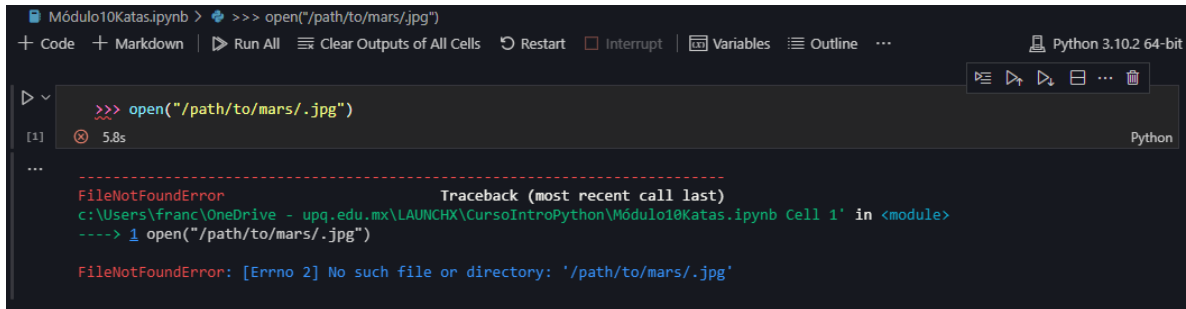


MÓDULO 10 – MANEJO DE ERRORES

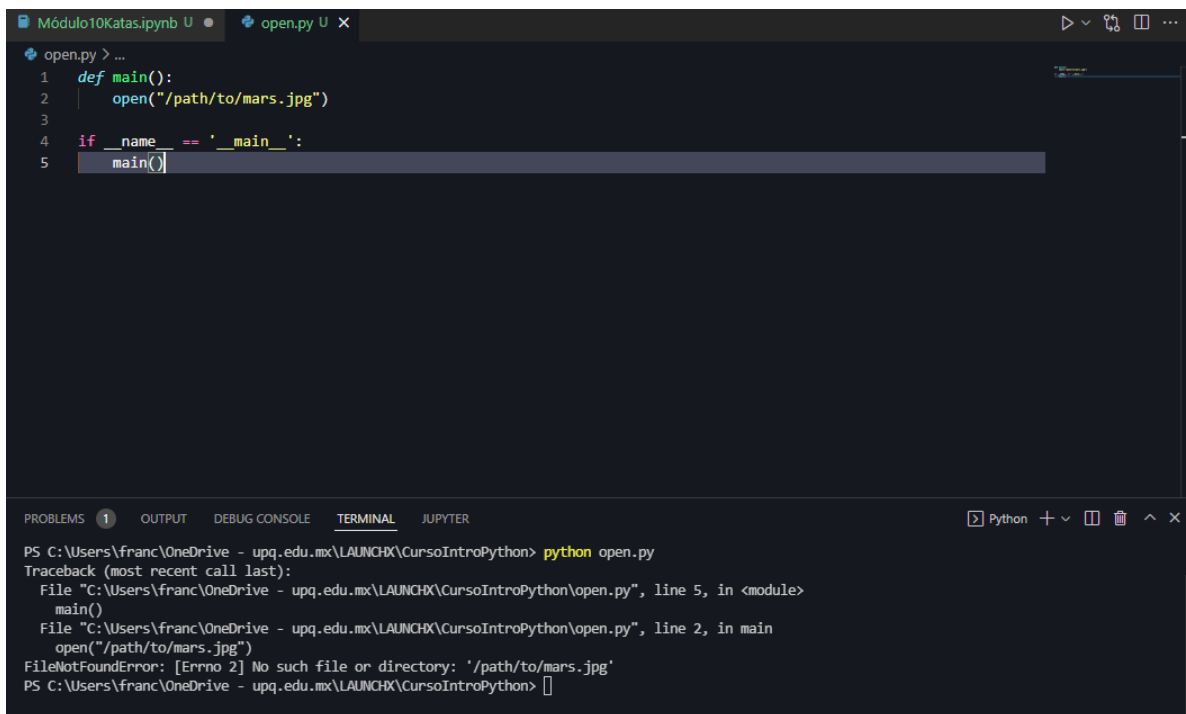
Tracebacks



A screenshot of a Jupyter Notebook interface. The top bar shows 'Módulo10Katas.ipynb' and a command prompt icon. Below the toolbar, a code cell contains the command `>>> open("/path/to/mars/.jpg")`. The output area shows a `FileNotFoundError` with a traceback. The traceback indicates the error occurred in the current cell at line 1. The error message is: `FileNotFoundError: [Errno 2] No such file or directory: '/path/to/mars/.jpg'`.

```
>>> open("/path/to/mars/.jpg")
FileNotFoundError                                Traceback (most recent call last)
c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas.ipynb Cell 1' in <module>
----> 1 open("/path/to/mars/.jpg")

FileNotFoundError: [Errno 2] No such file or directory: '/path/to/mars/.jpg'
```



A screenshot of a Python IDE showing a script named `open.py` and its execution output in the terminal. The script defines a `main()` function that attempts to open a file at `"/path/to/mars.jpg"`. The terminal output shows the command `python open.py` being executed, followed by a `FileNotFoundError` traceback. The traceback shows the error occurred in `open.py` at line 5 in the `main()` function and line 2 in the `main` function. The error message is: `FileNotFoundError: [Errno 2] No such file or directory: '/path/to/mars.jpg'`.

```
def main():
    open("/path/to/mars.jpg")

if __name__ == '__main__':
    main()

PS C:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython> python open.py
Traceback (most recent call last):
  File "C:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\open.py", line 5, in <module>
    main()
  File "C:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\open.py", line 2, in main
    open("/path/to/mars.jpg")
FileNotFoundError: [Errno 2] No such file or directory: '/path/to/mars.jpg'
PS C:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython>
```

Controlando las excepciones

Try y Except de los bloques

```
Módulo10Katas.ipynb U • open.py U •
Módulo10Katas.ipynb > >>> try:
...     open('config.txt')
... except FileNotFoundError:
...     print("Couldn't find the config.txt file!")
