

Assignment 1 Report

STUDIO 1

ASPEN THOPSON, 1862679

Design and Implementation Rationale

Git utility – agit

This is a shortcut utility for git. It is used by calling agit with a command, help, add, branch, and revert. Add commits and pushes a file to the repo with a given file name and an optional message. Branch moves to master, pulls from origin, then creates a new branch of master, with a given name. Revert undoes changes to a passed file made since the last commit.

Mass name changer – chext

This changes all file extensions for files in a directory. It defaults to the current directory but can be changed using --directory "directory". Then, an input file extension must be given, or --all to change all files, and an output file extension, or --strip to remove file extensions. It then changes all matching input files to have the output file extension.

Testing

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ ls ~/.waste
ls: cannot access '/home/aspen/.waste': No such file or directory
aspen@GLORIA:/mnt/c/projects/uni/studio1$ touch test
aspen@GLORIA:/mnt/c/projects/uni/studio1$ listwaste
listwaste: command not found
aspen@GLORIA:/mnt/c/projects/uni/studio1$ listwaste.sh
Waste is empty.
aspen@GLORIA:/mnt/c/projects/uni/studio1$ emptywaste.sh
aspen@GLORIA:/mnt/c/projects/uni/studio1$ wastesize.sh
Files in waste: 0
```

Waste directory is created if it doesn't exist, commands work with an empty bin.

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ del.sh test
aspen@GLORIA:/mnt/c/projects/uni/studio1$ ls
agit.sh  chext.sh  chmx.sh  del.sh  emptywaste.sh  listwaste.sh  lshead.sh  masher.sh  wastesize.sh
aspen@GLORIA:/mnt/c/projects/uni/studio1$ ls ~/.waste
test
aspen@GLORIA:/mnt/c/projects/uni/studio1$ wastesize
wastesize: command not found
aspen@GLORIA:/mnt/c/projects/uni/studio1$ wastesize.sh
Files in waste: 1
aspen@GLORIA:/mnt/c/projects/uni/studio1$ listwaste.sh
Size    File Name
0       test
aspen@GLORIA:/mnt/c/projects/uni/studio1$ echo "eshotaysehntasteyatoastn" > testfile
```

Del, wastesize and listwaste working.

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ del.sh testfile
aspen@GLORIA:/mnt/c/projects/uni/studio1$ del.sh
Please give a file to delete.
aspen@GLORIA:/mnt/c/projects/uni/studio1$ del.sh .
Cannot delete .: Is a directory.
aspen@GLORIA:/mnt/c/projects/uni/studio1$ listwaste.sh
Size    File Name
0       test
25      testfile
25      total
aspen@GLORIA:/mnt/c/projects/uni/studio1$ wastesize.sh
Files in waste: 2
aspen@GLORIA:/mnt/c/projects/uni/studio1$ emptywaste.sh
aspen@GLORIA:/mnt/c/projects/uni/studio1$ listwaste.sh
Waste is empty.
aspen@GLORIA:/mnt/c/projects/uni/studio1$ wastesize.sh
Files in waste: 0
aspen@GLORIA:/mnt/c/projects/uni/studio1$ emptywaste.sh
aspen@GLORIA:/mnt/c/projects/uni/studio1$
```

Del working on a file, but not when passed no argument or a directory. Listwaste and wastesize work with multiple files, and emptywaste works correctly.

Del is unable to handle multiple files with the same name in the waste bin, nor is it able to store where the file originated for restoration.

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ lshead.sh -h 3
## ./agit.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Shortcuts a number of git tasks.

## ./chext.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Takes an input file extension and changes all files to another extension.

## ./chmx.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Make a file executable

## ./del.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Moves a file to a wastebin

## ./emptywaste.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Removes everything from the wastebin, including the wastebin directory

## ./listwaste.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# List the contents and size of each file within the wastebin

## ./lshead.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# List the first or last lines of all files in a directory

## ./masher.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Counts the number of characters given until a specific character is inputted
```

Lshead showing the top 3 lines

```
aspen@GLORIA:/mnt/c/projects/uni/studio1
## ./masher.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Counts the number of characters given until a specific character is inputted
## ./wastesize.sh ##
#!/bin/bash
# Aspen Thompson, u1862679@hud.ac.uk
# Gets the number of files in the waste directory
aspen@GLORIA:/mnt/c/projects/uni/studio1$ lshead.sh -t 1
## ./agit.sh ##

## ./chext.sh ##

## ./chmx.sh ##

## ./del.sh ##

## ./emptywaste.sh ##
rm -rf ~/.waste
## ./listwaste.sh ##
fi
## ./lshead.sh ##

## ./masher.sh ##
echo "Other characters (including control character):" $other
## ./wastesize.sh ##
aspen@GLORIA:/mnt/c/projects/uni/studio1$
```

Lshead showing bottom line of every file.

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ lshead.sh -d nn
Invalid directory given.
aspen@GLORIA:/mnt/c/projects/uni/studio1$
```

Lshead with an invalid directory.

```
aspen@GLORIA:/mnt/c/projects/uni/studio1$ masher.sh
Takes an argument, and asks for more input until a control character (*) is entered.
Outputs the count of letters, digits, and other characters entered.
aspen@GLORIA:/mnt/c/projects/uni/studio1$ masher.sh oasntiohip
Input a string, include * to finish: npudrt90d093
Input a string, include * to finish: snhtos*sneht
Total length: 29
Letters input: 23
Digits input: 5
Other characters (including control character): 1
aspen@GLORIA:/mnt/c/projects/uni/studio1$
```

Masher working as expected, including ignoring input after the control character.