```
■ Administrador: Símbolo del sistema

El número de serie del volumen es: 42F4-F7F1

 Directorio de C:\Users\PC\launchxmagh

08/02/2022  01:41 p. m.    <DIR>          .
08/02/2022  01:41 p. m.    <DIR>          ..
08/02/2022  01:15 p. m.    <DIR>          .ipynb_checkpoints
07/02/2022  08:52 p. m.    <DIR>          CursoIntroPython-main
07/02/2022  08:51 p. m.         1,056,239 CursoIntroPython-main.zip
07/02/2022  09:43 p. m.            11,548 Ejercicio_1.ipynb
07/02/2022  09:51 p. m.             7,555 Ejercicio_2.ipynb
08/02/2022  01:40 p. m.    <DIR>          env
08/02/2022  01:14 p. m.             2,011 Programas.ipynb
07/02/2022  08:56 p. m.                24 ship-manual.ipynb
08/02/2022  01:41 p. m.    <DIR>          tutorial
08/02/2022  01:17 p. m.               588 Untitled.ipynb
               6 archivos      1,077,965 bytes
               6 dirs  592,440,721,408 bytes libres

C:\Users\PC\launchxmagh>cd tutorial

C:\Users\PC\launchxmagh\tutorial>Scripts\activate.bat

(tutorial) C:\Users\PC\launchxmagh\tutorial>deactivate.bat
C:\Users\PC\launchxmagh\tutorial>cd ..

C:\Users\PC\launchxmagh>cd env

C:\Users\PC\launchxmagh\env>cd Scripts\activate.bat
El nombre del directorio no es válido.

C:\Users\PC\launchxmagh\env>cd Scripts

C:\Users\PC\launchxmagh\env\Scripts>activate.bat

(env) C:\Users\PC\launchxmagh\env\Scripts>
```

Nombre	Fecha de modificación	Tipo	Tamaño
.ipynb_checkpoints	08/02/2022 07:54 p. m.	Carpeta de...	
CursoIntroPython-main	07/02/2022 08:52 p. m.	Carpeta de...	
env	08/02/2022 01:40 p. m.	Carpeta de...	
tutorial	08/02/2022 01:41 p. m.	Carpeta de...	
CursoIntroPython-main	07/02/2022 08:51 p. m.	Archivo W...	1,032 KB
Ejercicio_1	08/02/2022 08:25 p. m.	Archivo de...	12 KB
Ejercicio_2	07/02/2022 09:51 p. m.	Archivo de...	8 KB
env1	08/02/2022 08:30 p. m.	Archivo P...	20 KB
env2	08/02/2022 08:30 p. m.	Archivo P...	23 KB
mod0	08/02/2022 08:24 p. m.	Document...	1,665 KB
mod0_1	08/02/2022 08:26 p. m.	Document...	411 KB
mod1	08/02/2022 08:27 p. m.	Document...	83 KB
mod2	08/02/2022 08:29 p. m.	Archivo P...	50 KB
modulo_3	08/02/2022 04:59 p. m.	Archivo de...	5 KB
modulo_4	08/02/2022 05:31 p. m.	Archivo de...	8 KB
modulo_5	08/02/2022 07:53 p. m.	Archivo de...	5 KB
modulo_6	08/02/2022 08:23 p. m.	Archivo de...	5 KB
Programas	08/02/2022 01:14 p. m.	Archivo de...	2 KB
ship-manual	07/02/2022 08:56 p. m.	Archivo de...	1 KB

