

NAME: _____

COLLABORATOR(S): _____

1. Read *Origins and History of Unix*: Who were the inventors of Unix? What was the motivation between the projects when considering batch computing?

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2. What are the three components of a Unix system? Provide an example of the interaction from a user perspective down to the hardware and back up.

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3. According to *APUE*, what does an operating system consist of, in a "broad sense"?

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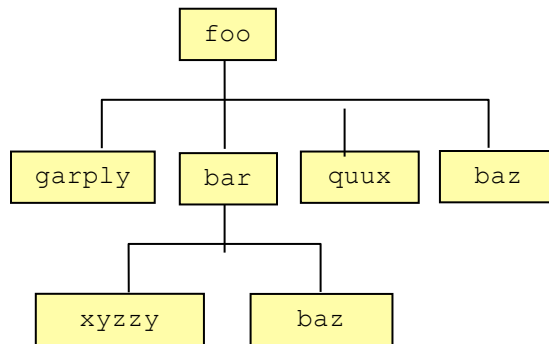
4. In the Unix File System hierarchy, match the location of the item to its directory path

- _____ Essential Command Binaries
- _____ The Kernel
- _____ System Binaries generally run by the super user or administrator
- _____ Standard Unix System Resources
- _____ Library files for Binaries

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5. Consider the following file system hierarchy and the path:
/foo/bar/../../quux/../../baz/../../bar/../../baz

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- (a) Circle the item that the path refers to.
- (b) Draw arrows indicating the items that are being referenced.

6. Assume you are in your home directory, and you want to create a directory structure and files that looks like this:

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```

~/
|--> myDir/
|   |--> baz.txt
|   |--> bar/
|       |--> foo.txt
|--> beatarmy/
|   |--> gonavy.txt
  
```

Write the sequence of command line instructions to generate that file structure, assuming the present working directory is your home directory. **DO NOT USE cd. Instead use complete paths.**

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7. Assume the following file system structure for your home directory with shell's current working directory being your home directory. (hint: note some files are hidden files, e.g., start with preceding .)

```
~/
|--> classNotes/
|   |___,-> lec0.txt
|   |___,-> demo
|       |___,-> ls-demo.txt
|-->CynicalMidsGifs/           (note: empty directory)
|-->gonavy.txt
|-->.emacs
|-->.ssh/
|   |___,->known_host
|   |___,->authorized_keys
|   |___,->id_rsa.pub
|   |___,->id_rsa
```

What files/directories are listed when running the following commands from the current working directory (the home directory):

(a) `ls`

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(b) `ls -a`

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(c) `ls -a .ssh/`

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(d) `ls .emacs`

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8. Consider the following **ls -l** output, label the output appropriately.

```
drwxr-xr-x  2 aviv  scs 4096 2013-12-22 10:57 demo/  
-rw-r--r--  1 aviv  scs 13454 2013-12-22 10:56 text.dat
```

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9. For the following commands, determine in which bin directory they live using the **which** command.

ls	_____	cat	_____
which	_____	touch	_____
head	_____	tail	_____
tac	_____	mv	_____
rmdir	_____	grep	_____
cut	_____	chmod	_____

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10. For all of the commands above that was not covered in lecture or lab, use the **man** command to read the description in the Unix manual and describe its function and one of its options:

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