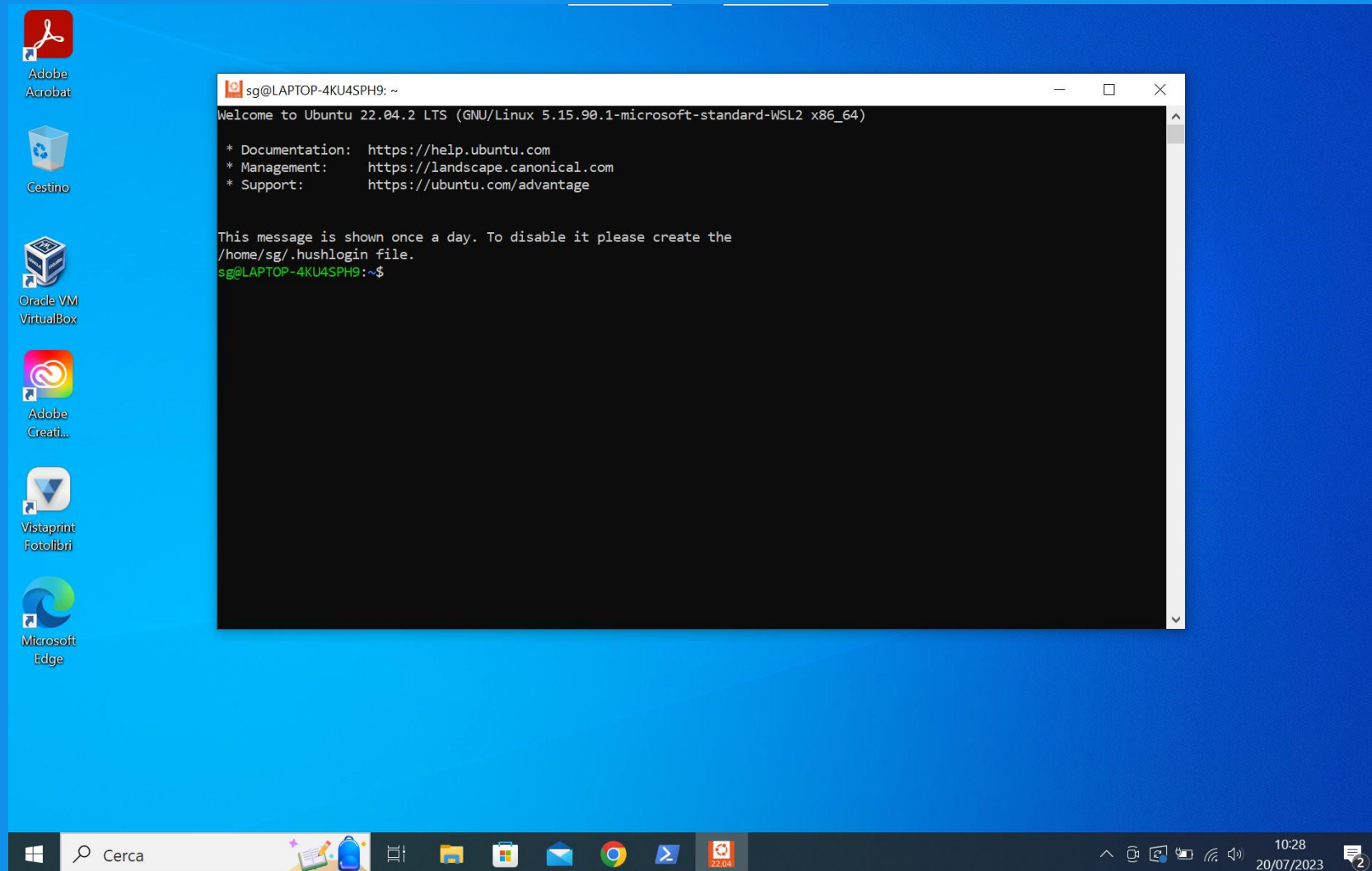
Windows PowerShell



Windows Power Shell



Windows Subsystem for Linux (WSL)



WSL

<https://learn.microsoft.com/it-it/windows/wsl/install>

The screenshot shows a web browser window displaying the Microsoft Learn page for installing Linux on Windows using WSL. The page is in Italian. The breadcrumb trail is 'Learn / Windows / Ambiente di sviluppo / WSL /'. The main title is 'Installare Linux in Windows con WSL'. Below the title, it says 'Articolo • 07/07/2023 • 8 contributori'. There is a button for 'Commenti e suggerimenti'. A section titled 'In questo articolo' lists links for 'Prerequisiti', 'Installare il comando WSL', 'Modificare la distribuzione Linux predefinita installata', and 'Configurare le informazioni utente Linux', followed by a 'Mostra 6 in più' link. The main text begins with 'Gli sviluppatori possono accedere alla potenza di Windows e Linux contemporaneamente in un computer Windows. La sottosistema Windows per Linux (WSL) consente agli sviluppatori di installare una distribuzione Linux (ad esempio Ubuntu, OpenSUSE, Kali, Debian, Arch Linux e così via) e usare'. On the left, a sidebar shows a navigation menu with 'Documentazione di WSL' expanded, listing 'Panoramica', 'Installazione' (with 'Installare WSL' selected), 'Esercitazioni', 'Concetti', 'Procedure', 'Domande frequenti', 'Risoluzione dei problemi', and 'Note sulla versione'. At the bottom of the sidebar is a 'Scarica il PDF' button. On the right, a 'Risorse aggiuntive' section lists 'Documentazione' with links to 'Configurare un ambiente di sviluppo WSL', 'Confronto tra versioni di WSL', and 'Risoluzione dei problemi relativi a Sottosistema Windows per Linux', each with a 'Mostra X in più' link.

Installare WSL | Microsoft Learn x +

learn.microsoft.com/it-it/windows/wsl/install

Microsoft | Learn Documentazione Formazione Certificazioni Q&A Esempi di codice Più informazioni v

Cerca Accedi

Windows Integrità rilascio Client Windows v Sviluppatori di applicazioni v Sviluppatori di hardware v Windows Server Windows per IoT Più informazioni v

Filtra in base al titolo

Documentazione di WSL

- > Panoramica
- > Installazione
 - Installare WSL**
 - Passaggi di installazione manuali per le versioni precedenti
 - Installare in Windows Server
- > Esercitazioni
- > Concetti
- > Procedure
- Domande frequenti
- Risoluzione dei problemi
- > Note sulla versione

Scarica il PDF

Learn / Windows / Ambiente di sviluppo / WSL /

Installare Linux in Windows con WSL

Articolo • 07/07/2023 • 8 contributori

Commenti e suggerimenti

In questo articolo

- Prerequisiti
- Installare il comando WSL
- Modificare la distribuzione Linux predefinita installata
- Configurare le informazioni utente Linux
- Mostra 6 in più

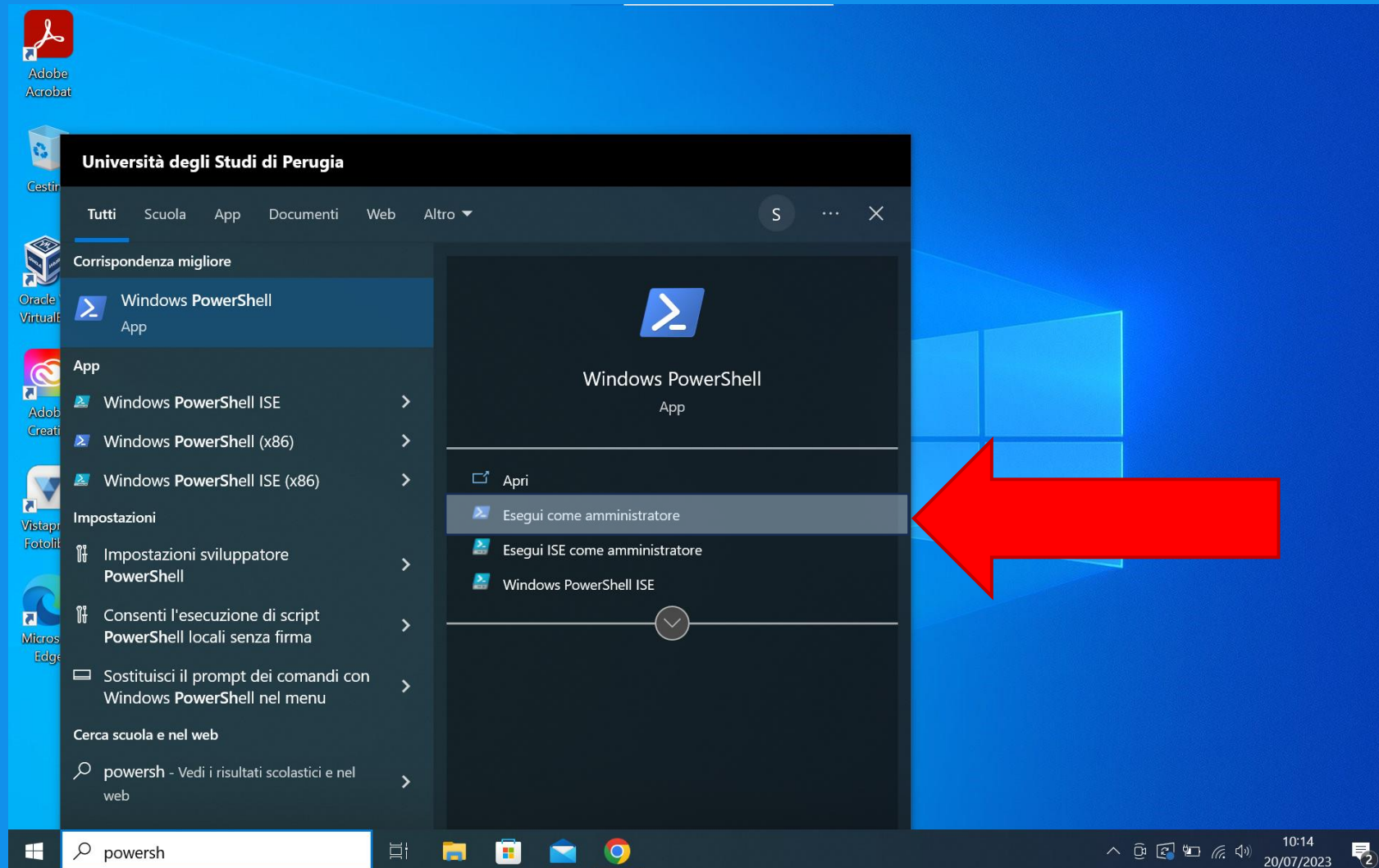
Gli sviluppatori possono accedere alla potenza di Windows e Linux contemporaneamente in un computer Windows. La sottosistema Windows per Linux (WSL) consente agli sviluppatori di installare una distribuzione Linux (ad esempio Ubuntu, OpenSUSE, Kali, Debian, Arch Linux e così via) e usare

