

Testing with testdir and ss.png final.c is the one with the main program

1) State of the folder before archiving

```
[at4535@DCLAP-V1156-CSD:~/os_project4$ ls -l
total 108
-rw-rw-r-- 1 at4535 at4535  468 May 12 16:54 README.md
-rwxrwxr-x 1 at4535 at4535 22680 May 12 16:56 final
-rw-rw-r-- 1 at4535 at4535  7962 May 12 16:54 final.c
-rw-rw-r-- 1 at4535 at4535  7680 May 12 16:56 final.o
-rw-rw-r-- 1 at4535 at4535 14805 May 12 16:54 functions.c
-rw-rw-r-- 1 at4535 at4535  2821 May 12 16:54 functions.h
-rw-rw-r-- 1 at4535 at4535 13744 May 12 16:56 functions.o
-rw-rw-r-- 1 at4535 at4535   189 May 12 16:54 makefile
-rw-rw-r-- 1 at4535 at4535 18673 May 12 16:54 ss.png
drwxrwxr-x 3 at4535 at4535  4096 May 11 23:01 testdir
[at4535@DCLAP-V1156-CSD:~/os_project4$
```

2) Going into the test dir

```
[at4535@DCLAP-V1156-CSD:~/os_project4$ cd testdir
[at4535@DCLAP-V1156-CSD:~/os_project4/testdir$ ls -l
total 8
drwxrwxr-x 2 at4535 at4535 4096 May 12 16:58 subdir
-rw-rw-r-- 1 at4535 at4535 2701 May 12 16:54 test.c
[at4535@DCLAP-V1156-CSD:~/os_project4/testdir$ cd subdir
[at4535@DCLAP-V1156-CSD:~/os_project4/testdir/subdir$ ls -l
total 8
-rw-rw-r-- 1 at4535 at4535   42 May 12 16:54 hello.txt
-rw-rw-r-- 1 at4535 at4535 2799 May 12 16:54 tatat.c
```

3) Incorrect command line parameters

```
[h13937@DCLAP-V1156-CSD:~/src$ ls
final.c functions.c functions.h makefile testDir text.txt
[h13937@DCLAP-V1156-CSD:~/src$ make
gcc -c final.c -o final.o
In file included from final.c:13:0:
functions.h:66:79: warning: 'struct FTW' declared inside parameter list will not be visible outside of this definition or declaration
    int removeFile(const char *path, const struct stat *statBuf, int type, struct FTW *ftwBuf);
                                                ^~~~~
gcc -c functions.c -o functions.o
gcc final.o functions.o -o final
[h13937@DCLAP-V1156-CSD:~/src$ ./final -y adzip.ad testDir
Invalid command option: -y
[h13937@DCLAP-V1156-CSD:~/src$ ./final -y adzip testDir
Invalid command option: -y
[h13937@DCLAP-V1156-CSD:~/src$ ./final -c adzip testDir
Invalid archive file: adzip
```

