

Control de errores

```
open("/path/to/mars.jpg")
```

0.7s Python

```
-----
FileNotFoundError                                Traceback (most recent call last)
c:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\test.ipynb Cell 34' in <module>
----> 1 open("/path/to/mars.jpg")

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

Excepcion 1.

```
config.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Cas...
File Edit Format Run Options Window Help
#SAMUEL HIRAM CASTRO MARTINEZ, KATA 10, INNOVACION VIRTUAL 2022

def main():
    try:
        # ...

if __name__ == '__main__':
    main()
```

ex IDLE Shell 3.10.2

```
File Edit Shell Debug Options Window Help
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py
Traceback (most recent call last):
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py", line 11, in <module>
    main()
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py", line 5, in main
    configuration = open('config.txt')
PermissionError: [Errno 13] Permission denied: 'config.txt'
```

Excepcion 2.

```
config.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Cas...
File Edit Format Run Options Window Help
#SAMUEL HIRAM CASTRO MARTINEZ, KATA 10, INN
def main():
    try:
        configuration = open('config.txt')
    except FileNotFoundError:
        print("Couldn't find the config.txt")

if __name__ == '__main__':
    main()
```

IDLE Shell 3.10.2

```
File Edit Shell Debug Options Window Help
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py
Couldn't find the config.txt file!
>>>
```

Excepcion 3 (pero controlandola).

Name	Date modified
open.py	2/20/2022 4:10 PM
config	2/20/2022 4:14 PM
config.txt	2/20/2022 4:27 PM


```

config.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Cas...
File Edit Format Run Options Window Help

IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py
Traceback (most recent call last):
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py", line 11, in <module>
    main()
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config.py", line 5, in main
    configuration = open('config.txt')
PermissionError: [Errno 13] Permission denied: 'config.txt'

>>>

```

Excepcion 4, tratando de abrir directorio.

Name	Date modified	Type	Size
open.py			
config			
config			
config			


```

config_mod_main.py - C:\Users\
File Edit Format Run Option
#SAMUEL HIRAM CASTRO MAR

def main():
    try:
        configuration =
    except Exception:
        print("Couldn't

IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config_mod_main.py
Couldn't find the config.txt file!

>>>

```

Excepcion 5 (pero controlada), modificando main()

```

config_correction_main.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ S...
File Edit Format Run Options Window Help
#SAMUEL HIRAM CASTRO MARTINEZ, KATA

def main():
    try:
        configuration = open('config
    except FileNotFoundError:
        print("Couldn't find the con
    except IsADirectoryError:
        print("Found config.txt but
    except PermissionError:
        print("No se puede abrir, ex

if __name__ == '__main__':
    main()

IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X Castro Martinez\Primera Mision\Kata 10\config_correction_n
No se puede abrir, error de permisos. uwu

>>>

```

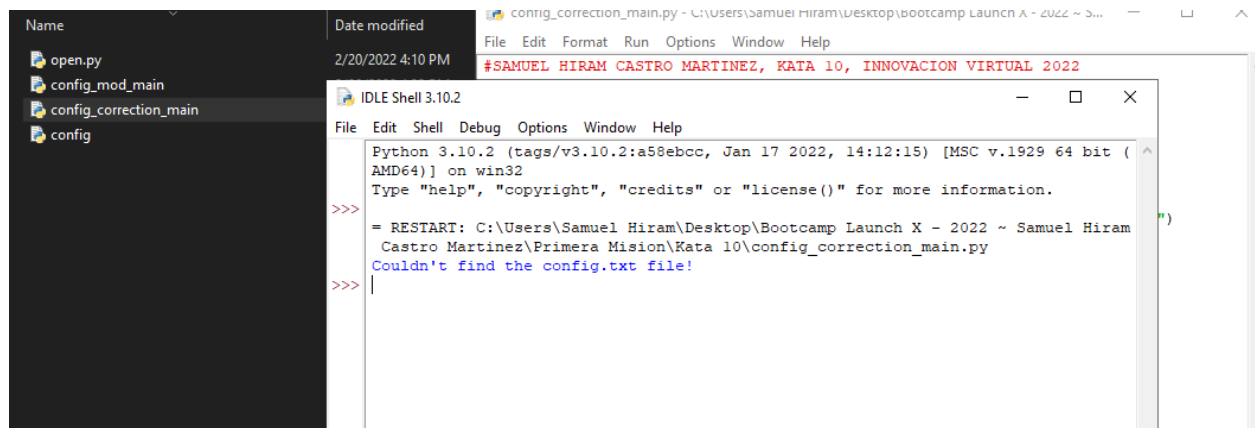
Excepcion 6, error en el directorio de permisos.

!:

Vamos a corregir este fragmento de código para abordar todas estas frustraciones. Revertiremos la detección de `FileNotFoundError` y luego agregamos otro bloque `except` para detectar `PermissionError`:

```
def main():
    try:
        configuration = open('config.txt')
    except FileNotFoundError:
        print("Couldn't find the config.txt file!")
    except IsADirectoryError:
        print("Found config.txt but it is a directory, couldn't read it")
```

Dice que “detectar `PermissionError`”. Pero nunca se agrega en el ejemplo, así que nunca sale. Debe agregarse para poder entender mejor el tutorial...



Excepcion 7 (pero controlada)...