Risorse aggiuntive

Documentazione

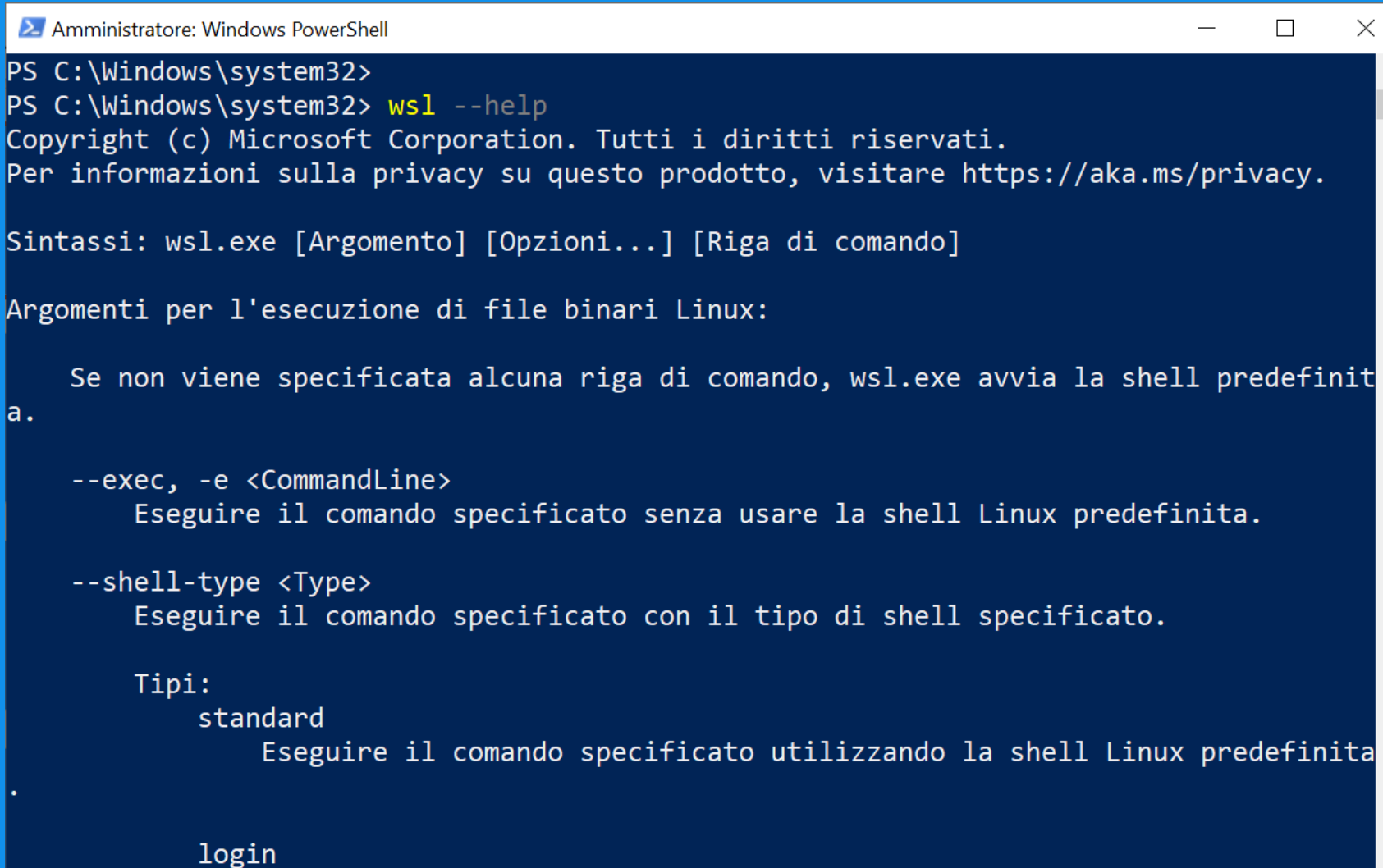
- [Configurare un ambiente di sviluppo WSL](#)
Configurare un ambiente di sviluppo WSL usando le procedure consigliate di questa guida dettagliata. Informazioni su come...
- [Confronto tra versioni di WSL](#)
WSL 2 offre i vantaggi di WSL 1, ma usa un kernel Linux effettivo, anziché un livello di conversione come WSL 1, con...
- [Risoluzione dei problemi relativi a Sottosistema Windows per Linux](#)
Fornisce informazioni dettagliate sugli errori e sui problemi comuni che si verificano durante l'esecuzione di Linux i...
- Mostra 5 in più

