Lecture 2 summary

This lecture was discussing about login to the class server over SSH. For Windows users, PuTTY can be used and, for MacOS or Linux users, specific command, ssh, can be called (ssh [${login}@linux.cs.rpi.edu](mailto:$%7blogin%7d@linux.cs.rpi.edu) -p 22). If users are outside campus, campus VPN will be used prior to use the class server. For file transfer, scp (secure copy) was introduced in class. For Unix to Unix copy, command format would be like scp [-r] ${login}@${source\_host}:${directory-or-file} ${login}@${destination\_host}:${directory-or-file}. For Windows user, PuTTY with pscp.exe installed or Winscp might be useful for file transfer. Also, for cross platform file transfers, the url link <https://mywebfiles.rpi.edu/orgs/MyWebFiles_Documentation/> might be helpful.

The second part discussed in this lecture was introduction to C language and Linux. First, for the difference between C and C++, C does not have classes, C does not have function overloading, and C i/o is relied on function call. But for the most parts, they are almost the same. Typical C program structure is like this: included libraries, definitions and global variables, function prototype and main for the last part. GUN compiler was introduced in this lecture (not Clang), and the command line format is like: **gcc –Wall –o {binary file} {source file}.** For standard i/o, printf (), scanf (), fread (), fopen (), and more can be called to accomplish this task. For printf (), syntax is **printf ( const char \*, . . . ).** And there are so many fun things to do, call man printf () for more information. For scanf (), pointer (or at least an address) will be needed before moving on. The rest part is pretty much the same as printf (). Also, for more information, use man scanf. If a line of chars is wanted, fgets () would be helpful. For string manipulation, strcpy (), strlen (), and strtok () might be helpful. Advanced math library might be helpful. Before using it, remember to add an option of -lm to tell the compiler to use the external math library.

The final part was about editors. Emacs was introduced in this lecture heavily, although I am a fan of Vim…