CS311 Homework 1

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Question 2 Revision Control Systems

Revision control systems are a way to manage and store past version of files. They are useful because you can store previous version of a file and restore your current version if you were to mess something up. It also allows others to work on a small portion of a large project and then merge their changes into the larger project.

Git (Specifically commands for the GitHub version)
git push - update the remote repository
git fetch - download changes from remote repository
git clone - make a copy of a repository
git checkout - start work on a specific branch

RCS
mkdir RCS - initialize an RCS directory
rcsdiff - show what has changed in the file
co - checkout a file to work on
rcs -l - lock a file so no one else can check it out

SVN
create - create a new repository
checkout - start working on a local branch
list - show the current repositories in a list
status - show what files have changed

Mercurical (hg)
hg clone - make a local copy of a repository
hg diff - show changes in files
hg pull - update the local files
hg update - update the repository with changed files

Question 3 Piping vs. Redirection

Redirection is a way to read from and write to files. For example, you can redirect the output from *ls* to some file using >.

Piping is a way to send data from one process to another. Instead of saving data to a file you can sent it to another program. An example that I always find helpful is piping the results from *ps* to *grep*: $ps\ -A|\ grep\ firefox$ will give you the process id of firefox.

Question 4 Find Command

```
find . -type f -exec file '{}' \;
```

Question 5 Make

Running make will start the GNU make program. Make is most useful for finding which file in a large project needs to recompiled. Large project can take a very long time to compile so only recompiling the update files saves a lot of time.