Windows PowerShell come Amministratore



Se richiedo concedere
il permesso di
apportare modifiche
al dispositivo

WSL

A screenshot of a Windows PowerShell terminal window titled "Amministratore: Windows PowerShell". The terminal shows the command `wsl --help` being executed. The output displays copyright information for Microsoft Corporation, a link to the privacy policy, and the syntax for the `wsl.exe` command. It lists arguments for executing Linux binaries, including `--exec` and `--shell-type`, and lists shell types: `standard` and `login`.

```
Amministratore: Windows PowerShell
PS C:\Windows\system32>
PS C:\Windows\system32> wsl --help
Copyright (c) Microsoft Corporation. Tutti i diritti riservati.
Per informazioni sulla privacy su questo prodotto, visitare https://aka.ms/privacy.

Sintassi: wsl.exe [Argomento] [Opzioni...] [Riga di comando]

Argomenti per l'esecuzione di file binari Linux:

    Se non viene specificata alcuna riga di comando, wsl.exe avvia la shell predefinita.

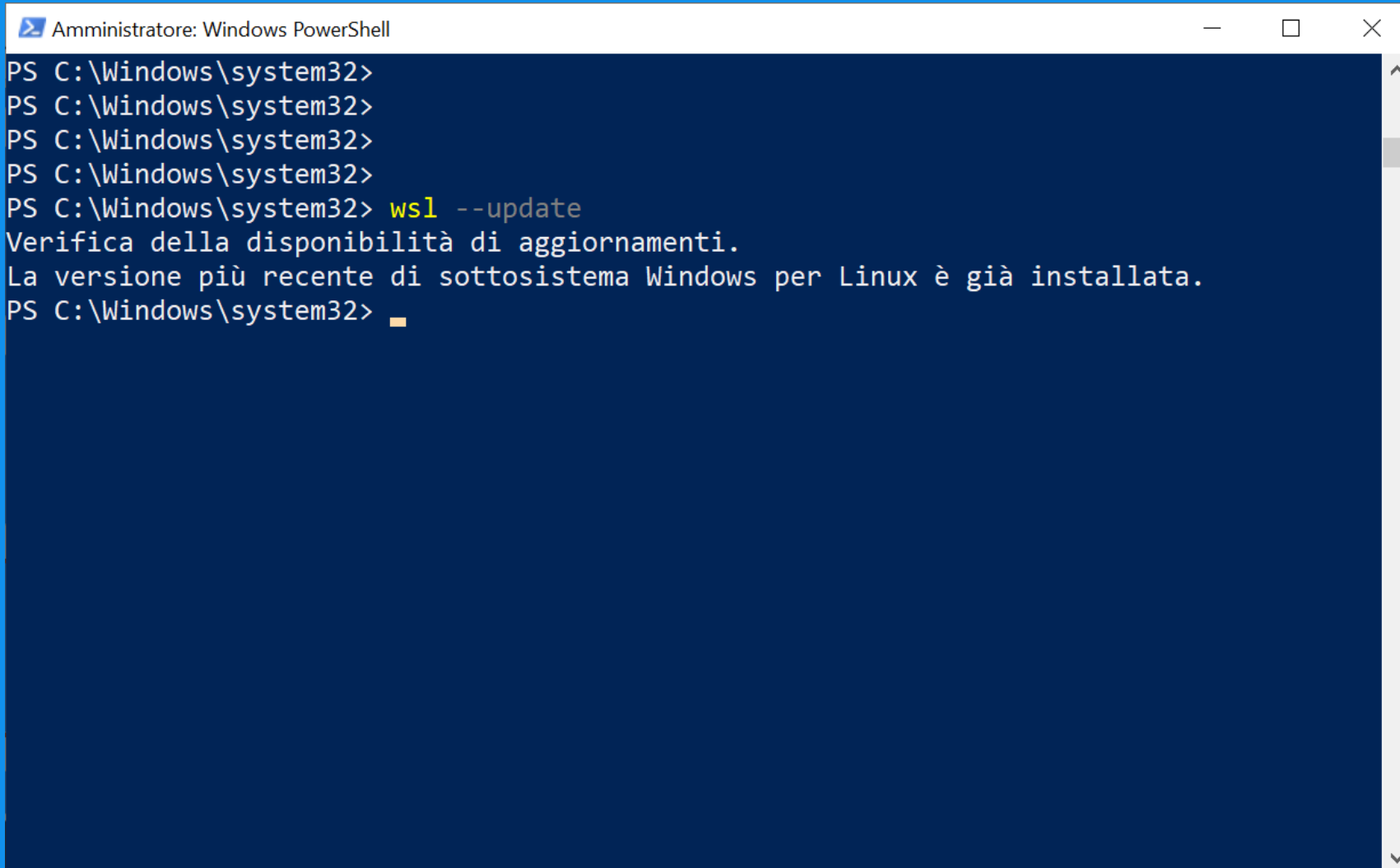
    --exec, -e <CommandLine>
        Eseguire il comando specificato senza usare la shell Linux predefinita.

    --shell-type <Type>
        Eseguire il comando specificato con il tipo di shell specificato.

    Tipi:
        standard
            Eseguire il comando specificato utilizzando la shell Linux predefinita.

        login
```

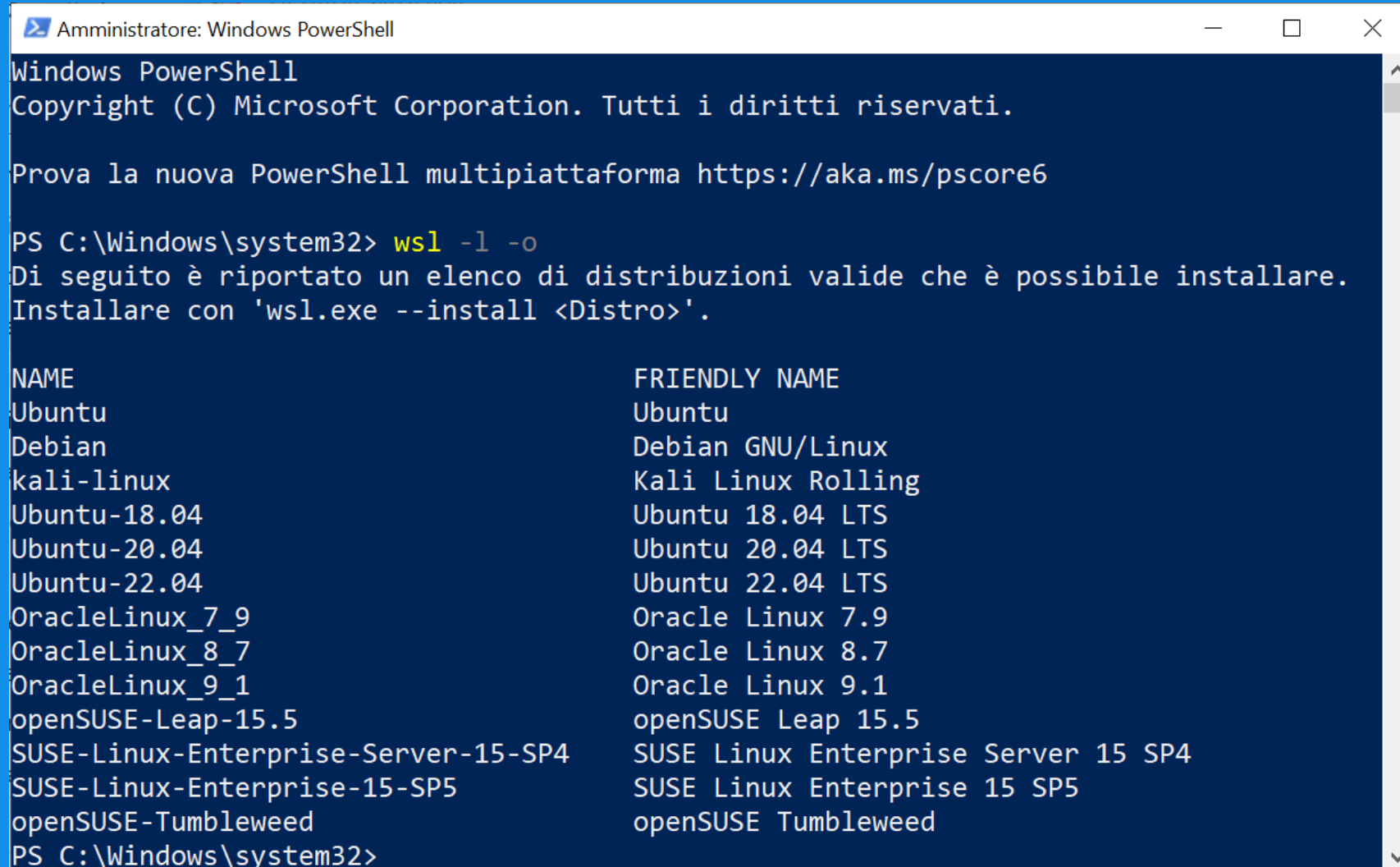
WSL



```
Amministratore: Windows PowerShell
PS C:\Windows\system32>
PS C:\Windows\system32>
PS C:\Windows\system32>
PS C:\Windows\system32>
PS C:\Windows\system32> wsl --update
Verifica della disponibilità di aggiornamenti.
La versione più recente di sottosistema Windows per Linux è già installata.
PS C:\Windows\system32> █
```

