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CS344-400
Homework 1

2. Revision Control Systems automate the process of storing and logging revisions. are useful for efficiently tracking files that are often revised, allowing users to comment and explain revisions.

Four examples of Revision Control Systems:

CVS
SVN
Git
Bazaar

3 commands they all have in common:

diff, checkout, commit

3. Difference between pipes and redirection: Redirection allows you to direct or append the output into a file. Pipes direct the output of a command into the input of another command. Example: pipe ls -l through more to paginate output. (ls -l | more)

4. Command to run file on all files from current directory down: find . -type f | xargs file
Running this on my CS344 folder, which currently only contains files for Homework 1, I get:

```
eos-class ~/cs344 202% find . -type f | xargs file
./Homework1/Question6/read_file.h:      ASCII C++ program text
./Homework1/Question6/sieve.c:          ASCII C++ program text
./Homework1/Question6/helloworld.c:      ASCII C++ program text
./Homework1/Question6/check_vowel.c:     ASCII C++ program text
./Homework1/Question6/Makefile:          ASCII make commands text
./Homework1/Question6/read_file.c:      ASCII C++ program text
./Homework1/Question6/check_vowel.o:     ELF 64-bit LSB relocatable, x86-64, version 1
(SYSV), not stripped
./Homework1/Question6/odd_even:          ELF 64-bit LSB executable, x86-64, version 1
(SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
./Homework1/Question6/odd_even.c:        ASCII C++ program text
./Homework1/Question6/odd_even.o:        ELF 64-bit LSB relocatable, x86-64, version 1
(SYSV), not stripped
./Homework1/Question6/helloworld.o:      ELF 64-bit LSB relocatable, x86-64, version 1
(SYSV), not stripped
./Homework1/Question6/helloworld:        ELF 64-bit LSB executable, x86-64, version 1
(SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
./Homework1/Question6/check_vowel:       ELF 64-bit LSB executable, x86-64, version 1
(SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
./Homework1/Question6/read_file.h.gch:   GCC precompiled header (version 013) for C
./Homework1/Question6/test:              ELF 64-bit LSB executable, x86-64, version 1 (SYSV),
dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
```

./Homework1/Question6/all: empty
./Homework1/Question6/read_file.o: ELF 64-bit LSB relocatable, x86-64, version 1 (SYSV), not stripped
./Homework1/Question6/sieve.o: ELF 64-bit LSB relocatable, x86-64, version 1 (SYSV), not stripped
./Homework1/Question6/sieve: ELF 64-bit LSB executable, x86-64, version 1 (SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
./Homework1/Question6/test.txt: ASCII text
./Homework1/Question6/read_file: ELF 64-bit LSB executable, x86-64, version 1 (SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.18, not stripped
./Homework1/Homework1-Question6.tar.bzip: bzip2 compressed data, block size = 900k

5. Make determines which pieces of a program need to be recompiled and issues the appropriate commands. It updates a target if it has not been updated since the last modification or if the target does not exist (ie it is the first time compiling).