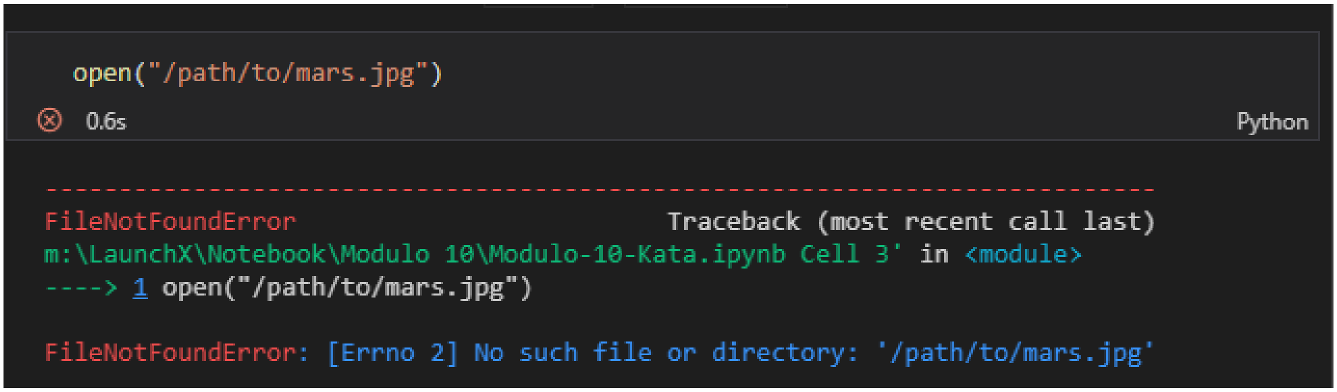
TRACEBACKS

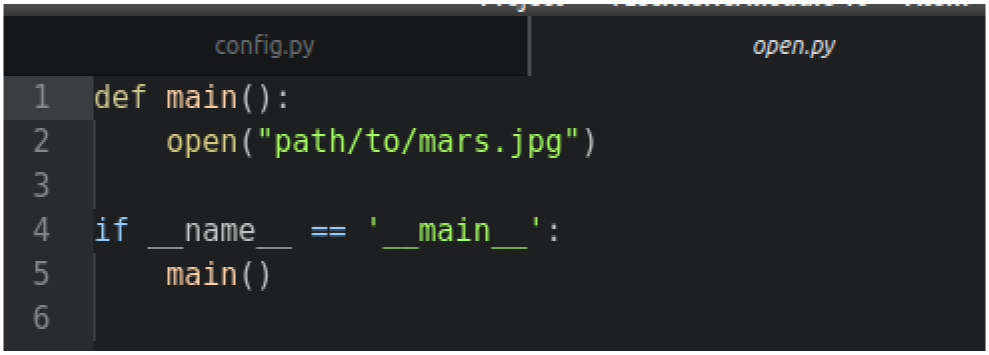
Abrir archivo desde el Notebook



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

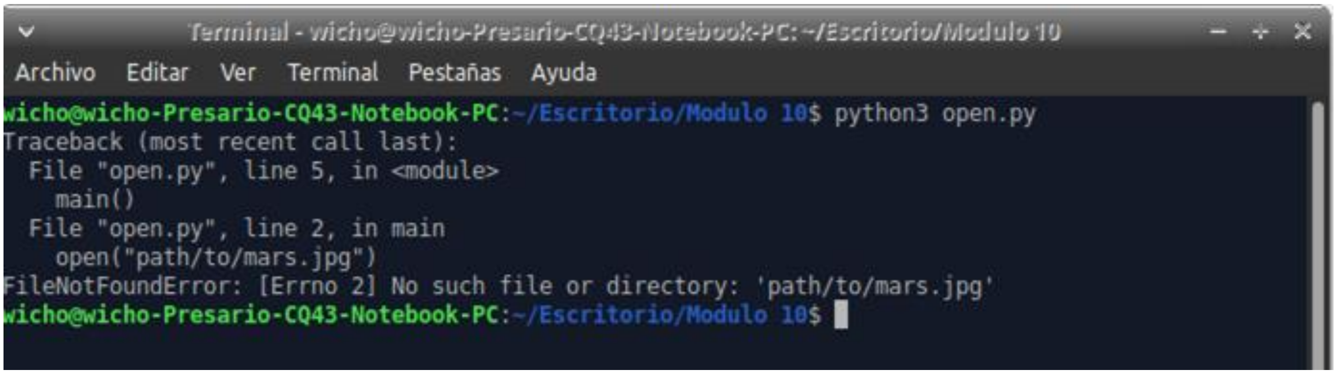
```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
m:\LaunchX\Notebook\Modulo 10\Modulo-10-Kata.ipynb Cell 3' in <module>
----> 1 open("/path/to/mars.jpg")

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

Archivo open.py



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

if __name__ == '__main__':
    main()