WSL

Aprire PowerShell come Amministratore



```
Amministratore: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. Tutti i diritti riservati.

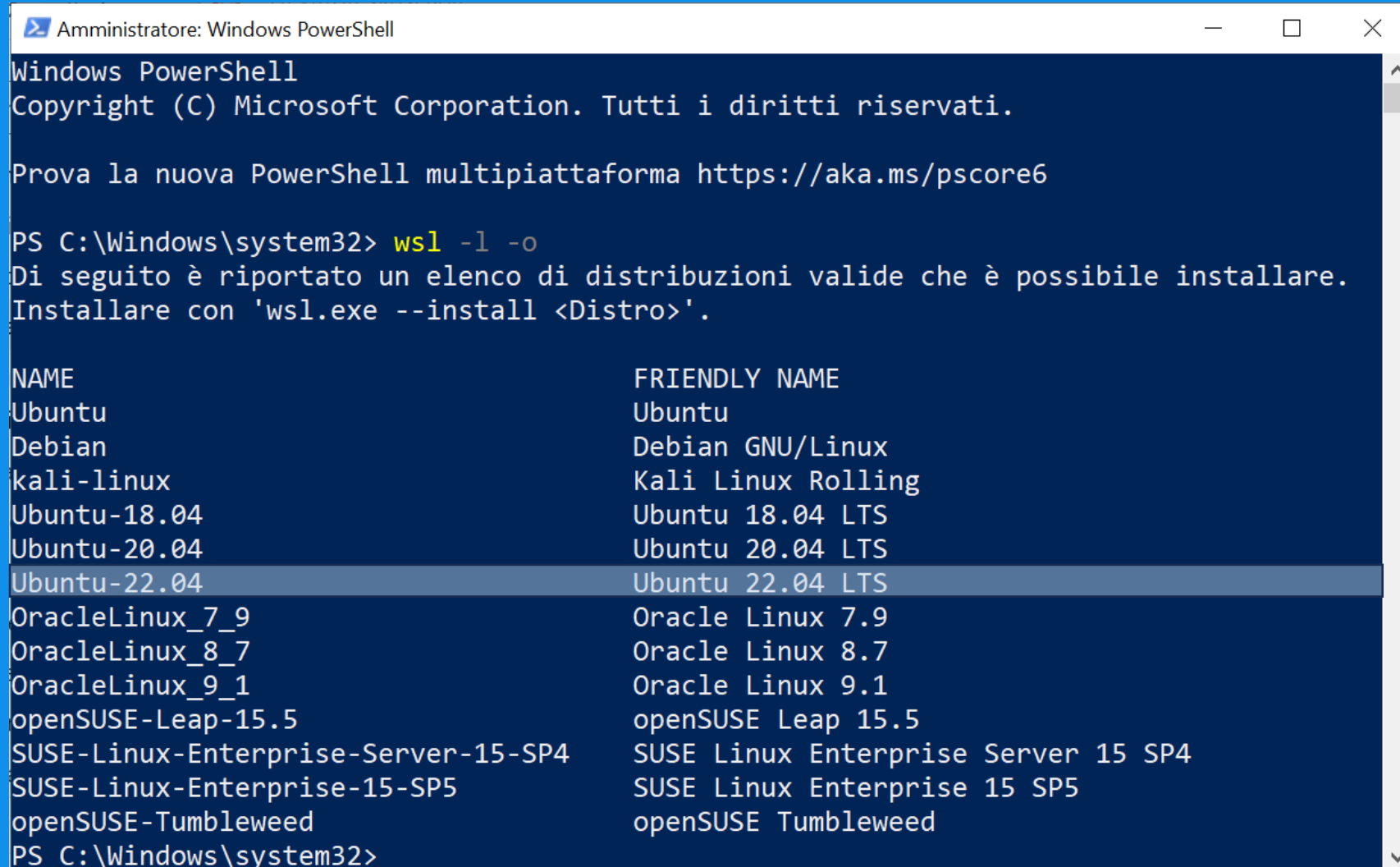
Prova la nuova PowerShell multiplatforma https://aka.ms/pscore6

PS C:\Windows\system32> wsl -l -o
Di seguito è riportato un elenco di distribuzioni valide che è possibile installare.
Installare con 'wsl.exe --install <Distro>'.

NAME                                FRIENDLY NAME
-----
Ubuntu                             Ubuntu
Debian                             Debian GNU/Linux
kali-linux                         Kali Linux Rolling
Ubuntu-18.04                       Ubuntu 18.04 LTS
Ubuntu-20.04                       Ubuntu 20.04 LTS
Ubuntu-22.04                       Ubuntu 22.04 LTS
OracleLinux_7_9                   Oracle Linux 7.9
OracleLinux_8_7                   Oracle Linux 8.7
OracleLinux_9_1                   Oracle Linux 9.1
openSUSE-Leap-15.5                 openSUSE Leap 15.5
SUSE-Linux-Enterprise-Server-15-SP4 SUSE Linux Enterprise Server 15 SP4
SUSE-Linux-Enterprise-15-SP5       SUSE Linux Enterprise 15 SP5
openSUSE-Tumbleweed                openSUSE Tumbleweed
PS C:\Windows\system32>
```

WSL

Aprire PowerShell come Amministratore



```
Amministratore: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. Tutti i diritti riservati.

Prova la nuova PowerShell multiplatforma https://aka.ms/pscore6

PS C:\Windows\system32> wsl -l -o
Di seguito è riportato un elenco di distribuzioni valide che è possibile installare.
Installare con 'wsl.exe --install <Distro>'.

NAME                                FRIENDLY NAME
-----                                -
Ubuntu                              Ubuntu
Debian                              Debian GNU/Linux
kali-linux                          Kali Linux Rolling
Ubuntu-18.04                         Ubuntu 18.04 LTS
Ubuntu-20.04                         Ubuntu 20.04 LTS
Ubuntu-22.04                         Ubuntu 22.04 LTS
OracleLinux_7_9                     Oracle Linux 7.9
OracleLinux_8_7                     Oracle Linux 8.7
OracleLinux_9_1                     Oracle Linux 9.1
openSUSE-Leap-15.5                  openSUSE Leap 15.5
SUSE-Linux-Enterprise-Server-15-SP4 SUSE Linux Enterprise Server 15 SP4
SUSE-Linux-Enterprise-15-SP5        SUSE Linux Enterprise 15 SP5
openSUSE-Tumbleweed                 openSUSE Tumbleweed
PS C:\Windows\system32>
```

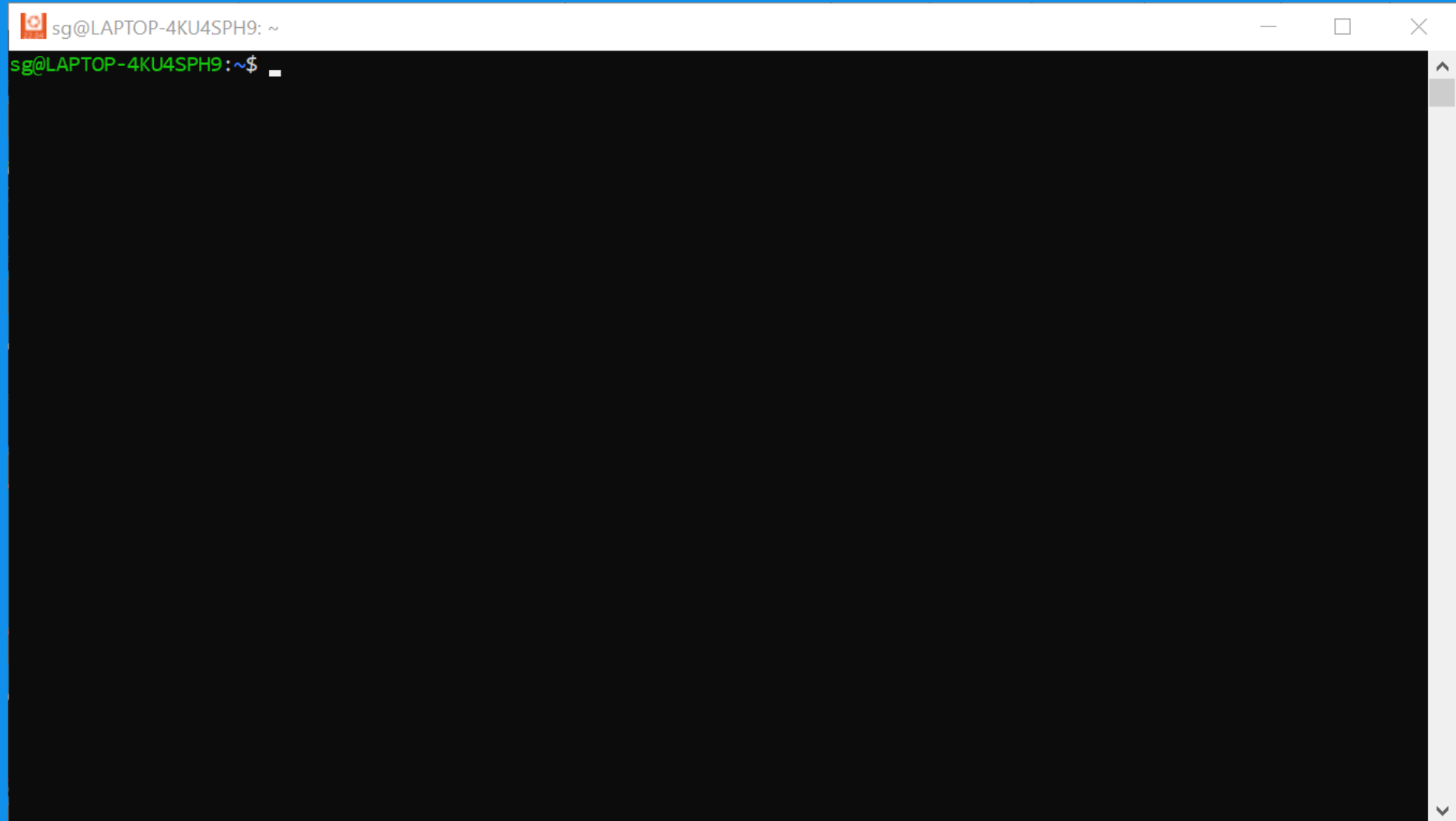
WSL

```
Amministratore: Windows PowerShell

NAME                                FRIENDLY NAME
-----
Ubuntu                             Ubuntu
Debian                             Debian GNU/Linux
kali-linux                         Kali Linux Rolling
Ubuntu-18.04                       Ubuntu 18.04 LTS
Ubuntu-20.04                       Ubuntu 20.04 LTS
Ubuntu-22.04                       Ubuntu 22.04 LTS
OracleLinux_7_9                   Oracle Linux 7.9
OracleLinux_8_7                   Oracle Linux 8.7
OracleLinux_9_1                   Oracle Linux 9.1
openSUSE-Leap-15.5                 openSUSE Leap 15.5
SUSE-Linux-Enterprise-Server-15-SP4 SUSE Linux Enterprise Server 15 SP4
SUSE-Linux-Enterprise-15-SP5       SUSE Linux Enterprise 15 SP5
openSUSE-Tumbleweed               openSUSE Tumbleweed

PS C:\Windows\system32>
PS C:\Windows\system32>
PS C:\Windows\system32>
PS C:\Windows\system32> wsl --install -d Ubuntu-22.04
```


Terminale Linux WLS



Comandi Base Terminale Linux - pwd

[illegible]

Comandi Base Terminale Linux – cd ..

