Coursera – The Unix Workbench

# Syllabus:

WEEK 1

Unix and Command Line Basics

This week we'll help you get access to Unix (you may already be using it), and you'll start using the command line. We'll draw parallels between using your mouse and keyboard with your computer's graphics versus only using the command line.

1 video, 13 readings

Video: Welcome to Week 1

Reading: Introduction

Reading: The Unix Workbench Book

Reading: What is Unix?

Reading: Mac & Ubuntu Users

Reading: Windows

Reading: Hello Terminal!

Reading: Hello Terminal! Exercises

Reading: Navigating the Command Line

Reading: Navigating the Command Line Exercises

Reading: Creation and Inspection

Reading: Creation and Inspection Exercises

Reading: Migration and Destruction

Reading: Migration and Destruction Exercises

Show less

Graded: Command Line Basics

WEEK 2

Working with Unix

Now we'll get into the power of different Unix tools. We'll walk through several scenarios where you could use Unix to perform tasks at a much faster speed than you would be able to normally.

1 video, 16 readings

Video: Welcome to Week 2

Reading: Self-Help

Reading: Self-Help Exercises

Reading: Get Wild

Reading: Get Wild Exercises

Reading: Regular Expressions

Reading: Metacharacters

Reading: Character Sets

Reading: Escaping, Anchors, Odds, and Ends

Reading: Find

Reading: Search Exercises

Reading: History

Reading: Customizing Bash

Reading: Differentiate

Reading: Pipes

Reading: Pipes Exercises

Reading: Make

Show less

Graded: Working with Unix

WEEK 3

Bash Programming

During this week we'll unleash the command line's usefulness as a programming language. By the end of this week you'll be writing your own little computer programs that you can use on the command line.

1 video, 25 readings

Video: Welcome to Week 3

Reading: Math

Reading: Math Exercises

Reading: Variables

Reading: Variables Exercises

Reading: User Input

Reading: User Input Exercise

Reading: Conditional Execution

Reading: Conditional Expressions

Reading: If and Else

Reading: Logic and If/Else Exercises

Reading: Arrays

Reading: Arrays Exercises

Reading: Braces

Reading: Braces Exercise

Reading: for

Reading: while

Reading: Nesting

Reading: Loops Exercises

Reading: Writing Functions

Reading: Getting Values from Functions

Reading: Functions Exercises

Reading: The Unix Philosophy

Reading: Making Programs Executable

Reading: Environmental Variables

Reading: Writing Programs Exercises

Show less

Graded: Bash Programming

WEEK 4

Git and GitHub

First you'll learn how to use Git, which is like "track changes" for your code and plain text files, but much more powerful. We'll then explore how to use Git with GitHub, a social coding network where you can publish you projects and explore other's code.

1 video, 16 readings

Video: Welcome to Week 4

Reading: What are Git and GitHub?

Reading: Setting Up Git and GitHub

Reading: Getting Started with Git

Reading: Git Exercises

Reading: Gitting Help, Logs, and Diffs

Reading: Ignoring Files

Reading: Important Git Features Exercises

Reading: Branching, Part 1

Reading: Branching, Part 2

Reading: Branching Exercises

Reading: GitHub

Reading: Markdown

Reading: Pull Requests

Reading: Pages

Reading: Forking

Reading: GitHub Exercises

Show less

Graded: Git & GitHub

Graded: Bash, Make, Git, and GitHub

Nephology

Finally we'll set up a cloud computing environment so we can explore how computers communicate with each other using the internet.

11 readings

Reading: Introduction to Cloud Computing

Reading: Setting Up DigitalOcean

Reading: Connecting to the Cloud

Reading: Moving Files In and Out of the Cloud

Reading: Talking to Other Servers

Reading: Automating Tasks

Reading: Cloud Computing Exercises

Reading: Shutting Down a Server

Reading: Next Steps

Reading: Giving Feedback

Reading: Using This Book

Show less

Graded: Nephology