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Lecture 1

Definition 1. *Abstraction: This refers to the concept of hiding the technical details of a system and show only the essential details.*

1. Hardware Abstraction

   - Hardware level:
   - Firmware level:

2. System Software Abstraction:

   - OS: Interacts with hardware.
   - Device Drivers: Specialized instruction for a specific hardware.

3. Application Software Abstraction

   - User level: Users do not have know the logic goes in software buiding. User should just have a knowledge of using the software.
   - High level programming levels: Syntaxes of high level programming langauges are more closer to the human language. It makes syntax more readable by humans.

'ps': For showing the process id.
'ps -e': For showing the process id for all programs running. 'f': List users also
'grep <pattern> <file-name>': find <pattern> in the file named <file-name>.
ps -ef — wc -l: '|': Pipe command
'wc': Word count; '-l': for number of lines.
Add '&' in the end of the command for keeping it background. But output will be shown in the screen. If shell is closed output is lost.
Add 'nohub' in the starting then all the output is directed to the 'nohub.out' file.