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Q1: (20 points) Explain what commands you used to set all this up.

(1) Create a file called "realityFile" containing a few lines of text.

> $ *nano realityFile*
> lines of text: "This is realityFile file for Cpts224"

(2) Create a normal (hard) link to "realityFile" and call it "hardRealityFile".

To create a hard link, I will use ln tool.
> *$ ln realityFile hardRealityFile*

(3) Create a soft (symbolic) link to realityFile and call it "softRealityFile".

To create a symbolic links in Linux, I will use ln tool with -s switch
> $ ln -s -/bin/realityFile/softRealityFile

(4) Create a copy of file "realityFile" and call it "copyRealityFile".

> $ cp realityFile copyRealityFile

Q2: (10 points) Give the output of *ls –l* on each file? Make some changes to the text in "realityFile". And then give the output of *ls –l* on each file? Explain how they are different.

Output of ls -l on each file (before and after respectively)

note * $ *nano realityFile*
> lines of text (after changed): "realityFile file for Cpts224"

```
$  ls -l realityFile
-rw-r--r-- 3 mrodrig1 mrodrig1 38 Sep 24 17:24 realityFile
-rw-r--r-- 3 mrodrig1 mrodrig1 30 Sep 24 17:43 realityFile
```

```
$ ls -l hardRealityFile
-rw-r--r-- 3 mrodrig1 mrodrig1 38 Sep 24 17:24 hardRealityFile
-rw-r--r-- 3 mrodrig1 mrodrig1 30 Sep 24 17:43 hardRealityFile
```

$ ls-l softRealityFile
lrwxrwxrwx 1 mrodrig1 mrodrig1 40 Sep 24 17:37 softRealityFile -> /
net/ugrads/mrodrig1/pvt/bin/realityFile
lrwxrwxrwx 1 mrodrig1 mrodrig1 40 Sep 24 17:37 softRealityFile -> /
net/ugrads/mrodrig1/pvt/bin/realityFile

$ ls -l copyRealityFile
-rw-r--r-- 1 mrodrig1 mrodrig1 38 Sep 24 17:39 copyRealityFile
-rw-r--r-- 1 mrodrig1 mrodrig1 38 Sep 24 17:39 copyRealityFile

Conclusions:
The only outputs that changed was the original realityFile and the hardRealityFile

Q3: (10 points) What is the inode number of each file? (You can get the inode number with *ls –i)*

$ ls -i realityFile
7531062 realityFile

$ ls -i hardRealityFile
7531062 hardRealityFile

$ ls -i softRealityFile
7531065 softRealityFile

$ ls -i copyRealityFile
7531066 copyRealityFile

Q4: (10 points) Use the *file* command and record what type of file each is. Explain any differences.

realityFile: ASCII text
hardRealityFile: ASCII text
softRealityFile: broken symbolic link to `/net/ugrads/mrodrig1/pvt/
bin/realityFile'
copyRealityFile: ASCII text

A hard link then just creates another file with a link to the same underlying inode. showing us the same 'kind' of file, txt. While the symbolic link is a link to another name in the file system. In this case is broken.

Q5: (10 points) Make "hardRealityFile" readable, writeable, executable by you, but not readable, writeable, executable by anyone else. What command you used to do this.

chmod command
```
$ chmod 600 hardRealityFile
```

Q6: (10 points) What is the permission of "realityFile" before and after you do Q5? How they are different? Why?

```
-rw------- 3 mrodrig1 mrodrig1 30 Sep 24 17:43 realityFile
```

It show us "realityFile" has road and write permissions but not executable permission. rxw represents to the owner.

Q7: (10 points) *cat* each file. Are the results the same for each file?

```
realityFile File for CPTS224
realityFile File for CPTS224
THIS IS realityFile File for CPTS224
```

```
no, only for the original file and harRealityFile
```

Q8: (10 points) Make some changes to the text in "softRealityFile". Explain what happened to the file size of "hardRealityFile", "realityFile", and "softRealityFile".

Modifications made in the link changed the original file "realityFile", and the rest by consequence.

Q9: (10 points) Move "realityFile" to "realityFile1". What is the output of ls -l. Explain what happened to "softRealityFile", copyRealityFile, and "hardRealityFile" (consider link count and inode number).

What is doing is making a copy.
inode number
 ls -i softRealityFile
```
ls: cannot access softRealityFile: Too many levels of symbolic links
```