

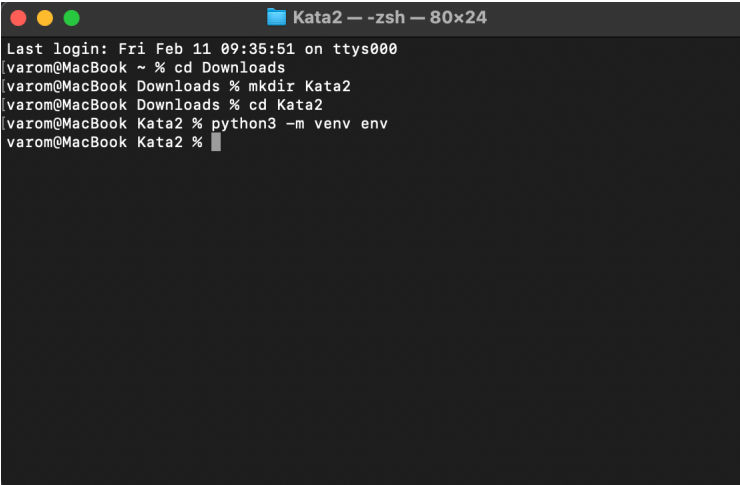
Ejercicio - Crear un paquete

En este ejercicio, aprenderás a utilizar entornos virtuales como una forma para no afectar a los paquetes instalados globalmente u otros programas que se ejecutan en tu máquina.

Crear un entorno virtual

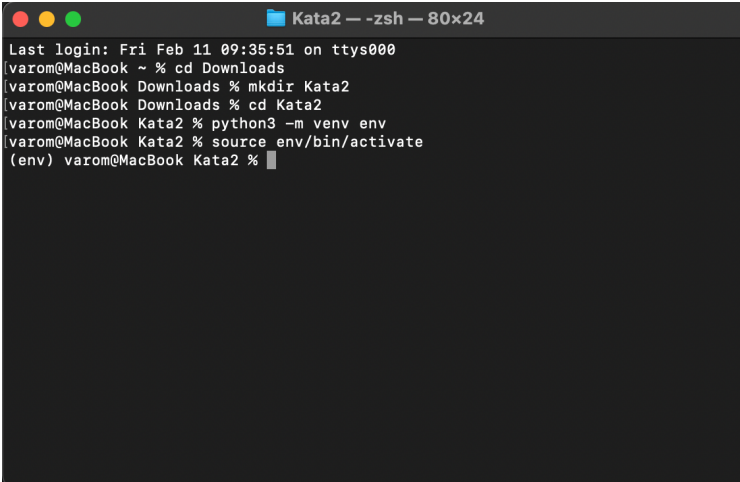
Crea un entorno virtual mediante venv

- Ejecutar en su terminal: `python3 -m venv env` o bien `python -m venv env`

A terminal window titled 'Kata2 - zsh - 80x24' showing a series of commands and their outputs. The user navigates from their home directory to the 'Downloads' folder, then creates a new directory named 'Kata2'. They then move into the 'Kata2' directory and run the command 'python3 -m venv env' to create a virtual environment named 'env'. The terminal shows the prompt changing from 'varom@MacBook' to '(env) varom@MacBook' after the command is executed.

```
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 %
```

- Ejecuta el comando para activar el entorno virtual: `source env/bin/activate`

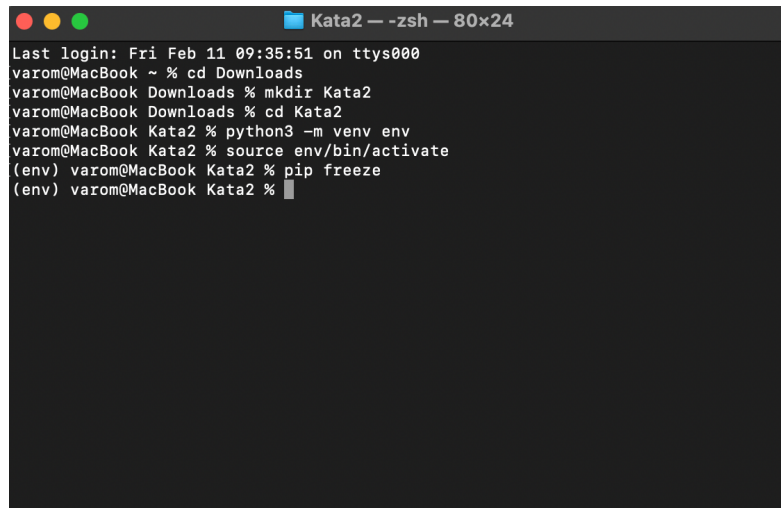
A terminal window titled 'Kata2 - zsh - 80x24' showing the continuation of the previous steps. The user runs the command 'source env/bin/activate' to activate the virtual environment. The terminal shows the prompt changing from '(env) varom@MacBook' to '(env) varom@MacBook' (the prompt text is the same, but the environment is now active).

```
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 % source env/bin/activate
(env) varom@MacBook Kata2 %
```

Instalar una biblioteca

Ahora que estás dentro de tu entorno virtual, puedes instalar una biblioteca y saber que la biblioteca solo existirá en el entorno virtual.

