ULI101: INTRODUCTION TO UNIX / LINUX AND THE INTERNET

WEEK 1: LESSON 2

ISSUING LINUX COMMAND / LINUX COMMAND HELP
COMMAND LINE EDITING
ONLINE TUTORIALS / STUDENT LEARNING GROUPS
PERFORMING ONLINE ASSIGNMENTS

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

- Tutorials with Linux Practice Questions
- Student Learning Groups
- Performing Online Assignments

Homework

- Perform **Tutorial 1 – Investigation #2**
- Perform Online **Assignment #1** (Sections: **1** and **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

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 would 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 **issue general Linux commands** and perform **command line editing**

GETTING PRACTICE ISSUING LINUX COMMANDS

Tutorials / Linux Practice Questions

There are **tutorials** that are available for students to get "hands-on" practice issuing Linux commands. Depending on your ULI101 professor these tutorials may be for **marks in a timely manner (i.e. due date)**.

It is **highly recommended** that you perform them and answer the Linux Practice Questions at the end of the tutorials. Weekly tutorials are highlighted in **yellow** (like weekly slides).

Perform Online Assignments

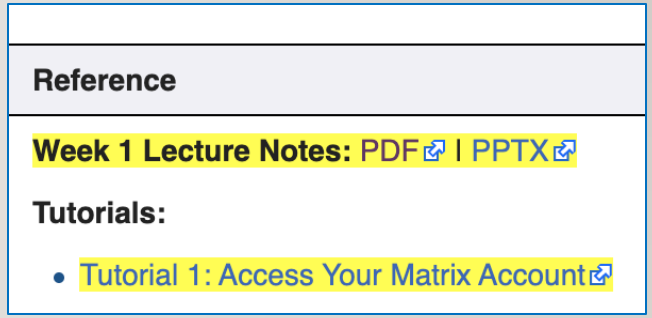
Complete **online assignments** in a timely manner for **marks** (**i.e. due date**). Students can perform the assignment sections more than once for **reinforcement** and will NOT affect the recorded completion of the assignment section performed previously.

HOW TO BECOME SUCESSFUL IN THIS COURSE

Performing Tutorials

At the end of each lesson, you will be directed to perform **section(s)** of the **weekly tutorial** (link contained in the **ULI101 WIKI's Weekly Schedule**).

The tutorials are designed to provide you **guided hands-on practice** with Linux commands and operations that will help you get practice prior to performing your assignments. Depending on your instructor, these tutorial may be worth **marks** (and assigned a **due date**).



Linux Practice Questions are located at the bottom of each tutorial.

Students that take the time to perform this tutorials tend to **complete the online assignments faster** and **perform better on quizzes and tests**!

HOW TO BECOME SUCESSFUL IN THIS COURSE

Performing Online Assignments

You are required to perform **3 online assignments** during this course.

Online assignment are used to teach and reinforce Linux commands and techniques as well as using Linux commands to perform tasks and test students.

HOW TO BECOME SUCESSFUL IN THIS COURSE

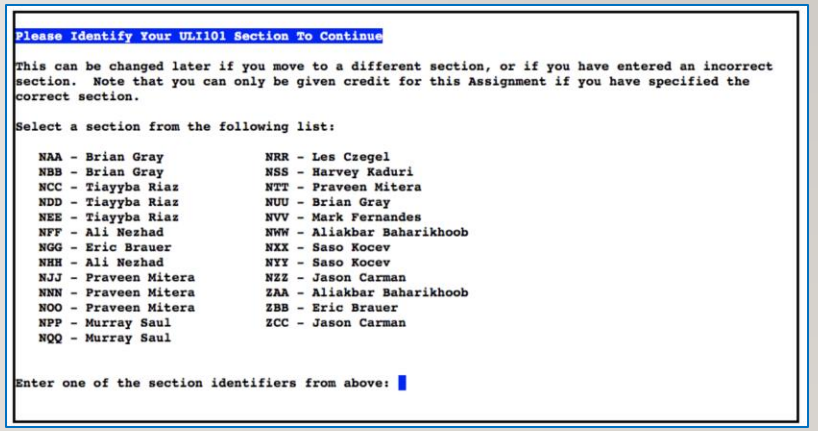
Performing Online Assignments

To run your assignment 1 in your Matrix account, issue the following command: `~uli101/a1`

A screen similar to the one displayed on the right will appear.

Select the **letters** corresponding to the correct **ULI101 section** and **professor** and press **ENTER**

WARNING: You need to select the CORRECT section for the course which you belong to. If you do NOT select your correct section, your assignment may not be recorded for marks!



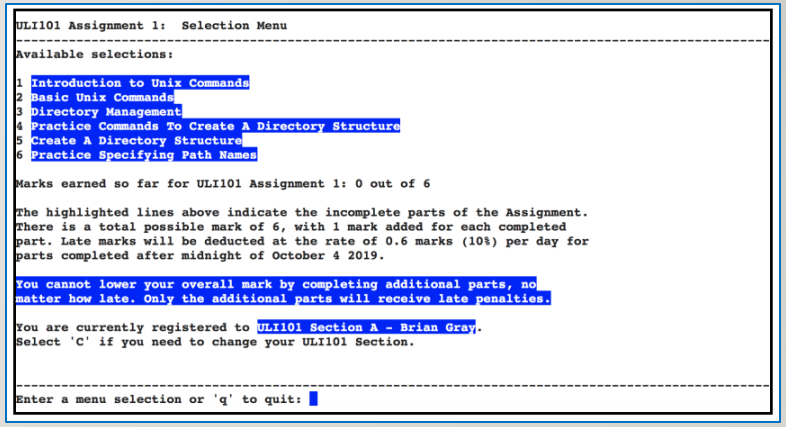
HOW TO BECOME SUCESSFUL IN THIS COURSE

After you have entered your **course section code**, there will be a screen that provides several important notes before proceeding. Please take a few moments to read those notes and press **ENTER** to proceed.

