

CS 32, Spring 2013  
HW2: 50 total points

Print this form, staple loose pages together, and write your answers on it.

Accepted: script by `turnin` before your lab section on Wednesday, April 24,  
plus this paper at the beginning of your lab section on April 24.  
No email submission allowed.

Name (1 pt): \_\_\_\_\_

Umail (1 pt): \_\_\_\_\_@umail.ucsb.edu

Lab Section (1 pt) Circle one:                    1:00                    2:00                    3:00

Add the following features to the `lw` script from Lab02. For each one, either place a check mark on the line if you (and your partner) successfully incorporated that feature, or write a brief explanation in the space instead.

1. (10 pts.) Add a usage direction to the user. Display it if the user does not enter any command line arguments. Also exit, signaling 1 (error value) to the operating system (`exit 1`). Results should match the following:

```
bash-4.2$ ./lw
usage: ./lw DirectoryName
bash-4.2$ echo $?
1
```

By the way, use `$0` to print the script name properly in the usage message.

#1 done: \_\_\_\_\_  
(check, or say why not)

2. (27 pts. - 9 each) Add the following error checks/messages as instructed.

a. Verify the file exists. Match this error message and exit code:

```
bash-4.2$ ./lw nonsense
there is no directory named nonsense
bash-4.2$ echo $?
2
```

#2a. done: \_\_\_\_\_

b. Verify the file is readable. Match this message and exit code:

```
bash-4.2$ ./lw /root
you do not have permission to read /root
bash-4.2$ echo $?
3
```

#2b. done: \_\_\_\_\_

c. Verify the file is a directory. Match this message and exit code:

```
bash-4.2$ ./lw lw
lw is not a directory
bash-4.2$ echo $?
4
```

#2c. done: \_\_\_\_\_

3. (10 pts.) Enhance the information printed when a run is successful, as in the following sample runs:

```
bash-4.2$ whoami
cs32
bash-4.2$ ./lw ~/labs
items in /cs/class/cs32/labs that are writable by cs32:
  lab01: directory
  lab02: directory
bash-4.2$ ./lw /
items in / that are writable by cs32:
  tmp: sticky directory
bash-4.2$ echo $?
0
```

Clarification/hints for problem 3:

- (a) Precede the list with a message that includes the full name of the directory, not the argument string, and includes the \$USER string.
- (b) Use the file command (`file $1`) to print the writable file names along with their types - indented 3 spaces from the left in the list of files.
- (c) The default exit code is 0.

#3 done: \_\_\_\_\_

End of Hw2

Turn-in instructions:

- A. Use the turnin program to submit the lw script as follows:

```
turnin hw2@cs32 lw
```

If you worked with a partner, then just turn in one copy for both of you, and enter your partner's name on the following line:

\_\_\_\_\_

- B. Each student must turn in this completed paper at your next lab.