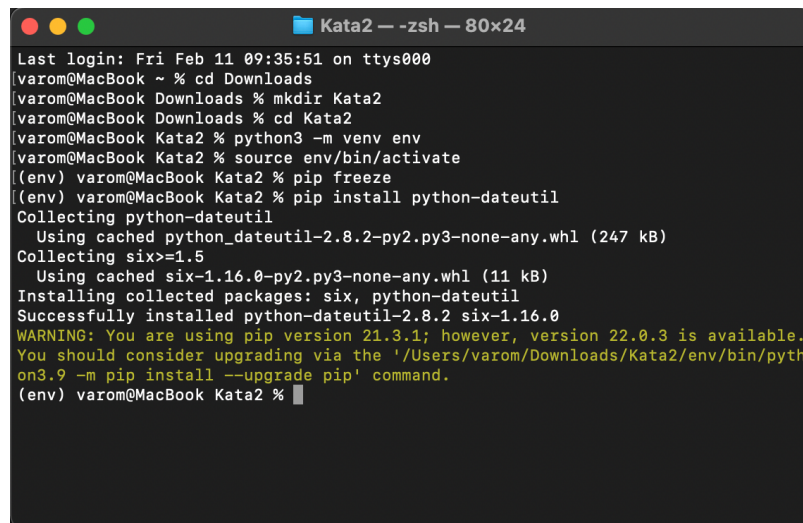
- Ejecuta el comando `pip freeze` para ver las bibliotecas instaladas en tu entorno:



```
Kata2 — -zsh — 80x24
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 % source env/bin/activate
(env) varom@MacBook Kata2 % pip freeze
(env) varom@MacBook Kata2 %
```

No deberías obtener respuesta. A continuación, veamos cómo cambia la salida de `pip freeze` cuando se agrega una biblioteca (un paquete).

- Ejecuta el comando `pip install` para instalar una biblioteca:



```
Kata2 — -zsh — 80x24
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 % source env/bin/activate
(env) varom@MacBook Kata2 % pip freeze
(env) varom@MacBook Kata2 % 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 21.3.1; however, version 22.0.3 is available.
You should consider upgrading via the '/Users/varom/Downloads/Kata2/env/bin/python3.9 -m pip install --upgrade pip' command.
(env) varom@MacBook Kata2 %
```

- Un gran mensaje de salida de texto dice que está instalando tu biblioteca, y debe terminar con la siguiente oración:
 - Successfully installed python-dateutil-2.8.2 six-1.16.0

- Vuelve a ejecutar pip freeze para ver cómo ha cambiado tu lista de bibliotecas:

```
Kata2 — -zsh — 80x24
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 % source env/bin/activate
(env) varom@MacBook Kata2 % pip freeze
(env) varom@MacBook Kata2 % 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 21.3.1; however, version 22.0.3 is available.
You should consider upgrading via the '/Users/varom/Downloads/Kata2/env/bin/python3.9 -m pip install --upgrade pip' command.
(env) varom@MacBook Kata2 % pip freeze
python-dateutil==2.8.2
six==1.16.0
(env) varom@MacBook Kata2 %
```

Desactivar un entorno virtual

Hasta ahora, has creado un entorno virtual y le has agregado un paquete. Sin embargo, es posible que estés trabajando en varios proyectos de Python y necesites cambiar entre ellos. Para hacer eso, debes salir (desactivar) tu entorno virtual.

- Ejecuta el comando deactivate:

```
Kata2 — -zsh — 80x24
Last login: Fri Feb 11 09:35:51 on ttys000
varom@MacBook ~ % cd Downloads
varom@MacBook Downloads % mkdir Kata2
varom@MacBook Downloads % cd Kata2
varom@MacBook Kata2 % python3 -m venv env
varom@MacBook Kata2 % source env/bin/activate
(env) varom@MacBook Kata2 % pip freeze
(env) varom@MacBook Kata2 % 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 21.3.1; however, version 22.0.3 is available.
You should consider upgrading via the '/Users/varom/Downloads/Kata2/env/bin/python3.9 -m pip install --upgrade pip' command.
(env) varom@MacBook Kata2 % pip freeze
python-dateutil==2.8.2
six==1.16.0
(env) varom@MacBook Kata2 % deactivate
varom@MacBook Kata2 %
```

Observa cómo cambia el mensaje de tu terminal (env) a cómo se veía antes. ¡Felicidades! Has logrado crear y usar correctamente un entorno virtual.