```

Ejecución del archivo open.py

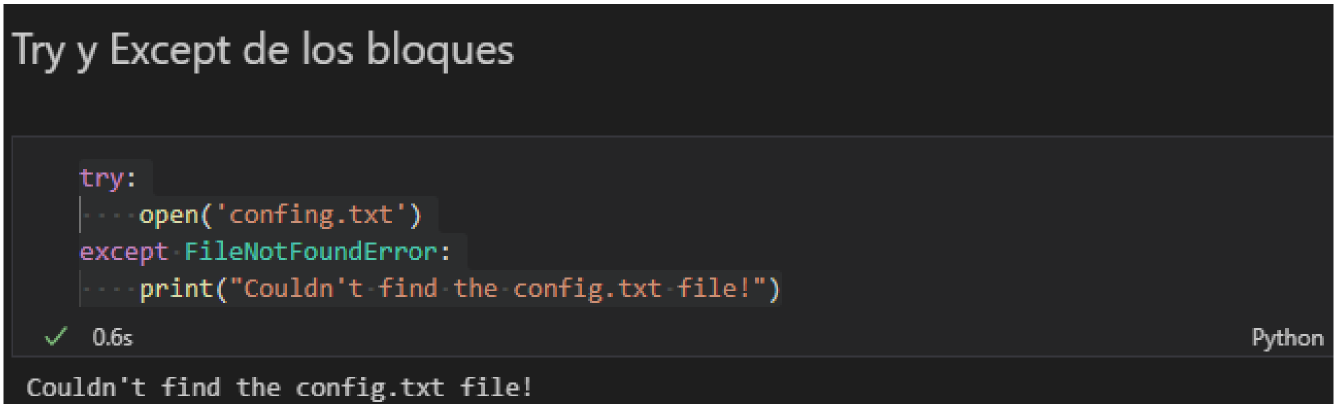


Terminal - wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 open.py
Traceback (most recent call last):
  File "open.py", line 5, in <module>
    main()
  File "open.py", line 2, in main
    open("path/to/mars.jpg")
FileNotFoundError: [Errno 2] No such file or directory: 'path/to/mars.jpg'
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

BLOQUES TRY – EXCEPT

Try – Except en Notebook



Try y Except de los bloques

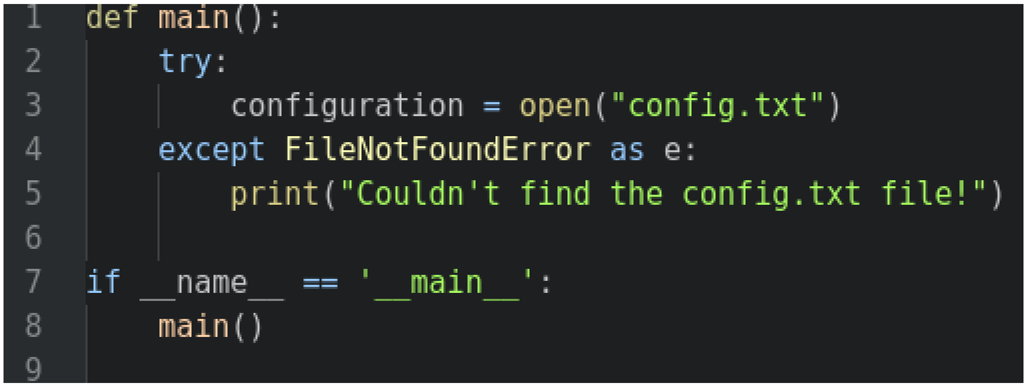
```python
try:
    open('confing.txt')
except FileNotFoundError:
    print("Couldn't find the config.txt file!")
```

