

PRIMER ENTORNO VIRTUAL: env_001_davila

The image shows a PyCharm IDE interface with a project named 'PythonProject1 [lorena_davila_rf01]'. The left sidebar shows the project structure with a file named 'requirements.txt' highlighted. The main editor displays the contents of 'requirements.txt', which lists various Python packages and their versions. A red arrow points from the 'requirements.txt' file in the sidebar to the editor. A yellow arrow points from a yellow box labeled 'NUEVA LIBRERIA' to the line 'IronPdf==2025.9.1.4'. Another yellow box labeled 'NUEVA LIBRERIA' points to the line 'pip freeze > ./requirements.txt' in the terminal. The terminal window shows the output of the command 'pip install django', indicating that the package is already installed. A red arrow points from the terminal output to the 'pip freeze > ./requirements.txt' command. A red arrow points from the bottom right of the terminal to a Windows watermark that says 'Activar Windows'.

```
requirements.txt
1 asgiref==3.9.1
2 cffi==1.17.1
3 clr_loader==0.2.7.post0
4 contourpy==1.3.3
5 cycler==0.12.1
6 Django==5.2.6
7 fonttools==4.59.2
8 IronPdf==2025.9.1.4
9 kiwisolver==1.4.9
10 matplotlib==3.10.6
11 numpy==2.3.2
12 packaging==25.0
13 pandas==2.3.2
14 pillow==11.3.0
15 pycparser==2.22
16 pyparsing==3.2.3
17 python-dateutil==2.9.0.post0
18 pythonnet==3.0.5
19 pytz==2025.2
20 seaborn==0.13.2
21 six==1.17.0
22 sqlparse==0.5.3
23 tzdata==2025.2
```

```
Terminal
(env_001_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip install django
Collecting django
  Using cached django-5.2.6-py3-none-any.whl.metadata (4.1 kB)
Requirement already satisfied: asgiref>=3.8.1 in c:\.virtualenvs\env_001_davila\lib\site-packages (from django) (3.9.1)
Requirement already satisfied: sqlparse>=0.3.1 in c:\.virtualenvs\env_001_davila\lib\site-packages (from django) (0.5.3)
Requirement already satisfied: tzdata in c:\.virtualenvs\env_001_davila\lib\site-packages (from django) (2025.2)
Using cached django-5.2.6-py3-none-any.whl (8.3 MB)
Installing collected packages: django
Successfully installed django-5.2.6

[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run 'python.exe -m pip install --upgrade pip'
(env_001_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip freeze > ./requirements.txt
(env_001_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1>
```

Activar Windows
Ve a Configuración para activar Windows.

SEGUNDO ENTORNO VIRTUAL: env_002_davila

The image shows a PyCharm IDE interface with a project named 'PythonProject1 [lorena_davila_rf01]'. The file explorer on the left shows the project structure, including a '.venv' directory and a 'requirements.txt' file. The main editor displays the contents of 'requirements.txt', which lists various dependencies. A yellow box labeled 'NUEVA LIBRERIA' points to the line 'pandas==2.3.2'. A green box labeled 'LIBRERÍAS SOLICITADAS' points to the same line. A red arrow points from the 'requirements.txt' file in the file explorer to the terminal window. The terminal window shows the command 'pip install pandas' being executed, followed by the output indicating that pandas is successfully installed. A red arrow points from the terminal output to the 'requirements.txt' file in the file explorer. A red arrow points from the terminal window to the bottom right corner of the screen, where a message 'Activar Windows' is visible.

Project: PythonProject1 [lorena_davila_rf01]

requirements.txt

```
1 colorama==0.4.6
2 contourpy==1.3.3
3 cycler==0.12.1
4 fonttools==4.59.2
5 kiwisolver==1.4.9
6 matplotlib==3.10.6
7 numpy==2.3.2
8 packaging==25.0
9 pandas==2.3.2
10 pillow==11.3.0
11 pyparsing==3.2.3
12 python-dateutil==2.9.0.post0
13 pytz==2025.2
14 qrcode==8.2
15 six==1.17.0
16 tzdata==2025.2
17
```

Terminal

```
(env_002_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip install pandas
Collecting pandas
  Using cached pandas-2.3.2-cp313-cp313-win_amd64.whl.metadata (19 kB)
Requirement already satisfied: numpy>=1.26.0 in c:\.virtualenvs\env_002_davila\lib\site-packages (from pandas) (2.3.2)
Requirement already satisfied: python-dateutil>=2.8.2 in c:\.virtualenvs\env_002_davila\lib\site-packages (from pandas) (2.9.0.post0)
Requirement already satisfied: pytz>=2020.1 in c:\.virtualenvs\env_002_davila\lib\site-packages (from pandas) (2025.2)
Requirement already satisfied: tzdata>=2022.7 in c:\.virtualenvs\env_002_davila\lib\site-packages (from pandas) (2025.2)
Requirement already satisfied: six>=1.5 in c:\.virtualenvs\env_002_davila\lib\site-packages (from python-dateutil>=2.8.2->pandas) (1.17.0)
Using cached pandas-2.3.2-cp313-cp313-win_amd64.whl (11.0 MB)
Installing collected packages: pandas
Successfully installed pandas-2.3.2

[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
(env_002_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip freeze > ./requirements.txt
(env_002_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1>
```

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TERCER ENTORNO VIRTUAL: env_003_davila