[illegible]

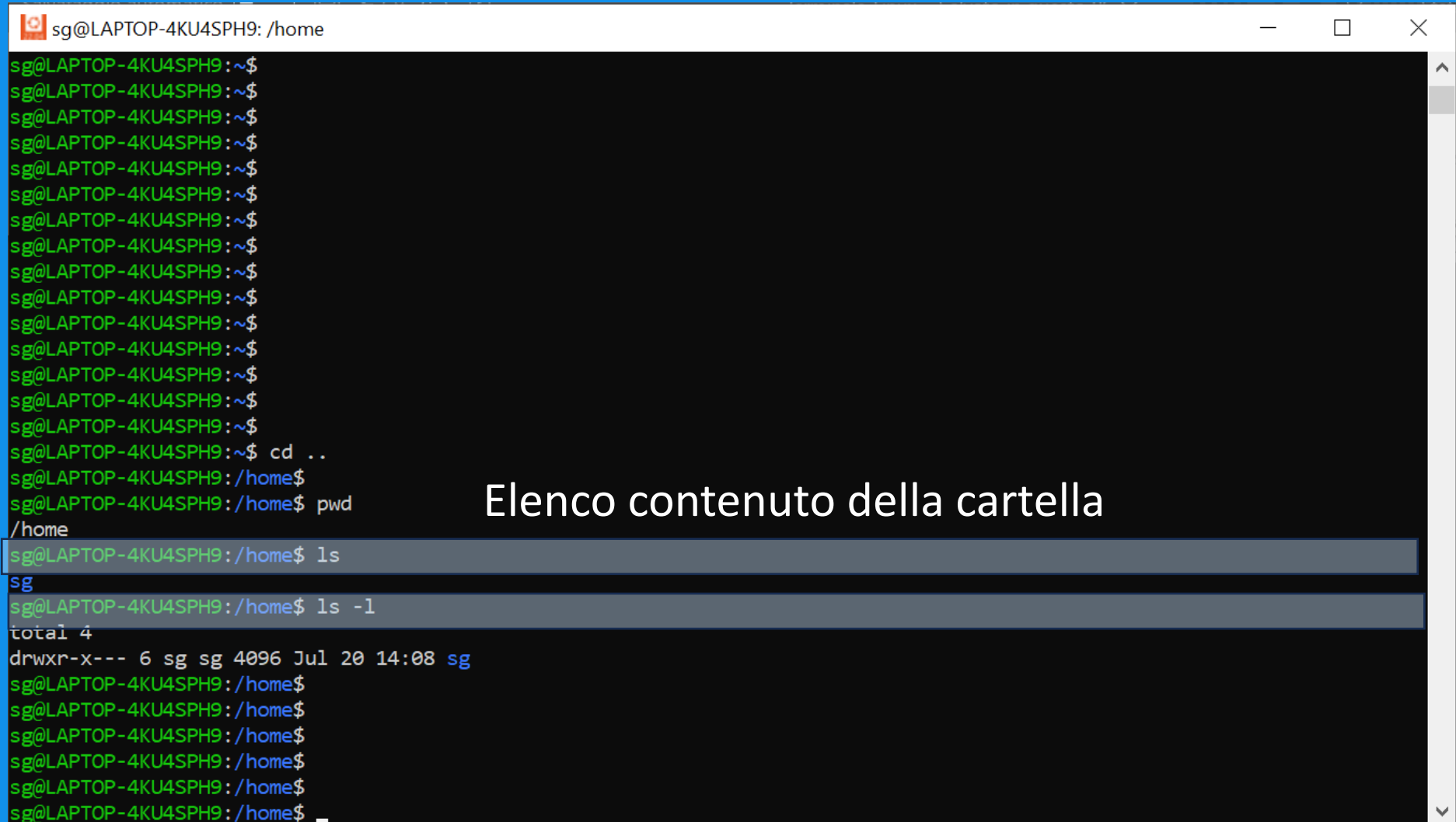
Spostamento nella cartella superiore

□ □ □

```
sg@LAPTOP-4KU4SPH9: /home
```

```
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$  
sg@LAPTOP-4KU4SPH9: ~$ cd ..  
sg@LAPTOP-4KU4SPH9: /home$  
sg@LAPTOP-4KU4SPH9: /home$ pwd  
/home  
sg@LAPTOP-4KU4SPH9: /home$ _
```

Comandi Base Terminale Linux – ls



```
sg@LAPTOP-4KU4SPH9: /home
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$ cd ..
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$ pwd
/home
sg@LAPTOP-4KU4SPH9: /home$ ls
sg
sg@LAPTOP-4KU4SPH9: /home$ ls -l
total 4
drwxr-x--- 6 sg sg 4096 Jul 20 14:08 sg
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$
sg@LAPTOP-4KU4SPH9: /home$
```

Elenco contenuto della cartella

... Help

```
sg@LAPTOP-4KU4SPH9: /home
sg@LAPTOP-4KU4SPH9:/home$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all                do not ignore entries starting with .
  -A, --almost-all        do not list implied . and ..
      --author              with -l, print the author of each file
  -b, --escape             print C-style escapes for nongraphic characters
      --block-size=SIZE    with -l, scale sizes by SIZE when printing them;
                           e.g., '--block-size=M'; see SIZE format below
  -B, --ignore-backups     do not list implied entries ending with ~
  -c                       with -lt: sort by, and show, ctime (time of last
                           modification of file status information);
                           with -l: show ctime and sort by name;
                           otherwise: sort by ctime, newest first
  -C                       list entries by columns
      --color[=WHEN]       colorize the output; WHEN can be 'always' (default
                           if omitted), 'auto', or 'never'; more info below
  -d, --directory          list directories themselves, not their contents
  -D, --dired               generate output designed for Emacs' dired mode
  -f                       do not sort, enable -aU, disable -ls --color
  -F, --classify           append indicator (one of */=>@|) to entries
                           likewise, except do not append '*'
      --format=WORD        across -x, commas -m, horizontal -x, long -l,
                           single-column -1, verbose -l, vertical -C
      --full-time           like -l --time-style=full-iso
  -g                       like -l, but do not list owner
      --group-directories-first
```

Comandi Base Terminale Linux - *cd dir*

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ cd ..  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ pwd  
/home  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ ls -l  
total 4  
drwxr-x--- 7 sg sg 4096 Jul 26 18:38 sg  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ cd sg/  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ pwd  
/home/sg  
sg@LAPTOP-4KU4SPH9:~$
```

Spostamento in una cartella specifica

Comandi Base Terminale Linux – cd -

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ cd ..  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ pwd  
/home  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ ls -l  
total 4  
drwxr-x--- 7 sg sg 4096 Jul 26 18:38 sg  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$  
sg@LAPTOP-4KU4SPH9:/home$ cd sg/  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ pwd  
/home/sg  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ cd -  
/home  
sg@LAPTOP-4KU4SPH9:/home$ pwd  
/home  
sg@LAPTOP-4KU4SPH9:/home$ cd -  
/home/sg  
sg@LAPTOP-4KU4SPH9:~$ pwd  
/home/sg  
sg@LAPTOP-4KU4SPH9:~$
```