✓ 0.6s

Python

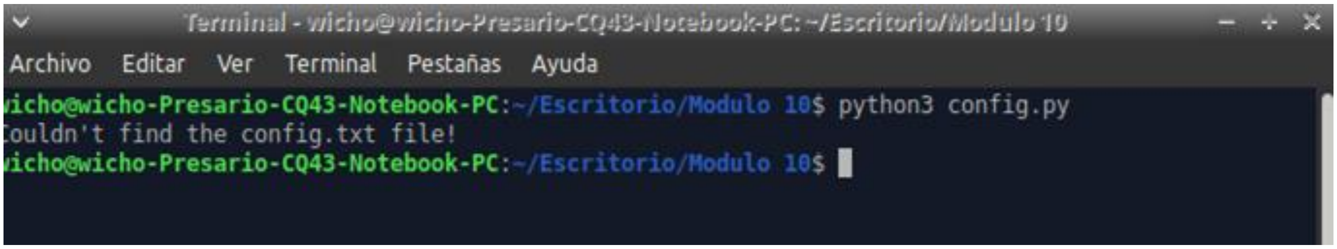
```
Couldn't find the config.txt file!
```

Archivo config.py



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

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

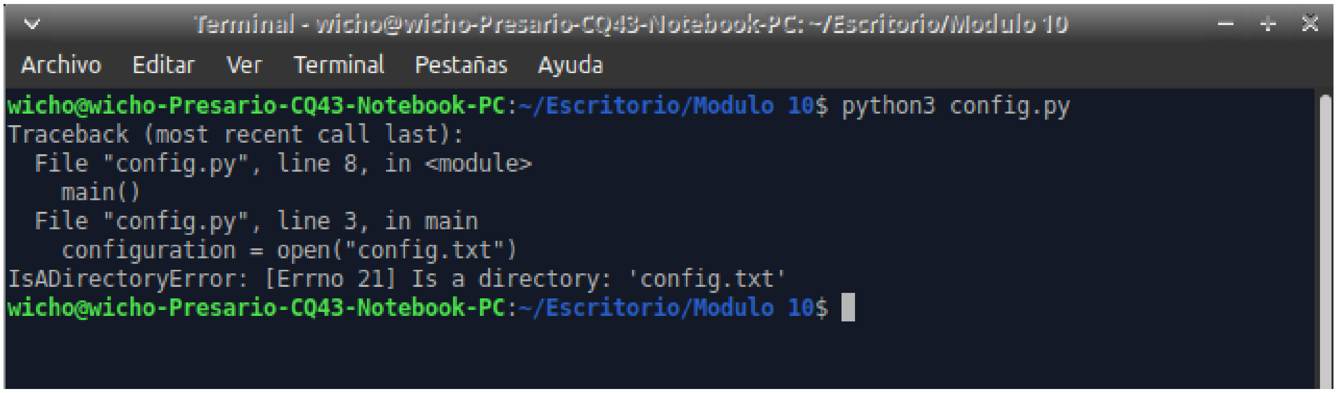
Ejecución del config.py



Terminal - wicho@wicho-Presario-CQ43-Notebook-PC: ~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

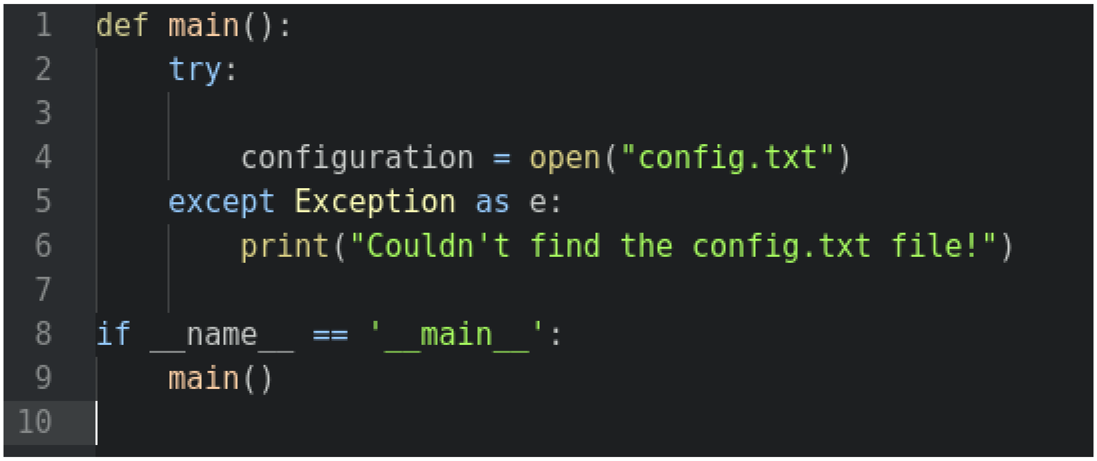
```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 config.py
Couldn't find the config.txt file!
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

Ejecución del config.py tras agregar el directorio config.txt


Terminal - wicho@wicho-Presario-CQ43-Notebook-PC: ~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

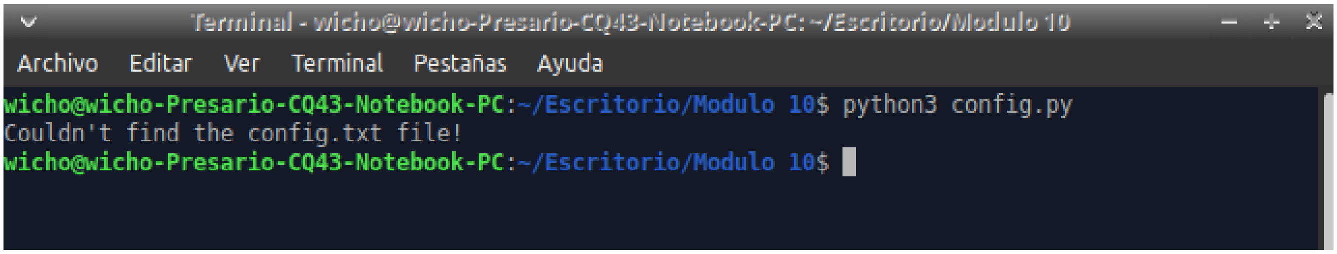
```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 config.py
Traceback (most recent call last):
  File "config.py", line 8, in <module>
    main()
  File "config.py", line 3, in main
    configuration = open("config.txt")
IsADirectoryError: [Errno 21] Is a directory: 'config.txt'
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

