COP 3402-Class Notes-01/10/19

Today we are going to talk about setting up all the tools chain

Why did we give you virtual machine? It is like we gave all of you a new computer so you can run your project easily without worrying about the dependencies.
What is a virtual machine? If you don't have the hardware you can emulate it. Instead of buying a new laptop you can use virtualbox and install a virtual machine which is like your operating system

- Go to the link of the assignment and accept the assignment, just submit the URL for your assignment in webcourses.

- You can see the skeleton of the project

- Use binaries.tar which is the compiled version of the project.
  You can use it to debug the projects and compare your result with expected result

After downloading and installing virtualbox, import cop3402.ova and start using virtual machine:
- Test Cases:
    - start using command line
    - clone the syllabus
    - go to project folder, then you can see tests folder
- Compiled Version of the Project:
    - Download binaries.tar from webcourses within the virtual machine
    - ls ~/binaries

git
-git is a version control system
git is different with Github
Using git commit, you can track the changes you have made in your project

If you have changes on the server you can get that changes on your computer by git pull
git push, push final version of your project into the github

gcc → gcc hello.c to compile your program → ./a.out to run your program
gcc -c hello.c to see the compilation process → hello.o
gcc hello.o → a.out

gcc -c factorial.c → factorial.o

gcc -c run.c → run.o

The linker joins these .o files together
gcc -o run factorial.o run.o → run
./run runs the run

For your project you can just use **make**
Just type "make" and it does all the linking and compiling
Why make?
-It is faster if your program is thousands of lines you don't need to run it over and over again
-You don't need to run all your programs separately
make is smart enough not to recompiling already compiled files (e.g run.c in our example)

For your project we will give you compiled version of correct implementation (binaries.tar), so if one of your project does not work completely you can use the correct one for your next projects

syllabus/project/overview.md is a good documentation for compiling and running the project

./compiler file.pl0 > file.pcode
./vm   out.pcode > out.vmout 2> out.vmtrace < ../tests/fib.vmin