Setup and Provision a Python Project - Lab (Terminal)

Instructions

1. Cd into the directory project-hello
2. Setup a virtual environment
3. Activate your virtual environment
4. Tell git your email and name:

```
git config --global user.email "you@example.com"
```

5. Tell git your name:

```
git config --global user.name "Your Name"
```

6. Initialize git
7. Add the file 'hello.py' to git
8. Commit this file with the message 'first commit'
9. Use vim (named vi in this environment) to open the file 'hello.py'
10. Read through the file and try to understand what it does
11. Close the file buffer
12. Run python hello.py and notice the output
13. Open 'hello.py' using Vim
    - https://scaron.info/blog/vim-keyboard-shortcuts.html
    - Also remember with VIM most importantly is what **MODE** you select
    - When in doubt, use the Esc key to exit to the default mode when you can then start with a command, you need to press Esc then hit the colon to access the cli type line
        - : (is the command interpreter)
14. Make name equal your name (or the name of your choice)
    - **For instance here we did the following vim actions**
        - Note the Text Manipulation Section for the VIM Keyboard Shortcut Above
            - Pressing **Esc** before any Text Manipulation cut and past action
                - Even for moving around (for instance you've been inserting or editing text and then want to move over somewhere in the line, you have to exit your INSERT MODE with ESC then can give it a command
                - For example, you can traverse to the cursor location of interest and then press Esc and followed by a text manipulation to continue. After deleting or manipulating text and you want to **ADD** next …
            - ADD

15. Save the file and close the buffer (you can do this in one command as :wq
16. Run the file and notice the output
17. Use git diff to see your changes
18. Commit the file with the message 'added a name'
19. Use git log to see your commits

- Terminal File from Exercise (Good Reminders!)
    - Note closer to the end of the terminal and don't forget #14 about traversing and VIM modes for getting around and editing, saving or moving through the different modes in the VIM editor

```
jovyan@ae61b2cb9304:~/work$ pwd
/home/jovyan/work
jovyan@ae61b2cb9304:~/work$ ls
project-hello
jovyan@ae61b2cb9304:~/work$ cd project-hello/
jovyan@ae61b2cb9304:~/work/project-hello$ -m venv ~/envs/put-together
bash: -m: command not found
jovyan@ae61b2cb9304:~/work/project-hello$ python -m venv
~/envs/put-together
jovyan@ae61b2cb9304:~/work/project-hello$ ls
hello.py
jovyan@ae61b2cb9304:~/work/project-hello$ source
~/envs/put-together/bin/activate
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git config
--global user.email "craigrupp@utexas.edu"
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git config
--global user.name "Craig Wenger"
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git init
Initialized empty Git repository in /home/jovyan/work/project-hello/.git/
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        hello.py
```

```
nothing added to commit but untracked files present (use "git add" to
track)
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git add hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git commit -m
"first commit"
[master (root-commit) 35ec20f] first commit
 1 file changed, 18 insertions(+)
 create mode 100755 hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ pwd
/home/jovyan/work/project-hello
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ ls
hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ python3 hello.py
Hi Darth Vader
Hello Darth Vader
Hiya Darth Vader
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ vi hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ python3 hello.py
Hi Darth Vader
Hello Darth Vader
Hiya Darth Vader
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   hello.py
```

```
no changes added to commit (use "git add" and/or "git commit -a")
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git diff
diff --git a/hello.py b/hello.py
index 730d234..df79f12 100755
--- a/hello.py
+++ b/hello.py
@@ -1,4 +1,4 @@
-name = ''
+name = 'Darth Vader'

 def say_hi(name):
        print(f'Hi {name}')
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git add hello.py
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git commit -m
"added name"
[master 19f99e4] added name
 1 file changed, 1 insertion(+), 1 deletion(-)
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ git log
commit 19f99e411b96eb167156b2fa65e89b8d55be5d23 (HEAD -> master)
Author: Craig Wenger <craigrupp@utexas.edu>
Date:   Thu Aug 10 17:40:14 2023 +0000

    added name

commit 35ec20fb8550c3766a2696a97e07417f37bb651f
Author: Craig Wenger <craigrupp@utexas.edu>
Date:   Thu Aug 10 16:49:35 2023 +0000

    first commit
(put-together) jovyan@ae61b2cb9304:~/work/project-hello$ deactivate
jovyan@ae61b2cb9304:~/work/project-hello$
```

- And don't forget to terminate session
  - Git here was for looking at the status, noticing that a modification had occurred then looking at the diff in the modified file and logging who ultimately created the commit messages and what the message contained