Using the Linux Command Line
Using the Linux Command Line

- The CS50 IDE is a cloud-based machine running *Ubuntu*, one of the many flavors of the *Linux* OS.

- Many modern Linux distributions have graphical user interfaces (GUI) to allow easy mouse-based navigation.

- Still, as a programmer you’ll likely be using your *terminal window* frequently, and you can do many of the same tasks with keyboard commands.
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- Let’s have a look at some of the most important of these keyboard-based commands for working within the IDE or any UNIX-based system.
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ls

- Short for “list”, this command will give you a readout of all the files and folders in your current directory.
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**cd** `<directory>`

- Short for “change directory”, this command change your current directory to `<directory>`, which you specify, in your workspace or on your operating system.

- The shorthand name for the current directory is .

- The shorthand name for the parent directory of the current directory is ..

- If ever curious about the name of the current directory, though the terminal prompt will often tell you, you can type `pwd` (present working directory).
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**mkdir**  `<directory>`
- Short for “make directory”, this command will create a new subdirectory called `<directory>` located in the current directory.
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`cp <source> <destination>`

- Short for “copy”, this command will allow you to create a duplicate of the file you specify as `<source>`, which it will save in `<destination>`.

- If you wish to copy entire directories, you’ll need to modify the command slightly:

  `cp -r <source directory> <destination directory>`

  The “-r” stands for *recursive*, and tells `cp` to dive down into the directory and copy everything inside of it (including any subdirectories it might contain).
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\texttt{rm} <file>

- Short for “remove”, this command will delete \texttt{<file>}
after it asks you to confirm (y/n) you want to delete it.

- You can skip the confirmation by typing:
  \texttt{rm -f <file>}
  But use at your own peril! There’s no undo.

- To delete entire directories you need to use the \texttt{–r} flag,
  just as was the case with \texttt{cp}.
  \texttt{rm -r <directory>}

- You can also combine the \texttt{–r} and \texttt{–f} flags into \texttt{–rf}.
  Again, careful! There’s no undo!
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mv <source>  <destination>
  ● Short for “move”, this command will allow you to effectively rename a file, moving it from <source> to <destination>.
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- To be sure, there are many more basic command line utilities at your disposal, and we’ll discuss many of them in the future in CS50.

- If you wish to explore other interesting ones before we see them in the class, read up on:

  chmod  ln  touch
  rmdir  man  diff
  sudo  clear  telnet