Week 2-1. Three Questions

Choose three key points in the chapter. For each, write a question you have about that point that you hope will be answered during the semester.

Key points

1. The code a programmer typed is converted into a language that machines can execute, through several steps. (’.c’ files are converted into binary executable object program through a sequence of low-level machine-language instructions)
2. The converted language is stored inside a part of computer, and executed inside another part of the computer with much of moving of those datas. (The converted binary executable object program is stored at the disk and processed or executed by the processor with much of moving of the datas through I/O buses)
3. The operating system connects a program with the hardware, so the programs can be executed without directly interacting with the hardwares.

Questions

1. How does the linker merge a program that a programmer wrote with the precompiled C file?
2. How is the binary executable object program readed (or executed) exactly by the processor? How is it delivered, with or without being transformed further more from the binary codes?
3. What are the differences between the different operating systems that are used commonly, i.e., Linux, Mac, Windows etc? Which part of it makes the difference that we see on the monitor or the programs to run on one but not the other?