

Bash Help GUI

Waikato Linux Users Group

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Bash Help GUI

Retrieve all the bash commands:

- \$ & <tab>
- \$ compgen -c

A terminal window with a dark background. The prompt is 'zsh: do you wish to see all 7409 possibilities (7414 lines)?' followed by a white cursor. The terminal has a top bar with icons for a file manager, home, and a red ampersand. A green checkmark icon is visible in the top right corner.

```
zsh: do you wish to see all 7409 possibilities (7414 lines)?
```

A terminal window showing the output of three commands. Each command is preceded by a green arrow icon. The commands and their outputs are: 'autoload bashcompinit', 'bashcompinit', and 'compgen -c | wc -l'. The output of the last command is '6138'. A vertical bar with three green checkmarks is on the right side.

```
autoload bashcompinit
bashcompinit
compgen -c | wc -l
6138
```

Note: Using Manjaro with zsh, not Ubuntu with bash

Bash Help GUI

Using a Python function to return output of compgen

```
from subprocess import check_output

def get_compgen_list():
    output = check_output('compgen -c', shell=True, executable='/bin/bash')
    command_list_byte = output.splitlines()

    # Convert from bytes list to string list
    command_list_str = []
    for item in command_list_byte:
        command_list_str.append(item.decode("utf-8"))

    # Remove duplicates in the list
    command_list = list(dict.fromkeys(command_list_str))

    # Sort the list
    command_list.sort()

    return command_list
```

Bash Help GUI

Using a Python function to return output of compgen

```
MESSAGE = ("\nA total of {} bash commands have been identified."  
           .format(len(bash_command_list)))  
  
print(MESSAGE)
```

```
A total of 4185 bash commands have been identified.
```

The `-h` and `--help` convention. E.g.

```
lslogins -h
```

Usage:

```
lslogins [options] [<username>]
```

Display information about known users in the system.

Options:

```
-a, --acc-expiration    display info about passwords expiration
```

```
basename -h
```

basename: invalid option -- 'h'

Try 'basename --help' for more information.

```
basename --help
```

Usage: basename NAME [SUFFIX]

```
or:  basename OPTION... NAME...
```

Print NAME with any leading directory components removed.

If specified, also remove a trailing SUFFIX.

Mandatory arguments to long options are mandatory for short options too.

```
-a, --multiple          support multiple arguments and treat each as a NAME
```

man pages. E.g.

MAN(1)

Manual pager utils

MAN(1)

NAME

`man` - an interface to the system reference manuals

SYNOPSIS

`man` [`man options`] [[`section`] `page` ...] ...

`man -k` [`apropos options`] `regexp` ...

`man -K` [`man options`] [`section`] `term` ...

`man -f` [`whatis options`] `page` ...

`man -l` [`man options`] `file` ...

`man -w|-W` [`man options`] `page` ...

DESCRIPTION

`man` is the system's manual pager. Each `page` argument given to `man` is normally the name of a program, utility or function. The `manual page` associated with each of these arguments is then found and displayed. A `section`, if provided, will direct `man` to look only in that `section` of the manual. The default action is to search in all of the available

whatis. E.g.

```
whatismain ~ whatis  
whatis (1) - display one-line manual page descriptions
```

```
whatismain ~ man whatis ✓
```

```
WHATIS(1) Manual pager utils WHATIS(1)  
NAME  
whatis - display one-line manual page descriptions
```

Bash Help GUI Program

Program Objectives:

- Collect all the bash commands using compgen
- Clean up the list and convert to a dictionary
- Launch a GUI and place the dictionary in the tree.

Upon selection of an item in the tree, display in a Text viewer:

whatis description

-h information

—help information

man pages

- Also provide a search field

Bash Help GUI Program

Program Versions available:



`bash-help-gui-gtk3.py`



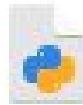
`bash-help-gui-gtk3-search.py`



`bash-help-gui-gtk4.py`



`bash-help-gui-gtk4-search.py`



`bash-help-gui-qt5.py`



`bash-help-gui-qt5-search.py`



`bash-help-gui-qt6.py`



`bash-help-gui-qt6-search.py`

Bash Help GUI Program

Repository: <https://github.com/WLUG/meetings/tree/master/2022/2022-08-22/ian>

Bash Help GUI Program

Demo program