The screenshot displays the PyCharm IDE interface for a project named 'PythonProject1'. The left sidebar shows the project structure with a file named 'requirements.txt' highlighted. The main editor window shows the contents of 'requirements.txt', which lists several Python libraries and their versions: numpy==2.2.6, opencv-python==4.12.0.88, pandas==2.3.2, py4j==0.10.9.9, PyMySQL==1.1.2, pyspark==4.0.1, python-dateutil==2.9.0.post0, pytz==2025.2, six==1.17.0, and tzdata==2025.2. A red arrow points from the 'requirements.txt' file in the sidebar to the editor. A yellow arrow points from the 'pyspark==4.0.1' line to a yellow box labeled 'NUEVA LIBRERIA'. A green box labeled 'LIBRERÍAS SOLICITADAS' has three green arrows pointing to the lines for 'opencv-python==4.12.0.88', 'pandas==2.3.2', and 'PyMySQL==1.1.2'. The bottom terminal window shows the command 'pip install pyspark' being executed, with output indicating that pyspark-4.0.1 was successfully installed. A yellow arrow points from the 'NUEVA LIBRERIA' box to the 'pip install pyspark' command. A red arrow points from the 'Activar Windows' watermark to the bottom right corner. The status bar at the bottom shows 'Python 3.13 (anv_003_davila)'.

Project

- PythonProject1 [loreana_davila_rf01] C:\Users\Sofia\PycharmProjects\PythonProject1
 - .venv library root
 - requirements.txt
 - External Libraries
 - Scratches and Consoles

requirements.txt

```
1 numpy==2.2.6
2 opencv-python==4.12.0.88
3 pandas==2.3.2
4 py4j==0.10.9.9
5 PyMySQL==1.1.2
6 pyspark==4.0.1
7 python-dateutil==2.9.0.post0
8 pytz==2025.2
9 six==1.17.0
10 tzdata==2025.2
11
```

LIBRERÍAS SOLICITADAS

NUEVA LIBRERIA

Terminal Local

```
tzdata==2025.2
(anv_003_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip install pyspark
Collecting pyspark
  Using cached pyspark-4.0.1-py2.py3-none-any.whl
Collecting py4j==0.10.9.9 (from pyspark)
  Using cached py4j-0.10.9.9-py2.py3-none-any.whl.metadata (1.3 kB)
Using cached py4j-0.10.9.9-py2.py3-none-any.whl (203 kB)
Installing collected packages: py4j, pyspark
Successfully installed py4j-0.10.9.9 pyspark-4.0.1

[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
(anv_003_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip freeze > ./requirements.txt
(anv_003_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1>
```

NUEVA LIBRERIA

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PythonProject1 > requirements.txt

11:1 CRLF UTF-16LE 4 spaces Python 3.13 (anv_003_davila)

CUARTO ENTORNO VIRTUAL: env 004 davila

The screenshot shows the PyCharm IDE interface. The top bar displays the project name 'lorena_davila_rf01' and the version control status. The left sidebar shows the project structure with 'PythonProject1 [lorena_davila_rf01]' and the '.venv' directory. The 'requirements.txt' file is open in the editor, listing various Python packages. The terminal window at the bottom shows the command 'pip install pdf-maker' and its output, indicating that the package was successfully installed. Annotations include red arrows pointing to the file explorer, the requirements.txt file, and the terminal command, and a yellow arrow pointing to the 'pdf-maker' package in the requirements.txt file. A yellow box labeled 'LIBRERÍAS SOLICITADAS' points to the list of packages. A yellow box labeled 'NUEVA LIBRERIA' points to the 'pdf-maker' package in the requirements.txt file.

Project: PythonProject1 [lorena_davila_rf01] C:\Users\Sofia\PycharmProjects\PythonProject1

requirements.txt

```
1 asgiref==3.9.1
2 awscli==1.42.25
3 boto3==1.40.25
4 colorama==0.4.6
5 Django==5.2.6
6 docutils==0.19
7 jmespath==1.0.1
8 numpy==2.3.2
9 pdf-maker==0.0.56
10 pyasn1==0.6.1
11 python-dateutil==2.9.0.post0
12 PyYAML==6.0.2
13 rsa==4.7.2
14 s3transfer==0.13.1
15 six==1.17.0
16 spark==0.2.1
17 sqlparse==0.5.3
18 tzdata==2025.2
19 urllib3==2.5.0
20
```

Terminal: Local

```
spark==0.2.1
sqlparse==0.5.3
tzdata==2025.2
urllib3==2.5.0
(env_004_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip install pdf-maker
Collecting pdf-maker
  Using cached pdf_maker-0.0.56-py3-none-any.whl.metadata (8.2 kB)
Collecting numpy (from pdf-maker)
  Using cached numpy-2.3.2-cp313-cp313-win_amd64.whl.metadata (60 kB)
Using cached pdf_maker-0.0.56-py3-none-any.whl (9.0 MB)
Using cached numpy-2.3.2-cp313-cp313-win_amd64.whl (12.8 MB)
Installing collected packages: numpy, pdf-maker
Successfully installed numpy-2.3.2 pdf-maker-0.0.56

[notice] A new release of pip is available: 25.1.1 -> 25.2
[notice] To update, run: python.exe -m pip install --upgrade pip
(env_004_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1> pip freeze > ./requirements.txt
(env_004_davila) PS C:\Users\Sofia\PycharmProjects\PythonProject1>
```

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