

PROJECT 2 - SHELL SCRIPTING

CPSC 254 - Fall 2015

Thao Nguyen

CWID: 890848781

October 5, 2015

1. Your script's source code

```
nptjr29@nptjr29:~/Project2$ cat mytree
#!/bin/bash
olddir=$PWD;
declare -i numDir=0;
declare -i numFiles=0;
declare -i dirDepth=0;

function listfolders
{
    cd "$1";
    for file in *
    do
        for (( i = 0; $i < $dirDepth; i++))
        do
            if [ -d "$file" ]
            then
                echo -n -e "\t";
            fi
        done
        if [ -d "$file" ]
        then
            echo -e "|--$file";
            numDir=$numDir+1;
        fi
    done
    dirDepth=$dirDepth-1;
}

function listfiles {
    cd "$1";
    for file in *
    do
        for (( i = 0; $i < $dirDepth; i++ ))
        do
            echo -n -e "\t";
        done
        if [ -d "$file" ]
        then
            echo -e "|--$file";
            numDir=$numDir+1;
        else
            echo -e "|--$file";
            numFiles=$numFiles+1;
        fi
        if [ -d "$file" ]
        then
            dirDepth=$dirDepth+1;
            listfiles "$file";
            cd ..;
        fi
    done
    dirDepth=$dirDepth-1;
}

if [[ "$1" == -d ]]
then
    listfolders "$2";
    echo "There are $numDir folders."
elif [[ "$1" == --help ]]
then
    echo "-----Usage information for mytree command-----"
    echo
    echo "Description: This command lists out a tree-like diagram showing the contents of a directory,
and the contents of any of those subdirectories, and so on."
    echo
    echo "Syntax: mytree takes a start directory as a parameter."
    echo "  To list out the contents of any directory, simply type ./mytree [directory]"
    echo "  To list out only the subdirectories of any directory, type ./mytree -d [directory]"
    echo "  To view the usage information of mytree, type ./mytree --help"
else
    listfiles "$1";
    echo "There are $numDir folders and $numFiles files."
fi

cd $olddir;

nptjr29@nptjr29:~/Project2$
```

2. The output of `tree /etc/gdm`

```
nptjr29@nptjr29:~/Project2$ tree /etc/gdm
/etc/gdm
├── config-error-dialog.sh
├── custom.conf
├── greeter.gsettings
├── Init
│   └── Default
├── PostLogin
│   └── Default.sample
├── PostSession
│   └── Default
├── PreSession
│   └── Default
└── Xsession

4 directories, 8 files
nptjr29@nptjr29:~/Project2$
```

3. The output of `mytree /etc/gdm`

```
nptjr29@nptjr29:~/Project2$ ./mytree /etc/gdm
|--config-error-dialog.sh
|--custom.conf
|--greeter.gsettings
|--Init
|   |--Default
|--PostLogin
|   |--Default.sample
|--PostSession
|   |--Default
|--PreSession
|   |--Default
|--Xsession
There are 4 folders and 8 files.
nptjr29@nptjr29:~/Project2$
```

4. The output of `mytree --help`

```
nptjr29@nptjr29:~/Project2$ ./mytree --help
-----Usage information for mytree command-----

Description: This command lists out a tree-like diagram showing the contents of a directory, and the contents of any of those subdirectories, and so on.

Syntax: mytree takes a start directory as a parameter.
        To list out the contents of any directory, simply type ./mytree [directory]
        To list out only the subdirectories of any directory, type ./mytree -d [directory]
        To view the usage information of mytree, type ./mytree --help
nptjr29@nptjr29:~/Project2$
```

5. The output of `mytree -d /etc/X11`

```
nptjr29@nptjr29:~/Project2$ ./mytree -d /etc/X11
|--app-defaults
|--cursors
|--fonts
    |--misc
    |--Type1
|--xinit
|--xkb
|--Xreset.d
|--Xresources
|--Xsession.d
|--xsm
There are 11 folders.
nptjr29@nptjr29:~/Project2$
```

6. The output of `mytree -d /var/lib`

```
nptjr29@nptjr29:~/Project2$ ./mytree -d /var/lib
|--AccountsService
|   |--icons
|   |--users
|--acpi-support
|--alsa
|--apparmor
|   |--profiles
|--apt
|   |--keyrings
|   |--lists
|       |--partial
|   |--mirrors
|       |--partial
|   |--periodic
|--apt-xapian-index
|--aspell
|--avahi-autoipd
|--belocs
|--bluetooth
|--colord
|   |--icc
|--dbus
|--dhcp
|--dictionaries-common
|   |--aspell
|   |--hunspell
|   |--wordlist
|--doc-base
|   |--documents
|   |--info
|   |--onf
|--dpkg
|   |--alternatives
|   |--info
|   |--parts
|   |--triggers
|   |--updates
|--flashplugin-installer
|--gconf
|   |--debian.defaults
|   |--debian.mandatory
|   |--defaults
|--gdm
|   |--CMap
|   |--fonts
|--hp
|--initramfs-tools
|--initscripts
|--insserv
|--libreoffice
|   |--share
|       |--prereg
|       |--bundled
|--libuuid
|--lightdm [error opening dir]
|--lightdm-data
|   |--lightdm [error opening dir]
|   |--nptjr29
|--locales
|   |--supported.d
|--logrotate
|--man-db
|--misc
|--mlocate
|--NetworkManager
|--nssdb
|--ntpdate
|--os-prober
|--pan
|--plymouth
|--pn-utils
|--polkit-1 [error opening dir]
|--pulseaudio
|--python
|--rftkill
|--samba
|   |--private
|--sgml-base
|--snmp
|--sudo [error opening dir]
|--systemd
|   |--deb-systemd-helper-enabled
|       |--multi-user.target.wants
|       |--sockets.target.wants
|       |--sysinit.target.wants
|--ubiquity
|--ubuntu-drivers-common
|--ubuntu-release-upgrader
|--ucf
|   |--cache
|--udisks2 [error opening dir]
|--update-manager
|--update-notifier
|   |--package-data-downloads
|   |--user.d
|--update-rc.d
|--upower
|--urandom
|--ureadahead
|   |--debugfs
|--usb_modeswitch
|--usbutils
|--vim
|   |--addons
|--xfonts
|--xkb
|--xml-core
There are 108 folders.
nptjr29@nptjr29:~/Project2$
```