**LAB 5 – Software Development and Design Content**

Part 1: Software Version Control with Git

A screenshot of a computer

Description automatically generated with medium confidence

Useful commands:

Git config –global {user.name/user.email} “email/name”

Puts email/name in the git config

Git config –list

Lists current config for git

Git status

Displays status of the git files in a directory

Git add

Adds a file to github repo

Git commit (-m “message”)

Commits changes to the github repo, add -m to add a message

Git log

Show all commits in the branch

Git diff

Compare 2 commits

Git branch (name)

Add a branch

Git branch

Display all branches for the repo

Git branch -d

Delete a branch

Git checkout

Switch between branches

Git merge

Merge the contents of 2 branches

Git push

Pushes file to github repository

Git Remote add origin <url>

Add a git url as a remote alias

Sed -I ‘s/word1/word2/’ filename

Replaces word1 with word2 in a file

Part 2: Create a Python Unit Test

Lab netacad: Cisco DEVNET 3.5.7

Part 2 questions and the corresponding answers:

What unittest class do you use to create an individual unit of testing?

TestCase

How does the test runner know which methods are a test?

They start with “test\_”

What command will list all of the command line options for **unittest** shown in the following output?

Python3 -m unittest --help

Error:Text

Description automatically generated

Text

Description automatically generated

Use -V for verbal output to troubleshoot

Problem occurs at “key should be found,…”

We try solving the error by moving the list object out of the function:

Graphical user interface, text

Description automatically generated

Ret\_Val was previously under def json\_search

But this does not solve our issue, so we looked for another error..

We are now using a global variable, so we wrap our json\_search with an outer function and delete the existing json\_search

Graphical user interface, text, application

Description automatically generated

Now our unittest runs without errors:

Text

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Part 3: Parse Different Data Types with Python

Lab netacad: cisco DEVNET 3.6.6

Parsing XML:

We import xml elementtree and RE for our script to work.

We parse the xml file using ET.parse(“myfile.xml”) and store it in a variable

We also store the root element in a variable using the getroot function, so we can use the match function along with tag).group to search the three for two named values.

Result:

Text

Description automatically generated

Parsing JSON: