ULI101: INTRODUCTION TO UNIX / LINUX AND THE INTERNET

WEEK 1: LESSON 2

ISSUING LINUX COMMAND / LINUX COMMAND HELP
COMMAND LINE EDITING / ONLINE TUTORIALS / SLGS

LESSON 2 TOPICS

Using Your Matrix Account

- Issuing Linux Commands / Arguments / Options
- Command Help / Command Line Editing
- General Linux Commands

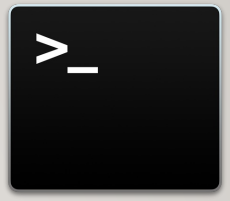
Getting Practice Issuing Linux Commands

- Performing Weekly Tutorials For Marks
- Linux Practice Questions
- Getting Help / SLGs (Student Learning Groups)

Homework

- Perform **Tutorial 1 – Investigation #2**

USING YOUR MATRIX ACCOUNT



Linux Command Structure

command argument1 argument2 ...

Some Linux commands can be issued by entering the Linux command line **without arguments** (e.g. **pwd**, **date**, **ls**, **cal**), but some Linux commands can be issued with arguments (e.g. **cal 2002**, **cd /bin**, **ls -la**).

An **argument** can be a file **pathname**, **text**, or an **option**.

Examples:

- The **ls** command displays a listing of just filenames in the **current** directory
- The **ls /bin** command displays a listing of filenames in the **/bin** directory (as opposed to your current directory)
- The **ls -l** command displays a **detailed** listing of filenames in the **current** directory
- The **ls -l /bin** command displays a **detailed** listing of files in the **/bin**

USING YOUR MATRIX ACCOUNT

Getting Help with Linux Commands

With the Linux OS containing over **2500** commands and utilities, it is good for a Linux user or Linux System Administrator (i.e. sysadmin) to learn about how to use commands *"on-the-fly"*.

The **man** command can provide information on how to use a command (i.e. **usage**, **arguments**, **options**, **examples**). The commands are classified into sections or "**volumes**".

Example:
man ls

If you do not know the name of a Linux command, the **man** utility can be used with the **-k** option to help list Linux commands that match a text pattern that is contained within the help screen for a Linux command.

Example:
man –k copy

USING YOUR MATRIX ACCOUNT

Getting Help with Linux Commands / Continued…

You can use the following short-cut keys within the **man** command to help navigate throughout this utility to get help with the specific command.

Keyboard Shortcut	Purpose
ENTER	Move down one line
SPACEBAR	Move one screen down
<ctrl><b>	Move one screen up
/pattern	Search for Pattern
q	quit man utility

MANAGING DIRECTORIES

Instructor Demonstration

Your instructor will demonstrate how to use the **man** pages.

USING YOUR MATRIX ACCOUNT

General Linux Commands

Your instructor will demonstrate several basic Linux commands to get practice how to issue **Linux commands** and using **arguments** and **options**.

Shortcut Key(s)	Arguments / Options	Purpose
pwd		Display Current Working Directory
cd	**dir-pathname**	Change Directory
ls	**-l, -a, -R, -d, dir-pathname**	List Files of Directory
cal	**month, year**	Display calendar
date		Display date and time
who		List users logged into server
whoami		Display username of user logged in
clear		Clear Screen
passwd	**username**	Change user's password

MANAGING DIRECTORIES

Instructor Demonstration

Your instructor will demonstrate how to **issue general Linux commands.**

USING YOUR MATRIX ACCOUNT

Command Line Editing

Learning **shortcut keys** in any OS terminal will allow you to be more productive as a sysadmin.
We will only focus on a few command line editing keyboard shortcut keys.

Shortcut Key(s)	Purpose
<ctrl><l>	Clear Screen
<ctrl><u>	Clear Command Line
<Up Arrow> ,<Down Arrow>	Scroll Up / Down Command History
<backspace> , <ctrl><backspace> ,<ctrl><h>	Delete character before the cursor
<ctrl><w>	Delete word before the cursor
<ctrl><a>	Move cursor to beginning of command line
<ctrl><e>	Move cursor to end of command line
<alt>f/<alt>b **(Mac: OPTION+Right/Left-Arrow)**	Move Forward/Backward one word

NOTE:

If you are using a **Graphical SSH application**, you may need to configure the application (META settings) to NOT bring up menus by mistake when you issue some of these shortcuts.

MANAGING DIRECTORIES

Instructor Demonstration

Your instructor will demonstrate how to perform **command line editing.**

GETTING PRACTICE ISSUING LINUX COMMANDS

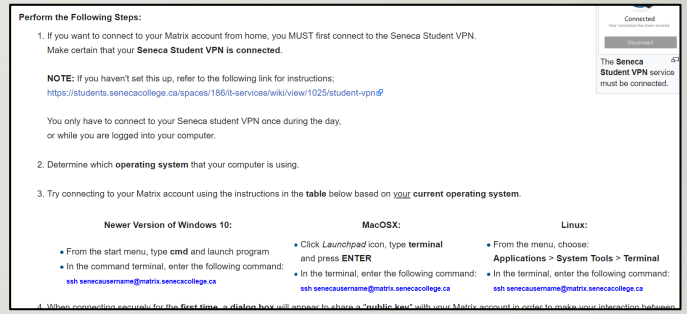
Weekly Tutorials / Linux Practice Questions

There are **Weekly tutorials** that are required to be completed by students for a **2%** grade for each tutorial. These tutorials are usually due by the following week by Friday @ midnight.