tutoria
Carpeta

Fecha de

4 elementos

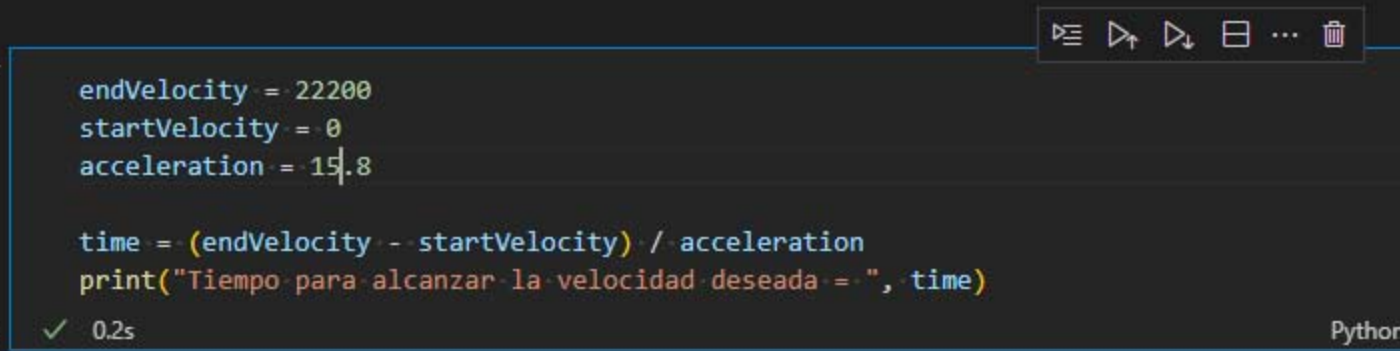| Nombre	Fecha de modificación	Tipo	Tama
Include	08/02/2022 01:40 p. m.	Carpeta de archivos	
Lib	08/02/2022 01:40 p. m.	Carpeta de archivos	
Scripts	08/02/2022 01:41 p. m.	Carpeta de archivos	
pyvenv	08/02/2022 01:40 p. m.	Archivo de origen ...	

Velocidad de la nave

Muestra los segundos necesarios para pasar de 0 a 11200 metros por segundo, dada la aceleración de la nave en metros por segundo.

```python
endVelocity = 22200
startVelocity = 0
acceleration = 15.8

time = (endVelocity - startVelocity) / acceleration
print("Tiempo para alcanzar la velocidad deseada = ", time)
```

```
Tiempo para alcanzar la velocidad deseada =  1405.0632911392404
```

Curso Propedéutico de Python para Launch X - Innovacción Virtual.

Material desarrollado con base en los contenidos de MSLearn y la metáfora de LaunchX, traducción e implementación por: Fernanda Ochoa - Learning Producer de LaunchX.

Redes:

- GitHub: FernandaOchoa
- Twitter: @imonsh
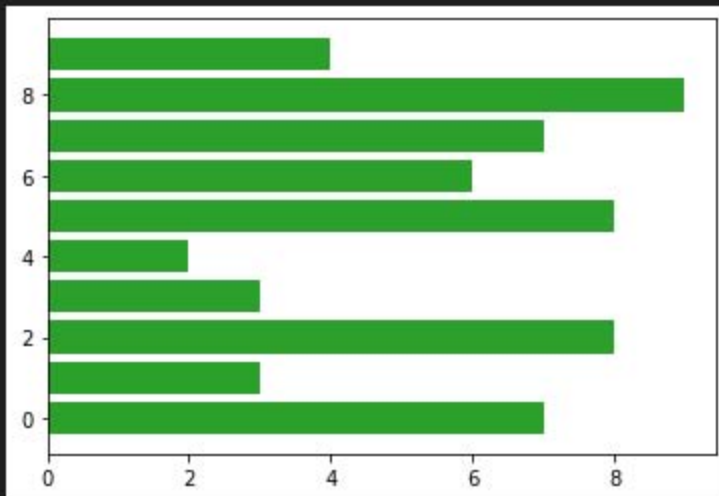- Instagram: fherz8a

Niveles de Oxígeno

Muestra diez minutos de niveles de oxígeno en tu nave.

```python
import numpy as np
import matplotlib.pyplot as plt
data = np.random.default_rng(12345)
oxy_nums = data.integers(low=1, high=10, size=10)

plt.barh(range(len(oxy_nums)), oxy_nums, color='tab:green')
plt.show()
```