The **assignment main menu** will then be displayed (refer to diagram).

Near the bottom of the window, you will see **"You are currently registered to"** followed by the **section letter** and **instructor name**.

Double-check with your course timetable to confirm that this the correct section letter. If you have selected the WRONG section, type **C** in the menu selection area and press **ENTER**. You will return back to the original window to enter your correct course section.

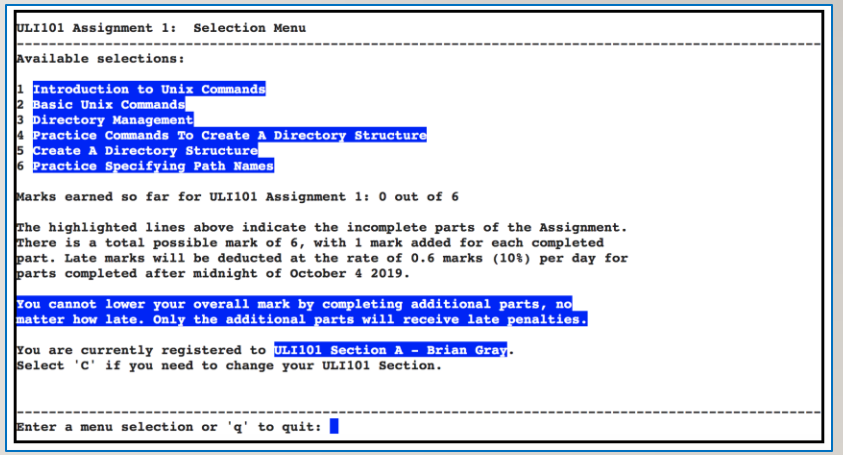


GETTING PRACTICE ISSUING LINUX COMMANDS

Near the top of the window displays the sections to complete in the assignment. You are NOT required to complete all sections at the same time.

You can check the **assignment #1 link** on the ULI101 main WIKI page to note the **due date** for assignment #1. Sections that are NOT completed will be displayed in reverse video

On the other hand, when you complete a section, then the section will appear as regular text (i.e. not in reverse video).



GETTING PRACTICE ISSUING LINUX COMMANDS

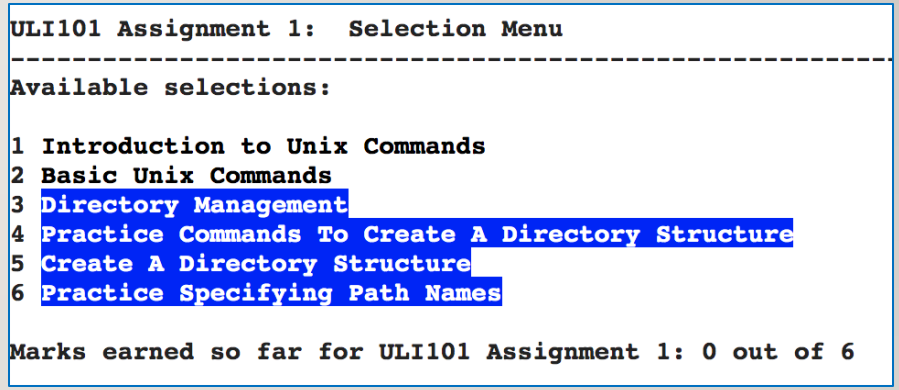
If you want to verify that you have completed sections for the assignment, look for the text **"Marks earned so far for ULI101 Assignment:"** and it will show how many sections have been completed.

You are NOT required to save your work. Once you have completed a section, it will remain in **reverse video for the duration of this course**.

You can exit the online assignment and complete other sections at a later time.

Make certain to check each assignment in the ULI101 main WIKI for each assignment's due date.

When the assignment main window shows **all** sections **in reverse video** , then your assignment has been completed and you should receive full marks provided you have selected your correct course section and you have completed the assignment by the required due date.



GETTING PRACTICE ISSUING LINUX COMMANDS

Need Additional Help? Try the Learning Centre:

https://www.senecacollege.ca/ce/info/services/learning-centre.html

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.

HANDS-ON TIME / HOMEWORK

1. Get Acquainted with the **ULI101 WIKI**, **notes**, **tutorials** and **resources**.
2. Perform the following investigations in **Tutorial 1**:
   - INVESTIGATION 2: USING THE LINUX SHELL / ONLINE ASSIGNMENTS
   - LINUX PRACTICE QUESTIONS **1 – 9** (will be taken up at beginning of next class)
3. Perform following sections for **online assignment #1**:
   - **Section 1: Introduction to Unix Commands**
   - **Section 2: Basic Unix Commands** (Parts **1**, **2** & **3**)