Spostamento nella cartella precedente

Comandi Base Terminale Linux – mkdir

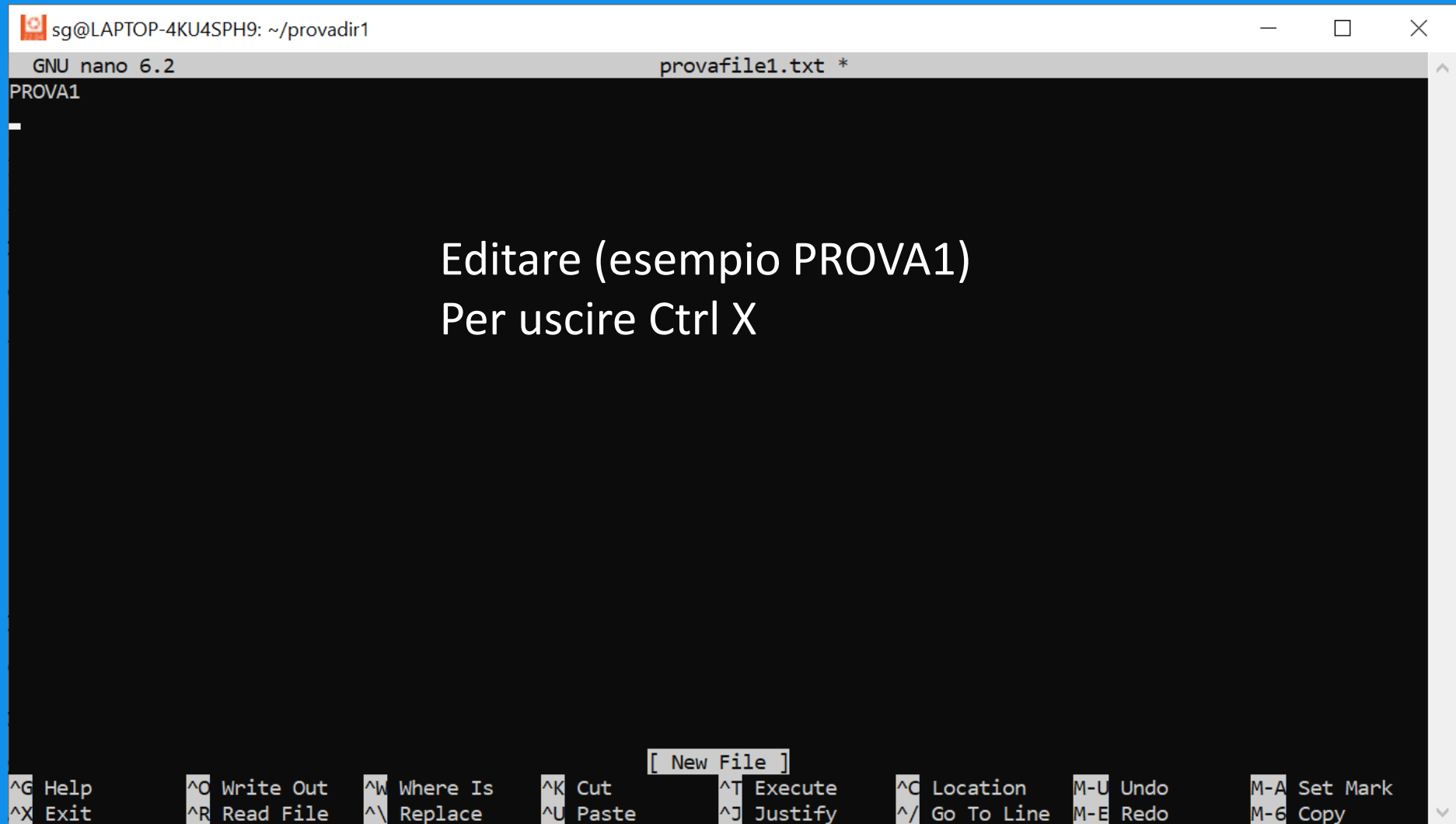
```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -l  
total 0  
sg@LAPTOP-4KU4SPH9:~$ mkdir provadir1  
sg@LAPTOP-4KU4SPH9:~$ ls -l  
total 4  
drwxr-xr-x 2 sg sg 4096 Jul 27 13:24 provadir1  
sg@LAPTOP-4KU4SPH9:~$ mkdir provadir2  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -l  
total 8  
drwxr-xr-x 2 sg sg 4096 Jul 27 13:24 provadir1  
drwxr-xr-x 2 sg sg 4096 Jul 27 13:24 provadir2  
sg@LAPTOP-4KU4SPH9:~$
```

Creazione nuova cartella

Comandi Base Terminale Linux – pico

[illegible]


Comandi Base Terminale Linux – pico



```
sg@LAPTOP-4KU4SPH9: ~/provalidir1
GNU nano 6.2 provafile1.txt *
PROVA1
-

Editare (esempio PROVA1)
Per uscire Ctrl X

[ New File ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line M-E Redo      M-6 Copy
```

```
 sg@LAPTOP-4KU4SPH9: ~/provadir1
```

```
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$ pico provafire1.txt  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$  
sg@LAPTOP-4KU4SPH9:~/provadir1$ ls -l  
total 4  
-rw-r--r-- 1 sg sg 8 Jul 27 20:44 provafire1.txt  
sg@LAPTOP-4KU4SPH9:~/provadir1$ _
```

Comandi Base Terminale Linux - more

[illegible]

Comandi Base Terminale Linux - rm

```
sg@LAPTOP-4KU4SPH9: ~/provadir1
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$ ls -l
total 4
-rw-r--r-- 1 sg sg 8 Jul 27 20:44 provaf1le1.txt
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$ rm provaf1le1.txt
sg@LAPTOP-4KU4SPH9:~/provadir1$
sg@LAPTOP-4KU4SPH9:~/provadir1$ ls -l
total 0
sg@LAPTOP-4KU4SPH9:~/provadir1$
```

Rimozione file

Comandi Base Terminale Linux - rm

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ pwd  
/home/sg  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -l  
total 8  
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1  
drwxr-xr-x 2 sg sg 4096 Jul 27 21:01 provadir2  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ rm provadir2  
rm: cannot remove 'provadir2': Is a directory  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ rm -R provadir2  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -l  
total 4  
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1  
sg@LAPTOP-4KU4SPH9:~$
```

Rimozione cartella

Accesso Incrociato WSL-Windows

[illegible]

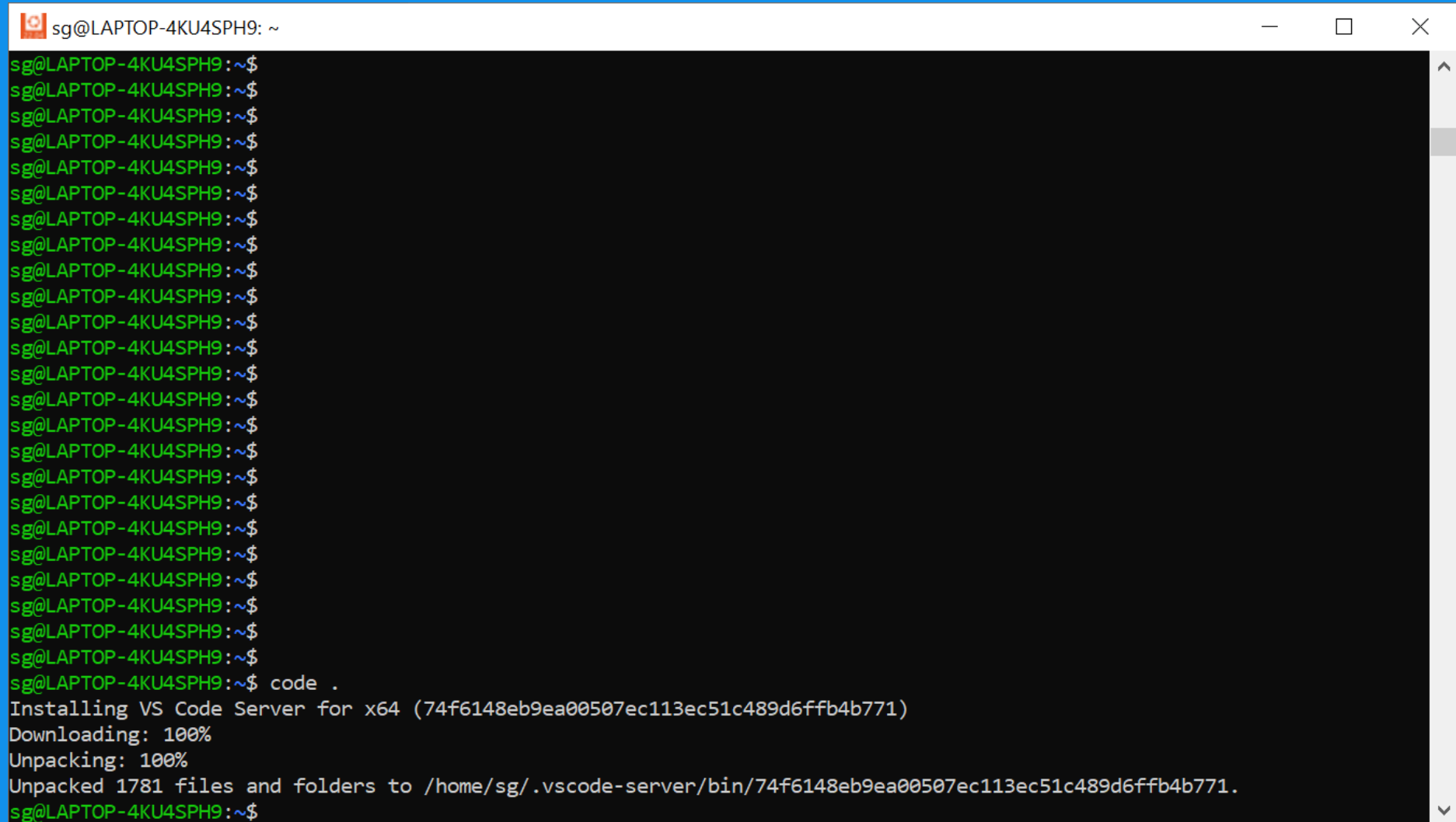
Accesso Incrociato WSL-Windows

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls /mnt/c/  
ls: cannot access '/mnt/c/DumpStack.log.tmp': Permission denied  
ls: cannot access '/mnt/c/hiberfil.sys': Permission denied  
ls: cannot access '/mnt/c/pagefile.sys': Permission denied  
ls: cannot access '/mnt/c/swapfile.sys': Permission denied  
'$Recycle.Bin'          DumpStack.log          'Program Files'        'System Volume Information'  pagefile.sys  
'$WinREAgent'          DumpStack.log.tmp      'Program Files (x86)'  Users                        swapfile.sys  
DRIVERS                Intel                  ProgramData             Windows  
'Documents and Settings' PerfLogs              Recovery               hiberfil.sys  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ explorer.exe .  
sg@LAPTOP-4KU4SPH9:~$
```

...