Python 3.10.2 64-bit

[2] ✓ 0.1s
... Couldn't find the config.txt file!
```

```
def main():
    try:
        configuration = open('config.txt')
    except FileNotFoundError:
        print("Couldn't find the config.txt file!")

if __name__ == '__main__':
    main()

[2] ✗ 1.3s
...
-----
PermissionError: [Errno 13] Permission denied: 'config.txt'
Traceback (most recent call last):
  c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 3: in <module>
      5     print("Couldn't find the config.txt file!")
      8 if __name__ == '__main__':
----> 9     main()

  c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 3: in main()
      1 def main():
      2     try:
----> 3         configuration = open('config.txt')
      4     except FileNotFoundError:
      5         print("Couldn't find the config.txt file!")
```

```
Módulo10Katas.ipynb U • config.py U X
Módulo10Katas > config.py > ...
1 def main():
2     try:
3         configuration = open('config.txt')
4     except FileNotFoundError:
5         print("Couldn't find the config.txt file!")
6     except IsADirectoryError:
7         print("Found config.txt but it is a directory, couldn't read it")
8
9 if __name__ == '__main__':
10     main()

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
franc@DESKTOP-980VSSB MINGW64 ~/OneDrive - upq.edu.mx/LAUNCHX/CursoIntroPython/Módulo10Katas (master)
$ python config.py
Couldn't find the config.txt file!

franc@DESKTOP-980VSSB MINGW64 ~/OneDrive - upq.edu.mx/LAUNCHX/CursoIntroPython/Módulo10Katas (master)
$
```

```
Módulo10Katas.ipynb U • config.py U
Módulo10Katas > Módulo10Katas.ipynb > >>> try:
...     open("mars.jpg")
... except FileNotFoundError as err:
...     print("got a problem trying to read the file:", err)

[12] ✓ 0.1s Python
... got a problem trying to read the file: [Errno 2] No such file or directory: 'mars.jpg'
```

```
Módulo10Katas.ipynb U • config.py U
Módulo10Katas > Módulo10Katas.ipynb > >>> try:
...     open("config.txt")
... except OSError as err:
...     if err.errno == 2:
...         print("Couldn't find the config.txt file!")
...     elif err.errno == 13:
...         print("Found config.txt but couldn't read it")

[13] ✓ 0.1s Python
... Found config.txt but couldn't read it
```

