Lab 15 – Python Virtual Environments

Create venv using steps shown in slides. Your output should resemble that shown at the end of this document. After you create the venv, activate the venv, install a package, write/run a program using that package within your newly created venv, exit (deactivate) the venv and try to run the same program and note the program cannot find the previously installed module.

Here are the steps:

- Create a directory to hold files for your venv (maybe labvnv?)

- cd to that directory

- Run
  Python -m venv labvnv

- Activate the venv by running a script peculiar to your host OS

- Install a Python module called *tinytag.* The tinytag module lets you access *audio file metadata*. Use *pip install* as shown in the slides or do a search on **PyPi.org** to find the pip install command.

- After install, check out the files/directories in your venv. Note the directory **site-packages** in your **lib** directory. Here's where pip installed your module.

- Copy the directory **sometunes** found in your lab directory to your *venv directory.*

- Copy the Python program **readmusicmetadata.py** found in your lab directory to your *venv directory.*

- From the command line, (you should be in your venv directory), *run the above python program*. Output from this program is at the end of this document (later, you'll write this program). **Note the program runs**.

- *Deactivate your venv and rerun the program. **Do not change directories!***

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- Note the *command prompt changes* and when you attempt to run the program, Python tells you it *cannot locate the tinytag module.*

Output from (some of) the steps cited above:

C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments>mkdir labvnv

C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments>**python -m venv labvnv**

C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments>**cd labvnv**

C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv>**Scripts\ activate**

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\ labvnv>dir/w
 Volume in drive C is Windows
 Volume Serial Number is CE36-4121

 Directory of C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\ labvnv

[.]   [..]   [Include]   [Lib]   pyvenv.cfg   [Scripts]
        1 File(s)   115 bytes
        5 Dir(s) 537,706,643,456 bytes free

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\ labvnv>**python -m pip install tinytag**

Collecting tinytag

  Downloading
https://files.pythonhosted.org/packages/38/34/e143d21a8ebea99c8af554a3e8978ad08469f1b0937623
46c9ca0296ebb4/tinytag-1.2.2.tar.gz
Installing collected packages: tinytag
  Running setup.py install for tinytag ... done
Successfully installed tinytag-1.2.2
WARNING: You are using pip version 19.2.3, however version 20.0.2 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv\Lib>dir site-packages/w
 Volume in drive C is Windows
 Volume Serial Number is CE36-4121
 Directory of C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv\Lib\site-packages

[.]   [..]   easy_install.py
[pip]   [pip-19.2.3.dist-info]   [pkg_resources]
[setuptools]   [setuptools-41.2.0.dist-info] [tinytag]
[tinytag-1.2.2-py3.8.egg-info] [__pycache__]
         1 File(s)   126 bytes
        10 Dir(s) 537,559,638,016 bytes free

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv\Lib\site-packages\tinytag>dir/w
 Volume in drive C is Windows
 Volume Serial Number is CE36-4121

 Directory of C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv\Lib\site-packages\tinytag

[.]   [..]   [tests]   tinytag.py   __init__.py __main__.py [__pycache__]
         3 File(s)   53,506 bytes
         4 Dir(s) 537,559,638,016 bytes free

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv>**readmusicmetadata.py**

For song sometunes\tune1.mp3:
  This track is by Snake River Conspiracy and is called Lovesong
  It is 235.601492 seconds long.

For song sometunes\tune2.mp3:
  This track is by Godsmack and is called Awake
  It is 304.535898 seconds long.

For song sometunes\tune3.mp3:
  This track is by Golden Earring and is called Twilight Zone
  It is 280.784504 seconds long.

For song sometunes\tune4.mp3:
  This track is by Alice In Chains and is called Get Born Again
  It is 327.459211 seconds long.

For song sometunes\tune5.mp3:

   This track is by Buffalo Springfield and is called For What It's Worth

   It is 160.445107 seconds long.

Mp3 file count: 5   M4a file count: 0

(labvnv) C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\ labvnv>**scripts\deactivate**

C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\ labvnv>**readmusicmetadata.py**

Traceback (most recent call last):

  File "C:\LousFolder\MyCourses\Python 3 Essentials\Labs\Ch16-PythonVirtualEnvironments\labvnv\ readmusicmetadata.py", line 2, in <module>

    from tinytag import TinyTag

ModuleNotFoundError: No module named 'tinytag'