These tutorials are designed to provide you **guided hands-on practice** with Linux commands and operations that will help you get **troubleshooting** practice.

NOTE: Students that do NOT complete ALL parts of each weekly tutorial will NOT obtain the full 2% grade.

Linux Practice Questions are at the end of each weekly tutorial. Although these practice Linux questions are NOT for marks, they are useful for studying for quizzes and tests.



Perform the Following Steps:

1. If you want to connect to your Matrix account from home, you MUST first connect to the Seneca Student VPN.
   Make certain that your **Seneca Student VPN is connected**.

   NOTE: If you haven't set this up, refer to the following link for instructions;
   https://students.senecacollege.ca/spaces/186/it-services/wiki/view/1025/student-vpn

   You only have to connect to your Seneca student VPN once during the day,
   or while you are logged into your computer.

2. Determine which **operating system** that your computer is using.

3. Try connecting to your Matrix account using the instructions in the **table** below based on your **current operating system**.

Newer Version of Windows 10:	MacOSX:	Linux:
• From the start menu, type **cmd** and launch program • In the command terminal, enter the following command: ssh senecausername@matrix.senecacollege.ca	• Click *Launchpad* icon, type **terminal** and press **ENTER** • In the terminal, enter the following command: ssh senecausername@matrix.senecacollege.ca	• From the menu, choose: **Applications** > **System Tools** > **Terminal** • In the terminal, enter the following command: ssh senecausername@matrix.senecacollege.ca

4. When connecting securely for the **first time**, a dialog box will appear to share a "**public key**" with your Matrix account in order to make your interaction between

Connected
Disconnect
The **Seneca Student VPN** service must be connected.

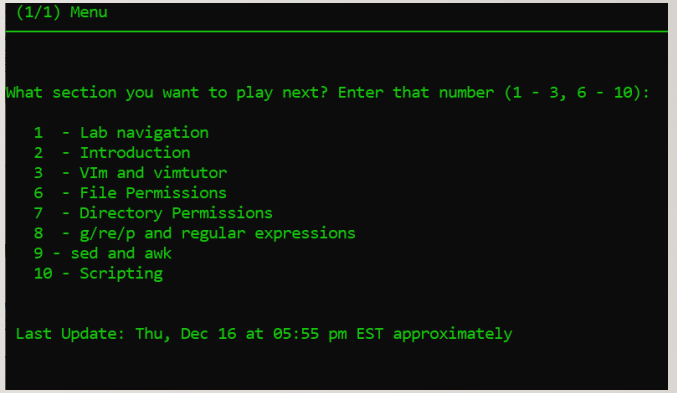
GETTING PRACTICE ISSUING LINUX COMMANDS

Review Tutorials

Is a **Review Tutorial module** that students perform to answer questions to test their Unix/Linux Knowledge. The review tutorial is **worth a total of 8%** which is broken down into **2 general sections** worth **4%**.

As students correctly answer questions within a section, they can proceed to the next section. If the student cannot answer a question, they cannot proceed to the next question.

Students will need to successfully complete ALL sections in order to receive the 8% grade. This review tutorial module is **due at the end of the semester** (refer to the Weekly Schedule for the due date).



GETTING PRACTICE ISSUING LINUX COMMANDS

Need Additional Help? Try the Learning Centre:

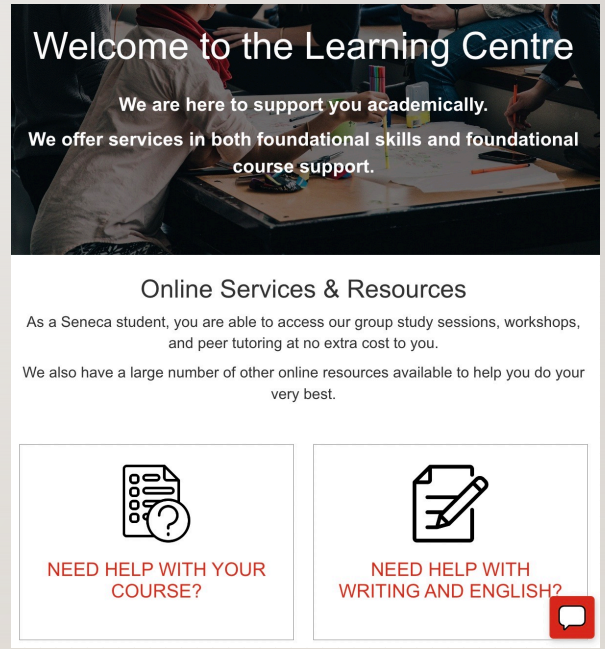
https://library.senecacollege.ca/learningcentre

ONE-ON-ONE TUTORING
Appointments focused on your individual needs that explain course concepts.

SUPPORTED LEARNING GROUPS (SLG)
Student-led and collaborative study sessions that review practical examples based on the course's content. Link: https://library.senecacollege.ca/learningcentre/slg

ENGLISH LANGUAGE SUPPORT
Offered through individual appointments or group learning sessions to focus on grammar, academic writing, conversation, and pronunciation.

STUDY SKILLS
Learn time management, exam preparation, critical thinking, note-taking, and reading.



HOMEWORK

1. Get Acquainted with the **ULI101 WIKI**, **notes**, **tutorials** and **resources**.
2. Perform the following investigations in **Tutorial 1**
   (Due: Friday Week 2 @ midnight for a 2% grade):
   - INVESTIGATION 2: USING THE LINUX SHELL / ONLINE ASSIGNMENTS
   - LINUX PRACTICE QUESTIONS (Questions 1 – 9)