[11] ✓ 0.1s   Python

```
...    Collecting matplotlib
         Downloading matplotlib-3.5.1-cp39-cp39-win_amd64.whl (7.2 MB)
            -------------------------------------- 7.2/7.2 MB 1.0 MB/s eta 0:00:00
       Collecting fonttools>=4.22.0
         Downloading fonttools-4.29.1-py3-none-any.whl (895 kB)
            --------------------------------- 895.5/895.5 KB 755.3 kB/s eta 0:00:00
       Collecting packaging>=20.0
         Using cached packaging-21.3-py3-none-any.whl (40 kB)
       Collecting kiwisolver>=1.0.1
         Downloading kiwisolver-1.3.2-cp39-cp39-win_amd64.whl (52 kB)
            ----------------------------------- 52.1/52.1 KB 890.8 kB/s eta 0:00:00
       Collecting pillow>=6.2.0
         Downloading Pillow-9.0.1-cp39-cp39-win_amd64.whl (3.2 MB)
            -------------------------------------- 3.2/3.2 MB 306.0 kB/s eta 0:00:00
       Requirement already satisfied: python-dateutil>=2.7 in
       c:\users\pc\launchxmagh\cursointropython-main\env\lib\site-packages (from matplotlib)
       (2.8.2)
       Collecting pyparsing>=2.2.1
         Using cached pyparsing-3.0.7-py3-none-any.whl (98 kB)
       Collecting cycler>=0.10
         Downloading cycler-0.11.0-py3-none-any.whl (6.4 kB)
       Collecting numpy>=1.17
         Downloading numpy-1.22.2-cp39-cp39-win_amd64.whl (14.7 MB)
            -------------------------------------- 14.7/14.7 MB 1.1 MB/s eta 0:00:00
       Requirement already satisfied: six>=1.5 in c:\users\pc\launchxmagh\cursointropython-
       main\env\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
       Installing collected packages: pyparsing, pillow, numpy, kiwisolver, fonttools, cycler,
       packaging, matplotlib
       Successfully installed cycler-0.11.0 fonttools-4.29.1 kiwisolver-1.3.2 matplotlib-3.5.1
       numpy-1.22.2 packaging-21.3 pillow-9.0.1 pyparsing-3.0.7
       Requirement already satisfied: numpy in c:\users\pc\launchxmagh\cursointropython-
       main\env\lib\site-packages (1.22.2)
```

```python
import ipywidgets as widgets

ignition = widgets.ToggleButton(
    value=False,
    description='Iniciar Lanzamiento de aprendizaje con INNOVACCION VIRTUAL ',
    button_style='success',
    tooltip='Engage your Launch',
    icon='rocket'
)

output = widgets.Output()

display(ignition, output)

def on_value_change(change):
    with output:
        if change['new'] == True:
            print("Nave Iniciada con Miguel Angel Garcia Hernandez!")
        else:
            print("Nave Detenida")

ignition.observe(on_value_change, names='value')
```

[6]   ✓ 0.4s   Python

🚀 Iniciar Lanzamie...

Nave Iniciada con Miguel Angel Garcia Hernandez!

```
pip install ipywidgets
```

... Requirement already satisfied: ipywidgets in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (7.6.5)
Requirement already satisfied: ipykernel>=4.5.1 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(6.9.0)
Requirement already satisfied: ipython-genutils~=0.2.0 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(0.2.0)
Requirement already satisfied: ipython>=4.0.0; python_version >= "3.3" in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(7.31.1)
Requirement already satisfied: widgetsnbextension~=3.5.0 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(3.5.2)
Requirement already satisfied: traitlets>=4.3.1 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(5.1.1)
Requirement already satisfied: nbformat>=4.2.0 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(5.1.3)
Requirement already satisfied: jupyterlab-widgets>=1.0.0; python_version >= "3.6" in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from ipywidgets)
(1.0.2)
Requirement already satisfied: tornado<7.0,>=4.2 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from
ipykernel>=4.5.1->ipywidgets) (6.1)
Requirement already satisfied: matplotlib-inline<0.2.0,>=0.1.0 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from
ipykernel>=4.5.1->ipywidgets) (0.1.3)
Requirement already satisfied: debugpy<2.0,>=1.0.0 in
c:\users\pc\appdata\local\programs\python\python37\lib\site-packages (from
ipykernel>=4.5.1->ipywidgets) (1.5.1)Note: you may need to restart the kernel to use
updated packages.