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls /mnt/c/  
ls: cannot access '/mnt/c/DumpStack.log.tmp': Permission denied  
ls: cannot access '/mnt/c/hiberfil.sys': Permission denied  
ls: cannot access '/mnt/c/pagefile.sys': Permission denied  
ls: cannot access '/mnt/c/swapfile.sys': Permission denied  
'$Recycle.Bin'      DumpStack.log      'Program Files'      'System Volume Information'  pagefile.sys  
'$WinREAgent'      DumpStack.log.tmp  'Program Files (x86)'  Users                    swapfile.sys  
DRIVERS            Intel              ProgramData           Windows  
'Documents and Settings' PerfLogs          Recovery              hiberfil.sys  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls /mnt/c/Users/  
'All Users'  Default  'Default User'  Public  Stefano  desktop.ini  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$
```

WSL – Visual Studio Code (da Windows)



The screenshot shows a terminal window titled "sg@LAPTOP-4KU4SPH9: ~". The terminal displays a series of 20 identical prompts "sg@LAPTOP-4KU4SPH9: ~\$". The 21st prompt is followed by the command "code .". The terminal then shows the installation progress for the Visual Studio Code Server for x64, including downloading (100%) and unpacking (100%) the files to the directory "/home/sg/.vscode-server/bin/74f6148eb9ea00507ec113ec51c489d6ffb4b771".

```
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$
sg@LAPTOP-4KU4SPH9: ~$ code .
Installing VS Code Server for x64 (74f6148eb9ea00507ec113ec51c489d6ffb4b771)
Downloading: 100%
Unpacking: 100%
Unpacked 1781 files and folders to /home/sg/.vscode-server/bin/74f6148eb9ea00507ec113ec51c489d6ffb4b771.
sg@LAPTOP-4KU4SPH9: ~$
```

Ubuntu 22.04

```
echo "nameserver 8.8.8.8" | sudo tee /etc/resolv.conf > /dev/null
```

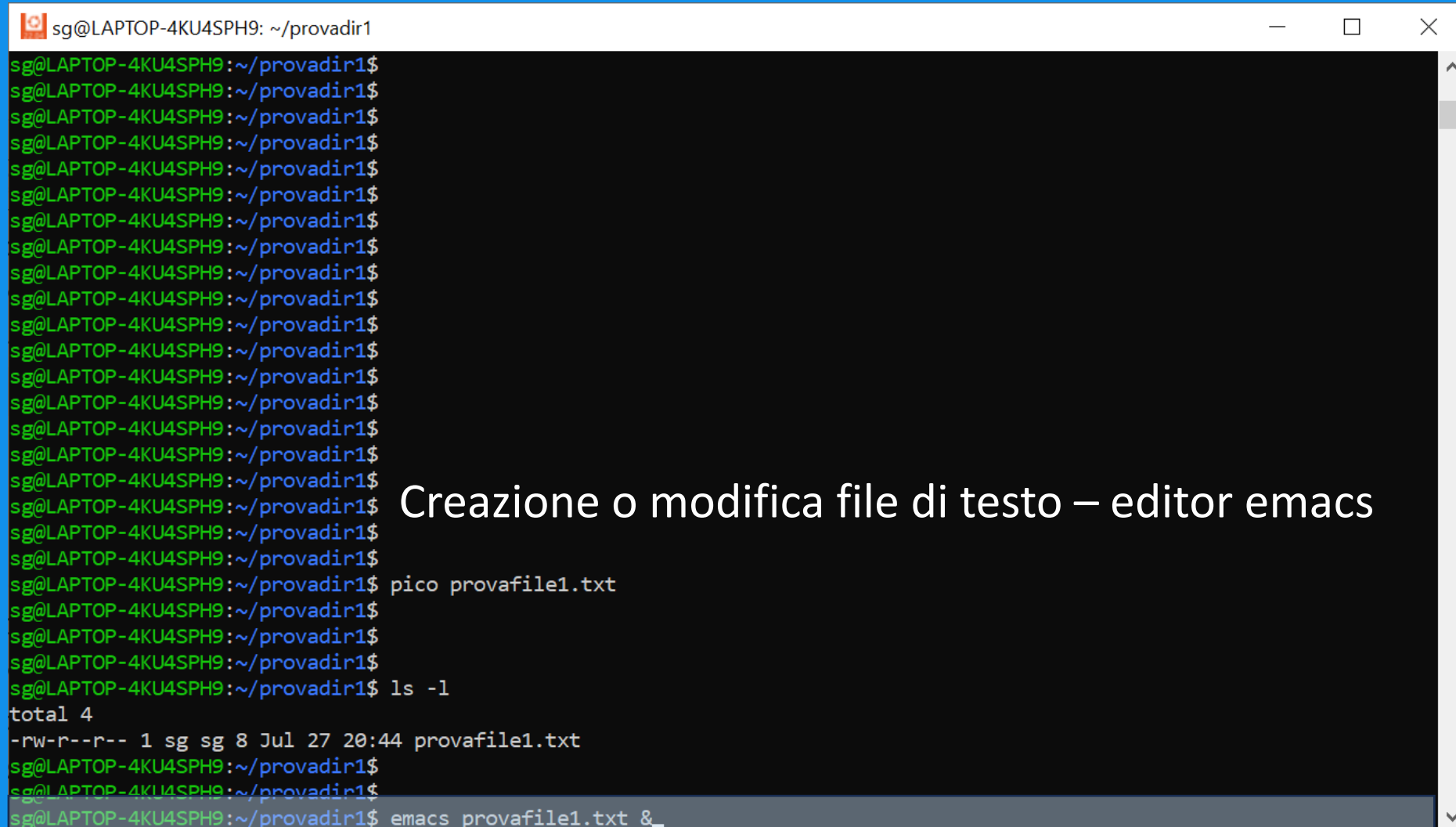
```
sudo apt update
```

```
#sudo apt-get update  
sudo apt install emacs
```

```
sudo apt install python3-dev  
sudo apt install python3-tk  
sudo apt install python3-pip
```

```
sudo python3 -m pip install pyqt5  
sudo python3 -m pip install numpy scipy matplotlib pandas argparse sympy
```

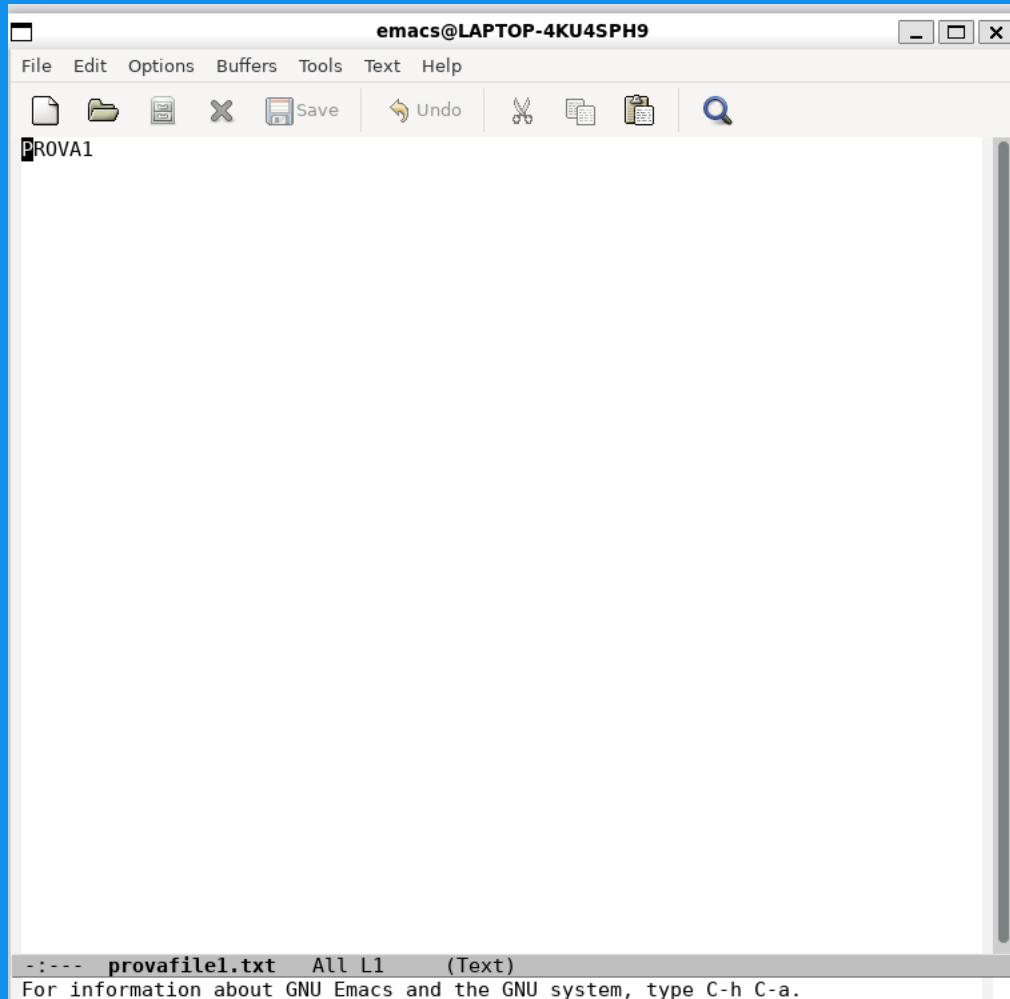
Comandi Base Terminale Linux – emacs



