CS105 Program Assignment #2
Old School Archive

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1 Goals

This assignment is aimed to get you experience with shell scripting and navigating the UNIX environment. In the olden days (back when Darrell was a wee lad), email was less sophisticated and could only transmit text. This meant that you couldn't email .tar archives, or binaries, or any non-text files to your friends. In tribute to our predecessors, you will write a self extracting archive script that can be used to concatenate the contents of a directory so that they can be emailed directly from the command line.

2 Assignment Specifications

You will be writing a shell script (.sh) that will bundle up a list of files and/or directories and output their contents to stdout. If there is a directory, then it will recursively traverse each subdirectory. If the file is not ASCII (if it's a binary), you will preform uuencode on it. This archive should be self extracting, meaning it must emit the shell commands that will that will extract the files and preserve their name and location in the directory hierarchy.

The recommended way to do this is by flagging the beginning of each line of a file with an 'X':

```
X                       The Sleuth Kit
X                        README File
X                   ...shortened for this example
X
```

This way you can use sed to extract the contents of a file.

3 Output

Your output should look something like this:

```
> ls
ping  README.txt  testsubdir
> cd testsubdir/
> ls
recursive_test.txt
>  ./arch.sh ../testdir/ > bundle
> head bundle
:
```

```
# This SHAR archive was created on Tue Oct  8 10:17:16 PDT 2013.
#
# This achive contains the following file(s).
#
# testdir
#
if test -f testdir
then
echo "That would clobber testdir!"
> mkdir archtest
> cd archtest/
> mv ../bundle .
> ls
bundle
> sh bundle
X - ping
-rw-rw-r-- 1 erik erik 35712 Oct  5 10:18 ping
X - README.txt
-rw-rw-r-- 1 erik erik 157 Oct  5 10:18 README.txt
X - recursive_test.txt
-rw-rw-r-- 1 erik erik 55 Oct  5 10:18 recursive_test.txt
> ls
bundle  testdir
> cd testdir/
> ls
README.txt  testsubdir ping
> cd testsubdir/
> ls
recursive_test.txt
```

4 Suggested tools

- bash

- echo

- cd

- mkdir

- sed

- uuencode

5 Hints

Just as you did on your last assignment, break this assignment up into small pieces, test each piece to make sure it works before adding it to your final program.