Cambio del except FileNotFoundError por except Exception



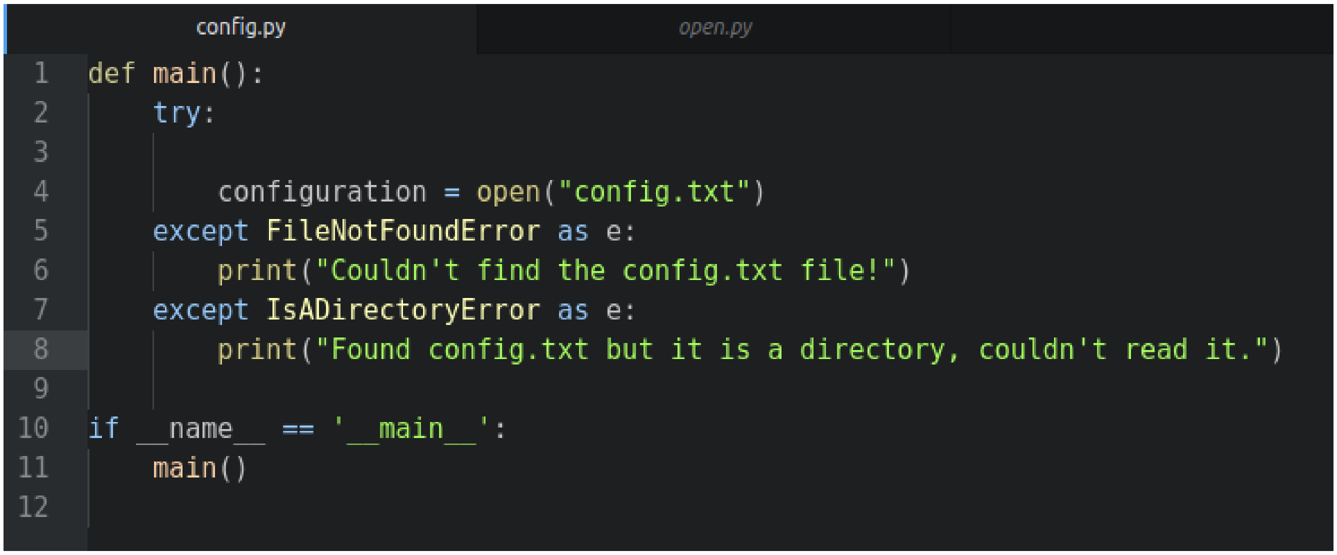
```
def main():
    try:

        configuration = open("config.txt")
    except Exception as e:
        print("Couldn't find the config.txt file!")

if __name__ == '__main__':
    main()

```

Ejecución del último código:


Terminal - wicho@wicho-Presario-CQ43-Notebook-PC: ~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

