

MATH5061: Week 1 Assignment

4 Sections

Instructions

Please submit answers to this assignment as a plain text document via email to math5061@temple.edu and attach to it the tar file you create in the last section. Make sure to use the subject line (without quotes) "**MATH5061:Assignment 01:ACCESSID**" Where ACCESSID is your AccessNet ID, for example tue86537

Section 1

Q1.1. How does an application program request a service from the OS kernel

- a. Through the BIOS
- b. By making a System Call
- c. By writing commands to special file

Q1.2. What is the Numeric User ID (UID) of the *root* user

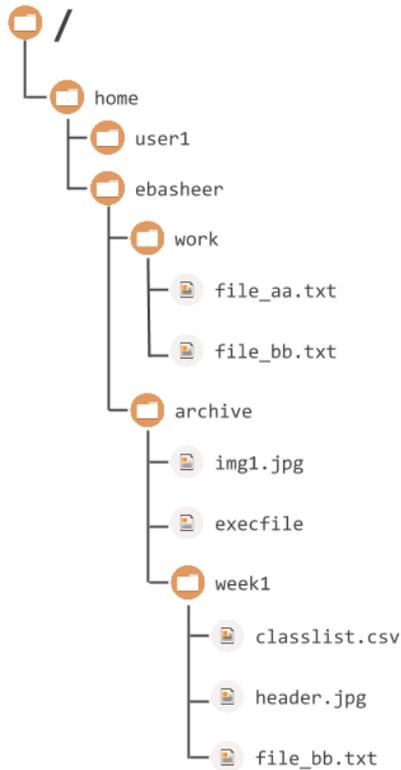
- a. -1
- b. 999
- c. 0

Q1.3. By default, where does data written to standard stream stdout go?

- a. Keyboard
- b. Terminal (screen)
- c. File on Disk

Section 2

The questions in this section refer to the directory hierarchy below



Example:

Assume your current working directory is `/home/ebasheer/archive`. The command to move file `img1.jpg` to the directory `week1` is:

1. Using relative pathnames

```
mv img1.jpg week1
```

2. Using absolute pathnames

```
mv /home/ebasheer/archive/img1.jpg /home/ebasheer/archive/week1
```

Q2.1

Assuming current working directory is `/home/ebasheer/work`, write the command to move file `file_aa.txt` to the directory `archive` using 1) relative pathnames and 2) absolute pathnames. Hint: Use the special subdirectory `..`.

Q2.2

Assuming current working directory is `/home/ebasheer/work`, copy file `file_bb.txt` using `cp` to directory `week1`. To prevent it from overwriting the file with the same name that already exists in the destination directory use the destination filename `file_bb_copy.txt`. Use relative pathnames.

Section 3

Q3.1

Write the command to set permissions for a file with name `conf_doc.txt` such that it can only be seen (read) and modified by the owner. Assume it's current permissions are `-r--rw-rw-`

Example

Command

```
tr abcd efgh
```

`abcd` is referred to as SET1 in the man page for `tr`. This command will replace all occurrences of letter 'a' in stdin with letter 'e' in stdout. Likewise 'b' is replaced with 'f', 'c' with 'g' and 'd' with 'h'. All other characters are passed through to stdout unmodified.

Q3.2

Write a `tr` command line to replace all lowercase letters with their uppercase counterparts. Refer to the `tr` man page to find a compact way to specify the source and replacement characters.

Section 4

Q4.1

For the following exercises, create an empty directory (with `mkdir`) and initialize a git repository. You can do this with the following commands

```
mkdir gitassign
cd gitassign
git init
```

After this perform the following steps (filling in missing steps) to build a git history

- Create a text file with vim or gedit (or any text editor) named `states.txt` with the following content

```
California
Hawaii
Florida
Texas
Pennsylvania
```

- Commit to the repository with commit message "create list of some states"
- Create another text file named `parks.txt` with the following content

```
Acadia
Badlands
Bryce Canyon
Joshua Tree
```

- Commit to the repository with the message "create list of some national parks"
- Verify that you have two commits with `git log`
- Edit `states.txt` and append to it `New Jersey`
- Edit `parks.txt` and append to it `Delaware Water Gap`
- Stage (add to index) `states.txt` but not `parks.txt`
- Commit with message "Add the garden state"
- Stage (add to index) `parks.txt`
- Commit
- Revert `states.txt` to the version from the first commit. `Parks.txt` should remain unchanged
- Commit with message "restore states.txt from initial commit"

Now prepare an archive of your git repository with the following commands. Commands are run from parent directory of repository, so first command is

```
cd ..
```

```
tar -czvf gitassign.tar.gz gitassign
```

This will create a new file `gitassign.tar.gz` in the current directory. Email this in along with your assignment.