

dc_shell

Testing



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February 5th, 2022

Test Results	2
Examples	3
Startup	3
newline	4
pwd	4
cd ..	4
cd ~	5
cd /	5
cd	5
mkdir -p foo/bar	5
cd foo/bar	6
ls -a -l	6
ls -al > a.txt	6
cat a.txt	6
cat < a.txt	7
cat < a.txt > b.txt	7
cat b.txt	8
cat < a.txt >> b.txt	8
ls -al	9
cat b.txt	9
cd b.txt	9
cd ../../	9
rm -rf foo	9
cd foo	9
ls foo 2>err.txt	10
cat err.txt	10
ls > ~/out.txt	10
cat out.txt	10
./a.out	10
gcc hello.c	10
./a.out	11
Unknown command	11
Invalid command	11
Exit	11

Test Results

Command	Description	Status	Example
<newline>	Empty command just goes back to read another command	Passed	Example 1
pwd	Print the working directory	Passed	Example 2
cd ..	Go back a directory	Passed	Example 3
cd ~	Go to the home directory	Passed	Example 4
cd /	Go to the root directory	Passed	Example 5
cd	Go to the home directory	Passed	Example 6
mkdir -p foo/bar	Make a directory	Passed	Example 7
cd foo/bar	Go to the new directory	Passed	Example 8
ls -a -l	List all of the files	Passed	Example 9
ls -al > a.txt	List all of the files to a file	Passed	Example 10
cat a.txt	Print the file	Passed	Example 11
cat < a.txt	Print stdin via a redirect	Passed	Example 12
cat < a.txt > b.txt	Print stdin and write it to a file	Passed	Example 13
cat b.txt	Print the file	Passed	Example 14
cat < a.txt >> b.txt	Print stdin and append it to a file	Passed	Example 15
ls -al	List the files to see that one is bigger than the other	Passed	Example 16
cat b.txt	Print the file to ensure that the data is printed twice	Passed	Example 17
cd b.txt	cd into a directory that is a file	Passed	Example 18
cd ../../	Go back 2 directories	Passed	Example 19
rm -rf foo	Remove the directory that was created	Passed	Example 20
cd foo	cd into a directory that does not exist	Passed	Example 21
ls foo 2>err.txt	Print a file that does not exist and redirect stderr to a file	Passed	Example 22

cat err.txt	Print the file	Passed	Example 23
ls > ~/out.txt	Print a file that exists in the users home directory	Passed	Example 24
cat out.txt	Print a file that exists in the users home directory	Passed	Example 25
./a.out	Run a command that does not exist	Passed	Example 26
gcc hello.c	Compile a program	Passed	Example 27
./a.out	Run the program without searching the PATH	Passed	Example 28
adasdasda	Run a command that does not exist	Passed	Example 29
;s	Enter an invalid command	Passed	Example 30
exit	Exit the shell	Passed	Example 31

Examples

Startup

```
raith@raith-XPS-15-9500:~$ ./dc_shell
[/home/raith] $
[/home/raith] $
```

newline

```
raith@raith-XPS-15-9500:~$ ./dc_shell  
[/home/raith] $  
[/home/raith] $  
[/home/raith] $ █
```

Pwd

```
[/home/raith] $ pwd  
/home/raith  
0  
[/home/raith] $ █
```

cd ..

```
[/home/raith] $ cd ..  
0  
[/home] $ █
```

cd ~

```
[/home] $ cd ~  
0  
[/home/raith] $
```

cd /

```
[/home/raith] $ cd /  
0  
[/] $
```

cd

```
[/] $ cd  
0  
[/home/raith] $
```

mkdir -p foo/bar

```
[/home/raith] $ mkdir -p foo/bar  
0  
[/home/raith] $
```

cd foo/bar

```
[/home/raith] $ cd foo/bar
0
[/home/raith/foo/bar] $
```

ls -a -l

```
[/home/raith/foo/bar] $ ls -a -l
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:10 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
0
[/home/raith/foo/bar] $
```

