

T1

```
user@AA3209-Ubuntu:~$ sudo apt update
This API has Super Cow Powers.
[sudo] password for user:
Hit:1 http://fi.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://fi.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://fi.archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:4 http://fi.archive.ubuntu.com/ubuntu focal-security InRelease [109 kB]
Get:5 http://fi.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [890
kB]
Get:6 http://fi.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages
[755 kB]
Fetched 1968 kB in 0s (4183 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
63 packages can be upgraded. Run 'apt list --upgradable' to see them.
user@AA3209-Ubuntu:~$
```

```
Most used commands:
list - list packages based on package names
search - search in package descriptions
show - show package details
install - install packages
reinstall - reinstall packages
remove - remove packages
autoremove - Remove automatically all unused packages
update - update list of available packages
upgrade - upgrade the system by installing/upgrading packages
full-upgrade - upgrade the system by removing/installing/upgrading packages
edit-sources - edit the source information file
satisfy - satisfy dependency strings
```

T2

```
user@AA3209-Ubuntu:~$ sudo apt show figlet
Package: figlet
Version: 2.2.5-3
Priority: optional
Section: universe/text
Origin: Ubuntu
Maintainer: Ubuntu Developers <ubuntu-devel-discuss@lists.ubuntu.com>
Original-Maintainer: Carlos Laviola <claviola@debian.org>
Bugs: https://bugs.launchpad.net/ubuntu/+filebug
Installed-Size: 752 kB
Depends: libc6 (>= 2.14)
Homepage: http://www.figlet.org/
Download-Size: 133 kB
APT-Sources: http://fi.archive.ubuntu.com/ubuntu focal/universe amd64 Packages
Description: Make large character ASCII banners out of ordinary text
 FIGlet (Frank, Ian & Glenn's Letters) is a program that creates large
 characters out of ordinary screen characters.
.
It can create characters in many different styles and can
kern and "smush" these characters together in various ways. FIGlet
output is generally reminiscent of the sort of "signatures" many people
like to put at the end of e-mail, Usenet and MOTD messages.

user@AA3209-Ubuntu:~$
```

T3

```
user@AA3209-Ubuntu:~$ sudo apt install figlet
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  figlet
0 upgraded, 1 newly installed, 0 to remove and 63 not upgraded.
Need to get 133 kB of archives.
After this operation, 752 kB of additional disk space will be used.
Get:1 http://fi.archive.ubuntu.com/ubuntu focal/universe amd64 figlet amd64 2.2.5-3 [133 kB]
Fetched 133 kB in 0s (2403 kB/s)
Selecting previously unselected package figlet.
(Reading database ... 144122 files and directories currently installed.)
Preparing to unpack .../figlet_2.2.5-3_amd64.deb ...
Unpacking figlet (2.2.5-3) ...
Setting up figlet (2.2.5-3) ...
update-alternatives: using /usr/bin/figlet-figlet to provide /usr/bin/figlet (figlet) in auto mode
Processing triggers for man-db (2.9.1-1) ...
user@AA3209-Ubuntu:~$
```

```
user@AA3209-Ubuntu:~$ figlet moro
```

```
user@AA3209-Ubuntu:~$
```

T4

```
user@AA3209-Ubuntu:~$ sudo apt purge figlet
```

```
[sudo] password for user:
```

Reading package lists... Done

Building dependency tree

Reading state information... Done

The following packages will be REMOVED:

```
figlet*
```

```
0 upgraded, 0 newly installed, 1 to remove and 63 not upgraded.
```

After this operation, 752 kB disk space will be freed.

```
Do you want to continue? [Y/n] y
```

```
(Reading database ... 144201 files and directories currently installed.)
```

Removing figlet (2.2.5-3) ...

```
Processing triggers for man-db (2.9.1-1) ...
```

```
(Reading database ... 144125 files and directories currently installed.)
```

```
Purging configuration files for figlet (2.2.5-3) ...
```

```
user@AA3209-Ubuntu:~$
```

```
user@AA3209-Ubuntu:~$ figlet moro
```

```
-bash: /usr/bin/figlet: No such file or directory
```

```
user@AA3209-Ubuntu:~$
```

T5

```
user@AA3209-Ubuntu:~$ sudo apt install build-essential
```

```
user@AA3209-Ubuntu:~$ sudo apt install libffi-dev
```

```
user@AA3209-Ubuntu:~$ sudo apt install zlib1g-dev
```

```
user@AA3209-Ubuntu:~$ wget http://student.labranet.jamk.fi/~hantt/os/Python-3.7.4.tar.gz
```

```
user@AA3209-Ubuntu:~$ tar -xf Python-3.7.4.tgz
```

```
user@AA3209-Ubuntu:~$
```

```
user@AA3209-Ubuntu:~/Python-3.7.4$ sudo ./configure
```

```
user@AA3209-Ubuntu:~/Python-3.7.4$ sudo make
```

```
user@AA3209-Ubuntu:~/Python-3.7.4$ sudo make install
```

```
user@AA3209-Ubuntu:~$ sudo ln -s /usr/local/bin/python3.7 /usr/bin/python3.7
```

```
user@AA3209-Ubuntu:~$ ls -l /usr/local/bin/
total 32400
lrwxrwxrwx 1 root root      8 Mar 28 22:16 2to3 -> 2to3-3.7
-rwxr-xr-x 1 root root    101 Mar 28 22:16 2to3-3.7
-rwxr-xr-x 1 root root    241 Mar 28 22:16 easy_install-3.7
lrwxrwxrwx 1 root root      7 Mar 28 22:16 idle3 -> idle3.7
-rwxr-xr-x 1 root root     99 Mar 28 22:16 idle3.7
-rwxr-xr-x 1 root root    223 Mar 28 22:16 pip3
-rwxr-xr-x 1 root root    223 Mar 28 22:16 pip3.7
lrwxrwxrwx 1 root root      8 Mar 28 22:16 pydoc3 -> pydoc3.7
-rwxr-xr-x 1 root root     84 Mar 28 22:16 pydoc3.7
lrwxrwxrwx 1 root root      9 Mar 28 22:16 python3 -> python3.7
lrwxrwxrwx 1 root root    16 Mar 28 22:16 python3-config -> python3.7
-rwxr-xr-x 2 root root 16568400 Mar 28 22:16 python3.7
lrwxrwxrwx 1 root root    17 Mar 28 22:16 python3.7-config -> python3
ig
-rwxr-xr-x 2 root root 16568400 Mar 28 22:16 python3.7m
-rwxr-xr-x 1 root root    2902 Mar 28 22:16 python3.7m-config
lrwxrwxrwx 1 root root    10 Mar 28 22:16 pyvenv -> pyvenv-3.7
-rwxr-xr-x 1 root root    441 Mar 28 22:16 pyvenv-3.7
```

```
user@AA3209-Ubuntu:~$ ls
Python-3.7.4      dataset      hl           pehmeelinkki.txt  tmp
Python-3.7.4.tgz first.txt    kansiol      second             users.txt
apache           funet       kovalinkki.txt third.txt
user@AA3209-Ubuntu:~$ cd Python-3.7.4/
user@AA3209-Ubuntu:~/Python-3.7.4$ python3
Python 3.7.4 (default, Mar 28 2021, 22:15:18)
[GCC 9.3.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>>
```