```
config_usando_err.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samue...
File Edit Format Run Options Window Help
#SAMUEL HIRAM CASTRO MARTINEZ, KATA 10, INNOVACION VIRTUAL 2022

def main():
    try:
        open('config.txt')
    except FileNotFoundError:
        print('Couldnt find the config.txt file!')
    elif __name__ == '__main__':
        main()
```

```
IDLE Shell 3.10.2
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\config_usando_err.py
Couldnt find the config.txt file!
>>>
```

Excepcion 8 pero utilizando el objeto err en base al error...

```
generacion de excepciones.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py (3.10.2)
File Edit Format Run Options Window Help

#SAMUEL HIRAM CASTRO MARTINEZ KATA 10, INNOVACION VIRTUAL 2022

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
    return f"Total water left after {days_left} days is: {total_water_left} liters"

if __name__ == '__main__':
    print(water_left(5, 100, 2))
```

```
IDLE Shell 3.10.2
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py
Total water left after 2 days is: -10 liters
>>>
```

Ejemplo de llamada a excepciones 1, sin raise

generacion de excepciones.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py (3.10.2)
File Edit Format Run Options Window Help

```
#SAMUEL HIRAM CASTRO MARTINEZ KATA 10, INNOVACION VIRTUAL 2022

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"

if __name__ == '__main__':
    print(water_left(5, 100, 2))
```

IDLE Shell 3.10.2

File Edit Shell Debug Options Window Help

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC
AMD64] on win32
Type "help", "copyright", "credits" or "license()" for more info
>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~
Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py
Total water left after 2 days is: -10 liters
>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~
Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py
Traceback (most recent call last):
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~
Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py",
line 12, in <module>
    print(water_left(5, 100, 2))
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~
Castro Martinez\Primera Mision\Kata 10\generacion de excepciones.py",
line 12, in water_left
    raise RuntimeError(f"There is not enough water for {astronauts}
astronauts after {days_left} days!")
RuntimeError: There is not enough water for 5 astronauts after 2
>>>
```

Ejemplo de llamada a excepciones 2 pero utilizando 'raise'

The image shows a Python IDE window titled "generacion de excepciones_no int err.py - C:\Users\Samuel Hiram\Desktop\Bootcamp Launch...". The script defines a function `water_left` that takes three arguments: `astronauts`, `water_left`, and `days_left`. It uses a `for` loop to iterate over these arguments. Inside the loop, it attempts to divide `argument / 10`. If a `TypeError` is raised, it catches it and raises a new `TypeError` with a custom message: "All arguments must be of type int, but received: '{argument}'". If no exception is raised, it calculates `daily_usage = astronauts * 11`, `total_usage = daily_usage * days_left`, and `total_water_left = water_left - total_usage`. It then checks if `total_water_left < 0`; if so, it raises a `RuntimeError` with a message: "There is not enough water for {astronauts} astronaut". Finally, it returns a string: `return f"Total water left after {days_left} days is: {total_water_left} lite`.

The IDE also shows the execution output in the "IDLE Shell 3.10.2" window. The user has entered `print(water_left('paco', "100", 2))`. The output shows a `RESTART` of the shell, followed by a `Traceback` indicating a `TypeError: unsupported operand type(s) for /: 'str' and 'int'` at line 8, in `water_left`. It then shows another `Traceback` indicating a `TypeError: All arguments must be of type int, but received: 'paco'` at line 22, in `<module>`.

```
#SAMUEL HIRAM CASTRO MARTINEZ KATA 10, INNOVACION VIRTUAL 2022

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} astronaut")
    return f"Total water left after {days_left} days is: {total_water_left} lite"

if __name__ == '__main__':
    print(water_left('paco', "100", 2))
```

```
type "neip", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones_no int err.py
Traceback (most recent call last):
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones_no int err.py", line 8, in water_left
    argument / 10
TypeError: unsupported operand type(s) for /: 'str' and 'int'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones_no int err.py", line 22, in <module>
    print(water_left('paco', "100", 2))
  File "C:\Users\Samuel Hiram\Desktop\Bootcamp Launch X - 2022 ~ Samuel Hiram Castro Martinez\Primera Mision\Kata 10\generacion de excepciones_no int err.py", line 12, in water_left
    raise TypeError(f"All arguments must be of type int, but received: '{argument}'")
TypeError: All arguments must be of type int, but received: 'paco'
>>>
```

Ln: 18 Col: 0

Ejemplo de llamada a excepcion 3 pero usando raise para cuando el dato introducido en la llamada no es un tipo int