ls -al > a.txt

```
[/home/raith/foo/bar] $ ls -al > a.txt
0
[/home/raith/foo/bar] $
```

cat a.txt

```
[/home/raith/foo/bar] $ cat a.txt
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:28 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith    0 Feb  5 20:28 a.txt
0
[/home/raith/foo/bar] $
```

cat < a.txt

```
[/home/raith/foo/bar] $ cat < a.txt
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:28 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith    0 Feb  5 20:28 a.txt
0
[/home/raith/foo/bar] $
```

cat < a.txt > b.txt

```
[/home/raith/foo/bar] $ cat < a.txt > b.txt
0
[/home/raith/foo/bar] $
```

cat b.txt

```
[/home/raith/foo/bar] $ cat b.txt
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:28 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith    0 Feb  5 20:28 a.txt
0
[/home/raith/foo/bar] $
```

cat < a.txt >> b.txt

```
[/home/raith/foo/bar] $ cat < a.txt >> b.txt
0
[/home/raith/foo/bar] $
```


ls -al

```
[/home/raith/foo/bar] $ ls -al
total 16
drwxrwxr-x 2 raith raith 4096 Feb  5 20:30 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith  148 Feb  5 20:28 a.txt
-rw-r--r-- 1 raith raith  296 Feb  5 20:31 b.txt
0
[/home/raith/foo/bar] $
```

cat b.txt

```
[/home/raith/foo/bar] $ cat b.txt
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:28 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith    0 Feb  5 20:28 a.txt
total 8
drwxrwxr-x 2 raith raith 4096 Feb  5 20:28 .
drwxrwxr-x 3 raith raith 4096 Feb  5 20:10 ..
-rw-r--r-- 1 raith raith    0 Feb  5 20:28 a.txt
0
[/home/raith/foo/bar] $
```

cd b.txt

```
[/home/raith/foo/bar] $ cd b.txt
cd: Not a directory: b.txt
1
[/home/raith/foo/bar] $
```

cd ../../

```
[/home/raith/foo/bar] $ cd ../../
0
[/home/raith] $
```

rm -rf foo

```
[/home/raith] $ rm -rf foo
0
[/home/raith] $
```

cd foo

```
[/home/raith] $ cd foo
cd: No such file or directory: foo
1
[/home/raith] $
```

ls foo 2>err.txt

```
[/home/raith] $ ls foo 2>err.txt
command: ls: not found
2
[/home/raith] $
```

cat err.txt

```
[/home/raith] $ cat err.txt
/usr/bin/ls: cannot access 'foo': No such file or directory
0
[/home/raith] $
```

ls > ~/out.txt

```
[/home/raith] $ ls > ~/out.txt
0
[/home/raith] $
```

cat out.txt

```
[/home/raith] $ cat out.txt
dcdump
dc_scripts
dc_shell
Desktop
Documents
Downloads
err.txt
gcc
install.py
Music
out.txt
Pictures
Public
snap
Templates
Videos
work
0
[/home/raith] $
```

./a.out

```
[/home/raith] $ ./a.out
command: ./a.out: not found
127
[/home/raith] $
```

gcc hello.c

For this test I created a C file in my home directory called hello.c

```
1  #include <stdio.h>
2  int main() {
3      // printf() displays the string inside quotation
4      printf("Hello, World!");
5      return 0;
6  }
```

```
[/home/raith] $ gcc hello.c
0
[/home/raith] $
```

./a.out

```
[/home/raith] $ ./a.out
Hello, World!
0
[/home/raith] $
```

Unknown command

```
[/home/raith] $ adasdasda
command: adasdasda: not found
127
[/home/raith] $
```

Invalid command

```
[/home/raith] $ ;s
unable to parse ";s"
internal error (2) Unquoted character in wordexp: ";s"
raith@raith-XPS-15-9500:~$
```

Exit

```
raith@raith-XPS-15-9500:~$ ./dc_shell
[/home/raith] $ exit
raith@raith-XPS-15-9500:~$
```