```
sg@LAPTOP-4KU4SPH9: ~/provadir1
sg@LAPTOP-4KU4SPH9:~/provadir1$ ls -l
total 4
-rw-r--r-- 1 sg sg 8 Jul 27 20:44 provafile1.txt
sg@LAPTOP-4KU4SPH9:~/provadir1$ pico provafile1.txt
sg@LAPTOP-4KU4SPH9:~/provadir1$ emacs provafile1.txt &
```

Creazione o modifica file di testo – editor emacs

Comandi Base Terminale Linux – emacs



Editare

Per salvare: Ctrl x Ctrl s

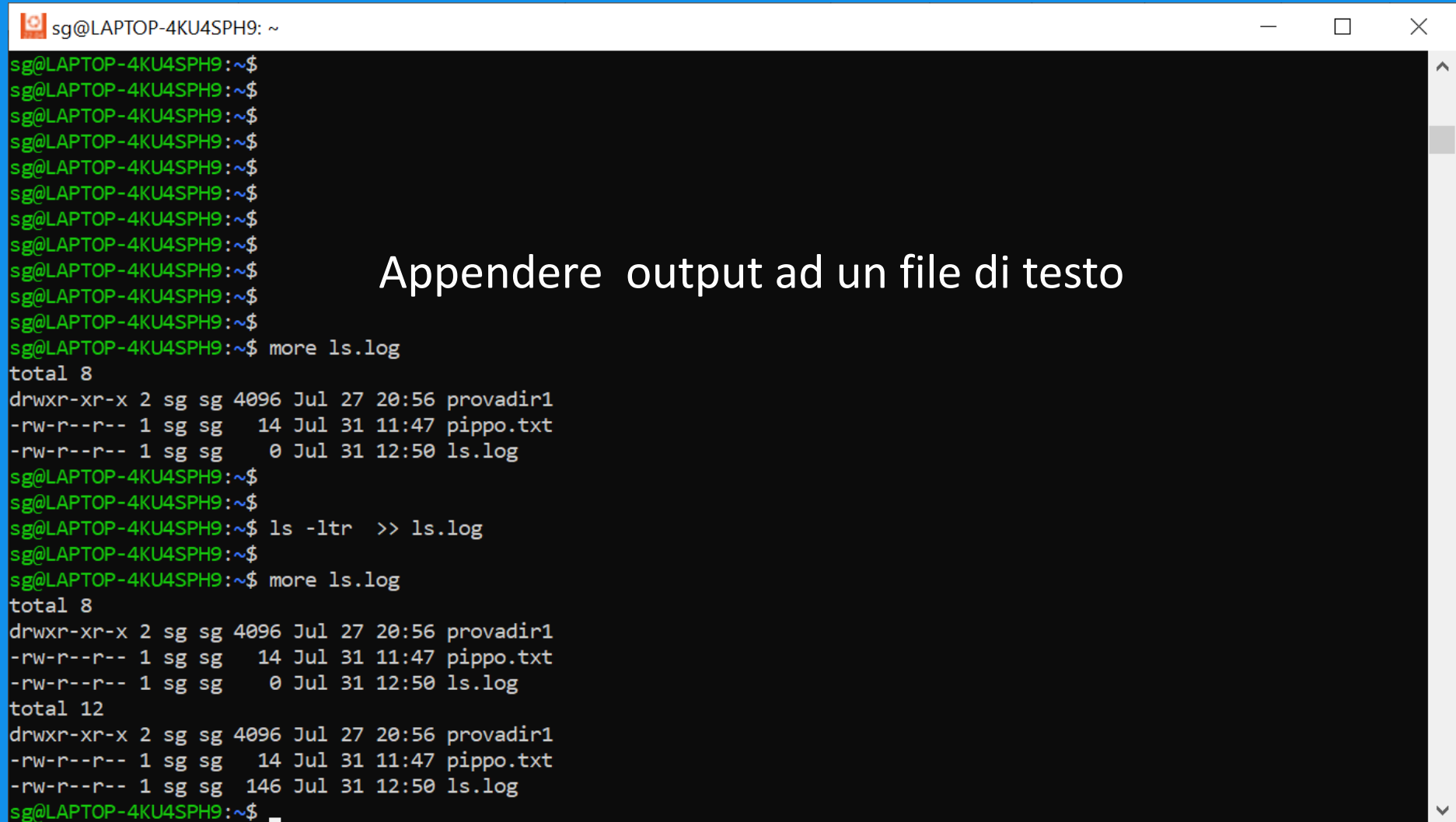
Per uscire: Ctrl x Ctrl c

+ molti altri comandi

Comandi Base Terminale Linux – >, >>

```
sg@LAPTOP-4KU4SPH9: ~  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -ltr  
total 8  
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1  
-rw-r--r-- 1 sg sg 14 Jul 31 11:47 pippo.txt  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ ls -ltr > ls.log  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$  
sg@LAPTOP-4KU4SPH9:~$ more ls.log  
total 8  
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1  
-rw-r--r-- 1 sg sg 14 Jul 31 11:47 pippo.txt  
-rw-r--r-- 1 sg sg 0 Jul 31 12:50 ls.log  
sg@LAPTOP-4KU4SPH9:~$
```

Comandi Base Terminale Linux – >, >>



A screenshot of a Linux terminal window titled "sg@LAPTOP-4KU4SPH9: ~". The terminal shows a series of commands and their outputs. The user repeatedly enters the prompt "sg@LAPTOP-4KU4SPH9:~\$" before typing "more ls.log". The output of "more ls.log" shows a directory listing for the current directory, including "provadir1", "pippo.txt", and "ls.log". The user then enters "ls -ltr >> ls.log", which appends the output of the "ls -ltr" command to the "ls.log" file. Finally, the user enters "more ls.log" again, and the output shows the updated directory listing, including the "ls.log" file with a size of 146 bytes.

```
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$ more ls.log
total 8
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1
-rw-r--r-- 1 sg sg  14 Jul 31 11:47 pippo.txt
-rw-r--r-- 1 sg sg   0 Jul 31 12:50 ls.log
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$ ls -ltr >> ls.log
sg@LAPTOP-4KU4SPH9:~$
sg@LAPTOP-4KU4SPH9:~$ more ls.log
total 8
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1
-rw-r--r-- 1 sg sg  14 Jul 31 11:47 pippo.txt
-rw-r--r-- 1 sg sg   0 Jul 31 12:50 ls.log
total 12
drwxr-xr-x 2 sg sg 4096 Jul 27 20:56 provadir1
-rw-r--r-- 1 sg sg  14 Jul 31 11:47 pippo.txt
-rw-r--r-- 1 sg sg 146 Jul 31 12:50 ls.log
sg@LAPTOP-4KU4SPH9:~$
```

Appendere output ad un file di testo

Esercizio

1. Aprire il terminale Linux (Nativo o WSL);
2. Assicurarsi di essere nella cartella *home* dell'utente;
3. Creare la cartella *MCF* e spostarsi al suo interno;
4. Creare il file di testo *Nome_Cognome.txt* (sostituendo opportunamente);
5. Editare il file inserendo le seguenti informazioni:
 1. Nome;
 2. Cognome;
 3. Matricola;
 4. e-mail istituzionale;
6. Appendere output del comando *python3 --version* al file;
7. Inviare il file al docente via e-mail