Generar excepciones

```
Módulo10Katas.ipynb U • config.py U
Módulo10Katas > Módulo10Katas.ipynb > >>> water_left(5, 100, 2)

def water_left(astronauts, water_left, days_left):
    daily_usage = astronauts * 11
    total_usage = daily_usage * days_left
    total_water_left = water_left - total_usage
    if total_water_left < 0:
        raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left} days!")
    return f"Total water left after {days_left} days is: {total_water_left} liters"

[16] ✓ 0.1s Python

>>> water_left(5, 100, 2)

[18] ✗ 0.1s Python
...
RuntimeError                                Traceback (most recent call last)
c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 8' in <module>
----> 1 water_left(5, 100, 2)

c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 7' in water_left(astronauts, water_left, days_left)
      4 total_water_left = water_left - total_usage
      5 if total_water_left < 0:
----> 6     raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left} days!")
      7 return f"Total water left after {days_left} days is: {total_water_left} liters"

RuntimeError: There is not enough water for 5 astronauts after 2 days!
```

```
Módulo10Katas.ipynb U • config.py U
Módulo10Katas > Módulo10Katas.ipynb > >>> water_left("3", "200", None)
+ Code + Markdown | ▶ Run All | Clear Outputs of All Cells | Restart | Interrupt | Variables | Outline | Python 3.10.2 64-bit

>>> water_left("3", "200", None)
[20] 0.1s Python

...
-----
TypeError                                Traceback (most recent call last)
c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 9' in <module>
----> 1 water_left("3", "200", None)

c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 7' in water_left(astronauts, water_left, days_left)
1 def water_left(astronauts, water_left, days_left):
2     daily_usage = astronauts * 11
----> 3     total_usage = daily_usage * days_left
4     total_water_left = water_left - total_usage
5     if total_water_left < 0:

TypeError: can't multiply sequence by non-int of type 'NoneType'
```

```
Módulo10Katas.ipynb U • config.py U
Módulo10Katas > Módulo10Katas.ipynb > >>> water_left("3", "200", None)
+ Code + Markdown | ▶ Run All | Clear Outputs of All Cells | Restart | Interrupt | Variables | Outline | Python 3.10.2 64-bit

def water_left(astronauts, water_left, days_left):
    for argument in [astronauts, water_left, days_left]:
        try:
            # If argument is an int, the following operation will work
            argument / 10
        except TypeError:
            # TypeError will be raised only if it isn't the right type
            # Raise the same exception but with a better error message
            raise TypeError(f"All arguments must be of type int, but received: '{argument}'")
    daily_usage = astronauts * 11
    total_usage = daily_usage * days_left
    total_water_left = water_left - total_usage
    if total_water_left < 0:
        raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left} days!")
    return f"Total water left after {days_left} days is: {total_water_left} liters"

[21] 0.8s Python

>>> water_left("3", "200", None)
[22] 0.2s Python
```

```
...
-----
TypeError                                Traceback (most recent call last)
c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 10' in water_left(astronauts, water_left, days_left)
3 try:
4     # If argument is an int, the following operation will work
----> 5     argument / 10
6 except TypeError:
7     # TypeError will be raised only if it isn't the right type
8     # Raise the same exception but with a better error message

TypeError: unsupported operand type(s) for /: 'str' and 'int'

During handling of the above exception, another exception occurred:

TypeError                                Traceback (most recent call last)
c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 11' in <module>
----> 1 water_left("3", "200", None)

c:\Users\franc\OneDrive - upq.edu.mx\LAUNCHX\CursoIntroPython\Módulo10Katas\Módulo10Katas.ipynb Cell 10' in water_left(astronauts, water_left, days_left)
5     argument / 10
6     except TypeError:
7         # TypeError will be raised only if it isn't the right type
8         # Raise the same exception but with a better error message
----> 9         raise TypeError(f"All arguments must be of type int, but received: '{argument}'")
10    daily_usage = astronauts * 11
11    total_usage = daily_usage * days_left

TypeError: All arguments must be of type int, but received: '3'
```