

Post-Lab Questions and Answers:

1. Describe the two main methods for obtaining a connection to the Raspberry Pi.

The two main methods for connecting to the Raspberry Pi are through Wi-Fi (Wireless Network) or an ethernet cable. Connecting to a wireless network can be done by configuring the Pi by editing the `wpa_supplicant.conf` file or using a preconfigured network. If the Wifi configuration fails connecting to the Pi can be done by directly connecting it to a laptop using an Ethernet cable.

2. What is Git, and why might it be useful for managing software in a project?

Git is a version control system that tracks changes to files and allows multiple users to collaborate on a project. It is useful for managing software because it provides a history of changes, the ability to revert to previous versions, facilitates collaboration by allowing team members to work on the same codebase without overwriting each other's work, and it supports branching and merging, enabling parallel development and experimentation.

3. Describe the commands for adding, committing, and pushing changes in a local repository to GitHub. If the push is successful, you would see updates on your remote repository. If your push command is rejected, it is likely because your local repository is behind the remote repository or when your teammate changes the code remotely without updating on your local files, what is the command you need to update your outdated local repository?

The commands for managing changes in a Git repository include `git add .` (for adding changes), `git commit -m "Your commit message"` (for committing changes), and `git push` (for pushing changes). `git add .` adds all modified and new files to the staging area. `git commit -m "Your commit message"` saves the changes in the local repository with a descriptive message. `git push` uploads the committed changes to the remote repository. If the push is rejected because the local repository is behind the remote repository the following command can be used to update the local repository: `git pull`. This command fetches and merges the changes from the remote repository into the local branch.

Contents

2m 23s video

2. Command-Line Basics

What is the command line?
3m 51s video

Understand how commands are structured
5m 31s video

Write commands in a shell at the prompt
4m 49s video

Find help for commands
5m 55s video

Helpful keyboard shortcuts in the terminal
5m 24s video

Challenge: Find command information
25s video

Solution: Find command information
3m 8s video

Chapter Quiz
14 questions

3. Files, Directories, and Permissions

Learning Linux Command Line

Understand user roles and sudo

Multuser Environment

89,498

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Older systems didn't have the concept of separate users

On older systems,

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Scott Simpson

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Contents

3. Files, Directories, and Permissions

The Linux file system
6m 18s video

Understanding file paths
4m 50s video

Navigating the file system
6m 58s video

Exploring the output of the ls command
2m 33s video

Create and remove directories
3m 36s video

Copy, move, and delete files and directories
7m 53s video

Find files from the command line
2m 10s video

Understand user roles and sudo
6m 3s video

Understand file permissions
5m 57s video

Modify file permissions
7m 4s video

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Modify file permissions
7m 4s video

Create hard and symbolic links
3m 26s video

Challenge: Fix broken syntax
26s video

Solution: Fix broken syntax
1m 24s video

Challenge: Practice working with files
34s video

Solution: Practice working with files
32s video

Chapter Quiz
26 questions

4. Common Command-Line Tasks and Tools

The Unix philosophy
2m 29s video

Use pipes to connect commands together
2m 41s video

View text files with cat, head, tail, and less

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✓ View text files with cat, head, tail, and less
4m 44s video

✓ Search for text in files and streams with grep
4m 30s video

✓ Manipulate text with awk, sed, and sort
6m 50s video

✓ Edit text with Vim
4m 35s video

✓ Edit text with nano
2m 49s video

✓ Working with tar and zip archives
8m 17s video

✓ Challenge: Create and share a file
28s video

✓ Solution: Create and share a file
1m 48s video

✓ Output redirection
5m 11s video

✓ Exploring environment variables and PATH
3m 54s video

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✓ Output redirection
5m 11s video

✓ Exploring environment variables and PATH
3m 54s video

✓ Challenge: Extract information from a text file
1m 8s video

✓ Solution: Extract information from a text file
3m 28s video

● Chapter Quiz
25 questions

5. A Peek at Some More Advanced Topics

○ Find information about your Linux distribution
2m 39s video

○ Find system hardware and disk information
4m 16s video

○ Install and update software with a package manager
4m 24s video

○ Chapter Quiz

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Understand user roles and sudo

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Get Files

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- 2. Python Basics
 - Building Hello World
 - 9m 5s video
 - Variables and expressions
 - 11m 44s video
 - Python functions
 - 11m 52s video
 - Conditional structures
 - 8m 17s video
 - Loops
 - 9m 28s video
 - Classes
 - 10m 30s video
 - Importing and using modules
 - 2m 22s video
 - Using exceptions
 - 5m 10s video
 - </> Code Challenge: Palindromes
 - 8m practice

Learning Python Importing and using modules 555,360 + 2,009 active

1. Welcome to Learning Python course by Joe Marini

```

2 #
3
4
5 # TODO: import the math module, which contains features for working with math
6 import math
7
8 # TODO: the math module contains lots of pre-built functions
9 print("The square root of 16 is", math.sqrt(16))
10
11 # TODO: in addition to functions, some modules contain useful constants
12 print("Pi is", math.pi)
13
14 # TODO: try some of the math functions for yourself here:
15

```

All right, so, once again, let's run this,

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Instructor

 **Joe Marini**
Technology Industry Veteran

Kyle Rex
Texas A&M University

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- 1. The Basics of Working on GitHub
 - What is Git?
 - 3m 20s video
 - What is GitHub?
 - 1m 55s video
 - Exploring GitHub
 - 7m 25s video
 - The GitHub workflow: Idea to commit
 - 4m 15s video
 - The GitHub workflow: Pull request to production
 - 3m 20s video
 - Get started with GitHub Learning Lab
 - 2m 44s video
- 2. Working Locally with the Command Line

Learning GitHub (2019) The GitHub workflow: Idea to commit 22,344 +

Local Repository GitHub

when they pull it down locally to work on it.

0:20 / 4:15

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 **Aaron Stewart and GitHub**

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