You are using pip version 19.0.3, however version 22.0.3 is available.   Activar Wir
You should consider upgrading via the 'python -m pip install --upgrade pip' command.   Ve a Configura

```
teutil-2.8.2 pywin32-303 pyzmq-22.3.0 six-1.16.0 stack-data-0.1.4 tomli-2.0.1 tornado-
6.1 traitlets-5.1.1 typing-extensions-4.0.1 wcwidth-0.2.5
WARNING: You are using pip version 20.2.3; however, version 22.0.3 is available.
You should consider upgrading via the 'c:\Users\PC\launchxmagh\CursoIntroPython-main\e
nv\Scripts\python.exe -m pip install --upgrade pip' command.
(env) PS C:\Users\PC\launchxmagh\CursoIntroPython-main> c:\Users\PC\launchxmagh\CursoI
ntroPython-main\env\Scripts\python.exe -m pip install --upgrade pip
Collecting pip
  Using cached pip-22.0.3-py3-none-any.whl (2.1 MB)
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 20.2.3
    Uninstalling pip-20.2.3:
      Successfully uninstalled pip-20.2.3
Successfully installed pip-22.0.3
(env) PS C:\Users\PC\launchxmagh\CursoIntroPython-main>
```

Python
Python
Python

```
(env) C:\Users\PC\launchxmagh\env\Scripts>C:\Users\PC\launchxmagh\env\Scripts\python.exe -m pip install --upgrade pip
Requirement already satisfied: pip in c:\users\pc\launchxmagh\env\lib\site-packages (21.2.3)
Collecting pip
  Using cached pip-22.0.3-py3-none-any.whl (2.1 MB)
Installing collected packages: pip
  Attempting uninstall: pip
    Found existing installation: pip 21.2.3
    Uninstalling pip-21.2.3:
      Successfully uninstalled pip-21.2.3
Successfully installed pip-22.0.3

(env) C:\Users\PC\launchxmagh\env\Scripts>pip freeze
python-dateutil==2.8.2
six==1.16.0

(env) C:\Users\PC\launchxmagh\env\Scripts>deactivate
C:\Users\PC\launchxmagh\env\Scripts>
```

```
(env) C:\Users\PC\launchxmagh\env\Scripts>pip freeze

(env) C:\Users\PC\launchxmagh\env\Scripts>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\PC\launchxmagh\env\Scripts\python.exe -m pip install --upgrade pip' command.
```

```
El número de serie del volumen es: 42F4-F7F1

 Directorio de C:\Users\PC\launchxmagh

08/02/2022  01:41 p. m.    <DIR>          .
08/02/2022  01:41 p. m.    <DIR>          ..
08/02/2022  01:15 p. m.    <DIR>          .ipynb_checkpoints
07/02/2022  08:52 p. m.    <DIR>          CursoIntroPython-main
07/02/2022  08:51 p. m.         1,056,239 CursoIntroPython-main.zip
07/02/2022  09:43 p. m.            11,548 Ejercicio_1.ipynb
07/02/2022  09:51 p. m.             7,555 Ejercicio_2.ipynb
08/02/2022  01:40 p. m.    <DIR>          env
08/02/2022  01:14 p. m.             2,011 Programas.ipynb
07/02/2022  08:56 p. m.                24 ship-manual.ipynb
08/02/2022  01:41 p. m.    <DIR>          tutorial
08/02/2022  01:17 p. m.               588 Untitled.ipynb
               6 archivos      1,077,965 bytes
               6 dirs  592,440,721,408 bytes libres

C:\Users\PC\launchxmagh>cd tutorial

C:\Users\PC\launchxmagh\tutorial>Scripts\activate.bat

(tutorial) C:\Users\PC\launchxmagh\tutorial>deactivate.bat
C:\Users\PC\launchxmagh\tutorial>cd ..

C:\Users\PC\launchxmagh>cd env

C:\Users\PC\launchxmagh\env>cd Scripts\activate.bat
El nombre del directorio no es válido.

C:\Users\PC\launchxmagh\env>cd Scripts

C:\Users\PC\launchxmagh\env\Scripts>activate.bat

(env) C:\Users\PC\launchxmagh\env\Scripts>
```