

LINUX Tutorial 1

Introduction

The CEE/CS uses a Linux server as the programming environment for the CMPS 2010 and 2020 sequence. This server uses a text-based interface called a command-line interface (**CLI**). In a **CLI**, you type commands to accomplish tasks instead of clicking on icons. This tutorial will introduce you to the basic commands you will need in the programming sequence.

The department server is called **Odin**. It is accessible over the Internet by using the domain name odin.cs.csub.edu and an appropriate client (called a terminal program) to connect to Odin's **CLI**. The terminal program will present you with a command-line prompt (such as the **\$** or **>** symbols). You can type commands at the prompt to initiate tasks and run applications.

Here are some examples of what a command-line prompt might look like (your prompt by default will look like the first two, but with your username before the **@** symbol):

```
rowdyrunner@odin:~$  
rowdyrunner@odin:~/2010$  
(/home/stu/rowdyrunner/)>  
(/home/stu/rowdyrunner/2010/)>
```

Important Notes

There are certain rules and conventions that are used in the computer science world:

- A **directory** is another name for a **folder**
- Whenever you see text in a **fixed-width font**, that is a command that can be executed in the terminal.
- The angle brackets **<** and **>** are used to indicate fields that must be replaced before the command is run. For example, in the command:

```
cat <filename>
```

you should replace **<filename>** with the actual name of the file you want to look at like this:

```
cat info.txt
```

- The square brackets **[** and **]** are used to indicate optional fields that you can choose to use. For example, in the command:

```
ls -l [folder-name]
```

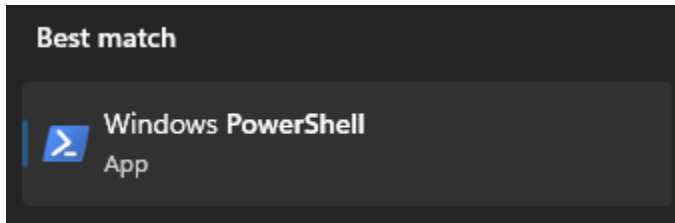
you can provide an optional folder name that you would like to look at like this:

```
ls -l cmps2010/
```

Terminal/SSH Crash Course

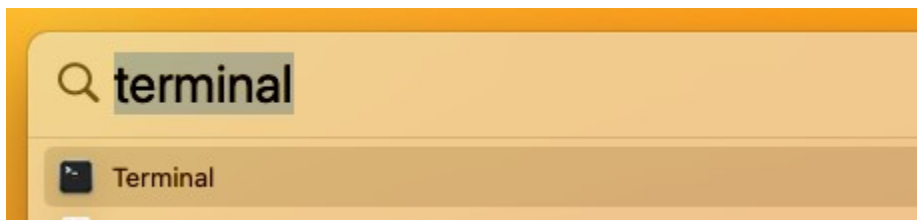
The Odin server at CSUB is a physical server that exists in the Science III building on campus, however you can connect to this server from ANYWHERE on the planet as long as you have an internet connection. To do this you will be using a protocol called SSH. While there are various programs dedicated to SSH, like Putty, most modern operating systems (Windows, macOS, Linux) have SSH baked right into their terminal applications.

- **For Windows (7 and later):** PowerShell comes installed by default! To access it, simply press the windows key and type *powershell* and it should pop up:



Alternatively, you can install a program called **Terminal** from the Microsoft store for a more fully-featured terminal experience. The new Windows Terminal application uses PowerShell by default.

- **For macOS:** Terminal comes installed by default! To access it, simply press Command+SpaceBar and type *terminal* and it should pop up:



- **For linux:** Terminal comes installed by default! Since there are various versions of Linux, you may have to search through your application menu to find it, or you can quickly open it using the keyboard shortcut Ctrl+Alt+T

Once you have located and opened the terminal application of your choice, you may want to pin it to your taskbar or smartbar to find it easier in the future.

You are now ready to complete Lab 1!