4) Creating the new archive.ad file from test dir using -c and using -p and -m and a to append ss.png to the archive and then using -x to extract

```
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -c archive.ad testdir
Created archive.ad
at4535@DCLAP-V1156-CSD:~/os_project4$ ls -l
total 120
-rw-rw-r-- 1 at4535 at4535 468 May 12 16:54 README.md
-rw-rw-r-- 1 at4535 at4535 11970 May 12 17:00 archive.ad
-rwxrwxr-x 1 at4535 at4535 22680 May 12 16:57 final
-rw-rw-r-- 1 at4535 at4535 7962 May 12 16:54 final.c
-rw-rw-r-- 1 at4535 at4535 7680 May 12 16:57 final.o
-rw-rw-r-- 1 at4535 at4535 14805 May 12 16:54 functions.c
-rw-rw-r-- 1 at4535 at4535 2821 May 12 16:54 functions.h
-rw-rw-r-- 1 at4535 at4535 13744 May 12 16:57 functions.o
-rw-rw-r-- 1 at4535 at4535 189 May 12 16:54 makefile
-rw-rw-r-- 1 at4535 at4535 18673 May 12 16:54 ss.png
drwxrwxr-x 3 at4535 at4535 4096 May 11 23:01 testdir
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -p archive.ad
testdir
testdir/subdir
testdir/subdir/tatat.c
testdir/subdir/hello.txt
testdir/test.c
testdir/.DS_Store
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -m archive.ad
archive.ad: Metadata Information
File Name: testdir, File Size:4096, File GID:1029, File UID:1029, File Mime: 2023-05-11 23:01:09 File Mode: drwxrwxr-x
File Name: testdir/subdir, File Size:4096, File GID:1029, File UID:1029, File Mime: 2023-05-12 16:58:41 File Mode: drwxrwxr-x
File Name: testdir/subdir/tatat.c, File Size:2799, File GID:1029, File UID:1029, File Mime: 2023-05-12 16:54:54 File Mode: -rw-rw-r--
File Name: testdir/subdir/hello.txt, File Size:42, File GID:1029, File UID:1029, File Mime: 2023-05-12 16:54:54 File Mode: -rw-rw-r--
File Name: testdir/test.c, File Size:2701, File GID:1029, File UID:1029, File Mime: 2023-05-12 16:54:53 File Mode: -rw-rw-r--
File Name: testdir/.DS_Store, File Size:6148, File GID:1029, File UID:1029, File Mime: 2023-05-12 16:54:53 File Mode: -rw-rw-r--
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -a archive.ad ss.png
Appended to archive.ad
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -p archive.ad
testdir
testdir/subdir
testdir/subdir/tatat.c
testdir/subdir/hello.txt
testdir/test.c
testdir/.DS_Store
ss.png
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -x archive.ad
Usage: ./final {-c|-a|-x|-m|-p} <archive-file>
at4535@DCLAP-V1156-CSD:~/os_project4$ ./final -x archive.ad
Extracted archive.ad to folder named extract
```

5) Looking at the folders after extracting - extract is created then we go in the extract folder

4.1)

```
at4535@DCLAP-V1156-CSD:~/os_project4$ ls -l
total 144
-rw-rw-r-- 1 at4535 at4535 468 May 12 16:54 README.md
-rw-rw-r-- 1 at4535 at4535 30678 May 12 17:01 archive.ad
drwx----- 3 at4535 at4535 4096 May 12 17:01 extract
-rwxrwxr-x 1 at4535 at4535 22680 May 12 16:57 final
-rw-rw-r-- 1 at4535 at4535 7962 May 12 16:54 final.c
-rw-rw-r-- 1 at4535 at4535 7680 May 12 16:57 final.o
-rw-rw-r-- 1 at4535 at4535 14805 May 12 16:54 functions.c
-rw-rw-r-- 1 at4535 at4535 2821 May 12 16:54 functions.h
-rw-rw-r-- 1 at4535 at4535 13744 May 12 16:57 functions.o
-rw-rw-r-- 1 at4535 at4535 189 May 12 16:54 makefile
-rw-rw-r-- 1 at4535 at4535 18673 May 12 16:54 ss.png
drwxrwxr-x 3 at4535 at4535 4096 May 11 23:01 testdir
at4535@DCLAP-V1156-CSD:~/os_project4$
```

4.2) going in the extract folder

```
at4535@DCLAP-V1156-CSD:~/os_project4$ cd extract
at4535@DCLAP-V1156-CSD:~/os_project4/extract$ ls -l
total 24
-rw-rw-r-- 1 at4535 at4535 18673 May 12 17:01 ss.png
drwxrwxr-x 4 at4535 at4535 4096 May 12 17:01 testdir
at4535@DCLAP-V1156-CSD:~/os_project4/extract/testdir$ ls -l
total 8
drwxrwxr-x 2 at4535 at4535 4096 May 12 17:01 subdir
-rw-rw-r-- 1 at4535 at4535 2701 May 12 17:01 test.c
```

```
at4535@DCLAP-V1156-CSD:~/os_project4/extract$ cd testdir
at4535@DCLAP-V1156-CSD:~/os_project4/extract/testdir$ ls -l
total 8
drwxrwxr-x 2 at4535 at4535 4096 May 12 17:01 subdir
-rw-rw-r-- 1 at4535 at4535 2701 May 12 17:01 test.c
at4535@DCLAP-V1156-CSD:~/os_project4/extract/testdir$ cd subdir
at4535@DCLAP-V1156-CSD:~/os_project4/extract/testdir/subdir$ ls -l
total 8
-rw-rw-r-- 1 at4535 at4535  42 May 12 17:01 hello.txt
-rw-rw-r-- 1 at4535 at4535 2799 May 12 17:01 tatat.c
```