

Creando un entorno virtual e instalando una biblioteca.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.22000.434]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Ricky UV>python -m venv env

C:\Users\Ricky UV>env\Scripts\activate

(env) C:\Users\Ricky UV>pip freeze

(env) C:\Users\Ricky UV>pip install python-dateutil
Collecting python-dateutil
  Using cached python_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)
Collecting six>=1.5
  Using cached six-1.16.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: six, python-dateutil
Successfully installed python-dateutil-2.8.2 six-1.16.0
WARNING: You are using pip version 21.2.3; however, version 22.0.3 is available.
You should consider upgrading via the 'C:\Users\Ricky UV\env\Scripts\python.exe
-m pip install --upgrade pip' command.

(env) C:\Users\Ricky UV>pip freeze
python-dateutil==2.8.2
six==1.16.0

(env) C:\Users\Ricky UV>
```

A continuación se muestran algunos intentos fallidos al crear un entorno virtual:

```
C:\WINDOWS\system32\cmd.exe
C:\Users\Ricky UV\Documents\Full Stack Developer\Modulo 2>cd ..

C:\Users\Ricky UV\Documents\Full Stack Developer>python3 -m env env
Error: Command '['C:\Users\Ricky UV\Documents\Full Stack Developer\env\Scripts\python.exe', '-Im', 'ensurepip', '--upgrade', '--default-pip']' returned non-zero
exit status 101.

C:\Users\Ricky UV\Documents\Full Stack Developer>cd ...

C:\Users\Ricky UV\Documents\Full Stack Developer>cd ..

C:\Users\Ricky UV\Documents>cd ..

C:\Users\Ricky UV>pip install virtualenv
Defaulting to user installation because normal site-packages is not writeable
Collecting virtualenv
  Downloading virtualenv-20.13.1-py2.py3-none-any.whl (8.6 MB)
    | 8.6 MB 163 kB/s
Requirement already satisfied: six<2,>=1.9.0 in c:\users\ricky uv\appdata\roaming\python\python39\site-packages (from virtualenv) (1.16.0)
Collecting distlib<1,>=0.3.1
  Downloading distlib-0.3.4-py2.py3-none-any.whl (461 kB)
    | 461 kB 177 kB/s
Requirement already satisfied: platformdirs<3,>=2 in c:\users\ricky uv\appdata\roaming\python\python39\site-packages (from virtualenv) (2.4.1)
Collecting filelock<4,>=3.2
  Downloading filelock-3.4.2-py3-none-any.whl (9.9 kB)
Installing collected packages: filelock, distlib, virtualenv
  WARNING: The script virtualenv.exe is installed in 'C:\Users\Ricky UV\AppData\Roaming\Python\Python39\Scripts' which is not on PATH.
    Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed distlib-0.3.4 filelock-3.4.2 virtualenv-20.13.1
WARNING: You are using pip version 21.2.3; however, version 22.0.3 is available.
You should consider upgrading via the 'C:\Program Files\Python39\python.exe -m pip install --upgrade pip' command.

C:\Users\Ricky UV>.\env\Scripts\activate
The system cannot find the path specified.

C:\Users\Ricky UV>virtualenv env
'virtualenv' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Ricky UV>env\Scripts\activate.bat
The system cannot find the path specified.

C:\Users\Ricky UV>source .\env\Scripts\activate
'source' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Ricky UV>env\Scripts\activate.bat
```

```
Get Started  ship-manualipyb x Ricky programa.py
ship-manualipyb > Manual de la nave > Velocidad de la nave > parsec = 11 * lightyears = 3.26156 * parsec
print(str(parsec) + " parsec, is " + str(lightyears) + " lightyears")

+ Code + Markdown | Run All | Clear Outputs of All Cells | Restart | Interrupt | Variables | Outline | Python 3.9.7 64-bit

PROBLEMS 9 OUTPUT TERMINAL JUPYTER SQL CONSOLE DEBUG CONSOLE
Collecting mypy-extensions>=0.4.3
  Downloading mypy_extensions-0.4.3-py2.py3-none-any.whl (4.5 kB)
Collecting pure-eval
  Downloading pure_eval-0.2.2-py3-none-any.whl (11 kB)
Collecting asttokens
  Downloading asttokens-2.0.5-py2.py3-none-any.whl (20 kB)
Collecting executing
  Downloading executing-0.8.2-py2.py3-none-any.whl (16 kB)
Installing collected packages: six, wcwidth, typing-extensions, traitlets, tomli, pywin32, pure-eval, platformdirs, pathspec, parso, mypy-e
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\Ricky UV\Documents\Full Stack Developer> # Bash | Consola
PS C:\Users\Ricky UV\Documents\Full Stack Developer> pip install python-dateutil
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: python-dateutil in c:\users\ricky uv\appdata\roaming\python\python39\site-packages (2.8.2)
Requirement already satisfied: six>=1.5 in c:\users\ricky uv\appdata\roaming\python\python39\site-packages (from python-dateutil) (1.16.0)
WARNING: You are using pip version 21.2.3; however, version 22.0.3 is available.
You should consider upgrading via the 'C:\Program Files\Python39\python.exe -m pip install --upgrade pip' command.
PS C:\Users\Ricky UV\Documents\Full Stack Developer>
```

Desactivar un entorno virtual:

```
(env) C:\Users\Ricky UV>deactivate  
C:\Users\Ricky UV>
```

A continuación se muestra el contenido de las carpetas que contiene el entorno virtual:

```
You should consider upgrading via the 'C:\Program Files\Python39\python.exe -m pip install --upgrade pip' command.  
PS C:\Users\Ricky UV\Documents\Full Stack Developer> ls
```

Directory: C:\Users\Ricky UV\Documents\Full Stack Developer

Mode	LastWriteTime	Length	Name
d-----	2/8/2022 4:29 PM		env

```
PS C:\Users\Ricky UV\Documents\Full Stack Developer> cd env  
PS C:\Users\Ricky UV\Documents\Full Stack Developer\env> ls
```

Directory: C:\Users\Ricky UV\Documents\Full Stack Developer\env

Mode	LastWriteTime	Length	Name
d-----	2/8/2022 4:29 PM		Include
d-----	2/8/2022 4:29 PM		Lib
d-----	2/8/2022 4:29 PM		Scripts
-a----	2/8/2022 4:56 PM	168	pyenv.cfg

```
PS C:\Users\Ricky UV\Documents\Full Stack Developer\env> cd Lib  
PS C:\Users\Ricky UV\Documents\Full Stack Developer\env\Lib> ls
```

Directory: C:\Users\Ricky UV\Documents\Full Stack Developer\env\Lib

Mode	LastWriteTime	Length	Name
d-----	2/8/2022 4:29 PM		site-packages

```
PS C:\Users\Ricky UV\Documents\Full Stack Developer\env\Lib>
```

Mostrando los paquetes instalados en el entorno virtual con el comando pip freeze desde consola:

```
Flask==2.0.1
Flask-MySQLdb==0.2.0
fonttools==4.29.1
iniconfig==1.1.1
ipykernel==6.9.0
ipython==8.0.1
ipython-genutils==0.2.0
ipywidgets==7.6.5
itsdangerous==2.0.1
jedi==0.18.1
Jinja2==3.0.1
jsonschema==4.4.0
jupyter-client==7.1.2
jupyter-core==4.9.1
jupyterlab-pygments==0.1.2
jupyterlab-widgets==1.0.2
kiwisolver==1.3.2
MarkupSafe==2.0.1
parso==0.8.3
pathspec==0.9.0
pdfkit==0.6.1
pickleshare==0.7.5
Pillow==9.0.1
platformdirs==2.4.1
pluggy==1.0.0
prometheus-client==0.13.1
prompt-toolkit==3.0.27
pure-eval==0.2.2
py==1.10.0
pycparser==2.21
Pygments==2.11.2
PyMySQL==1.0.2
pynumbat==0.0.5
pyparsing==2.4.7
pysistent==0.18.1
pytest==6.2.5
python-dateutil==2.8.2
pywin32==303
pywinpty==2.0.2
pyzmq==22.3.0
self==2020.12.3
Send2Trash==1.8.0
six==1.16.0
stack-data==0.1.4
terminado==0.13.1
testpath==0.5.0
toml==0.10.2
tomli==2.0.0
tornado==6.1
traitlets==5.1.1
typing_extensions==4.0.1
virtualenv==20.13.1
wcwidth==0.2.5
webencodings==0.5.1
Werkzeug==2.0.1
widgetsnbextension==3.5.2
```

Paquete instalado en el programa “app.py” para llamar al comando pipdate:

```
EXPLORER
FULLSTACKDEVELOPER
  env
  Modulo2
    ~$tomo virtual.docx
    app.py
    Entorno virtual.docx
  programa.py
  ship-manual.ipynb

Modulo2 > app.py > ...
1 from datetime import *
2 from dateutil.relativedelta import *
3 now = datetime.now()
4 print(now)
5
6 now = now + relativedelta(months=1, weeks=1, hour=10)
7 print(now)
```