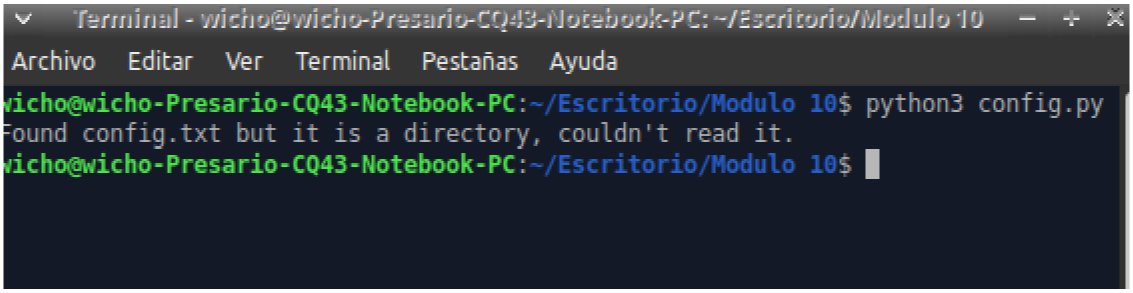
```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 config.py
Couldn't find the config.txt file!
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

Agregando bloque except IsADirectoryError



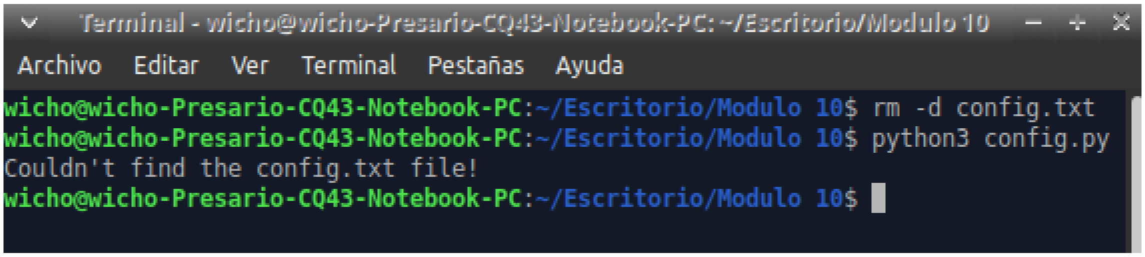
```python
def main():
    try:

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

if __name__ == '__main__':
    main()

```

Ejecución del código anterior.


Terminal - wicho@wicho-Presario-CQ43-Notebook-PC: ~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

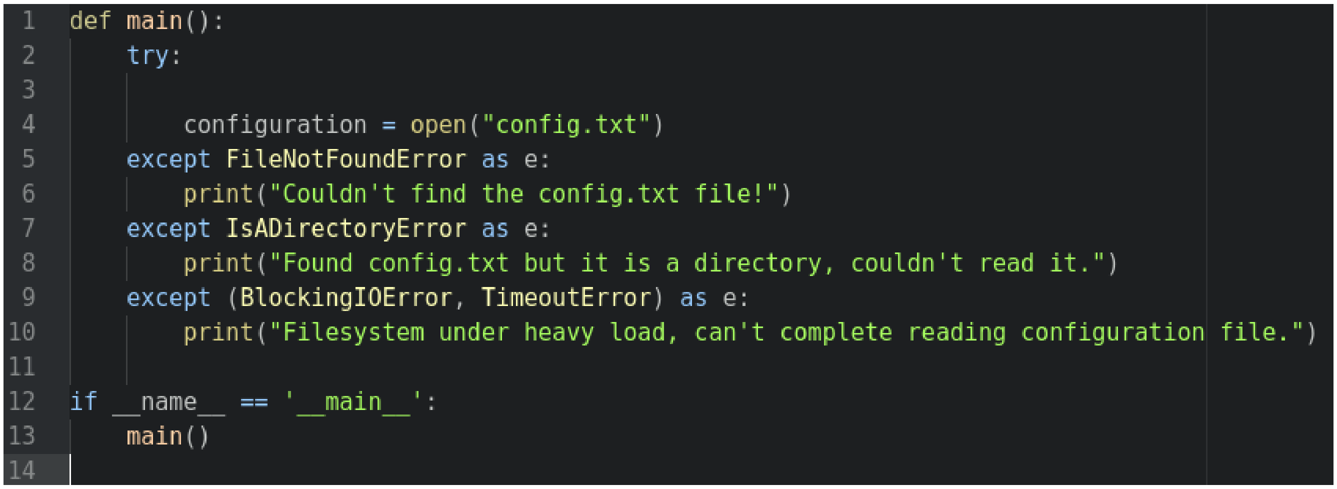
```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 config.py
Found config.txt but it is a directory, couldn't read it.
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

Eliminación del directorio config.txt y ejecución del código


Terminal - wicho@wicho-Presario-CQ43-Notebook-PC: ~/Escritorio/Modulo 10
Archivo
Editar
Ver
Terminal
Pestañas
Ayuda

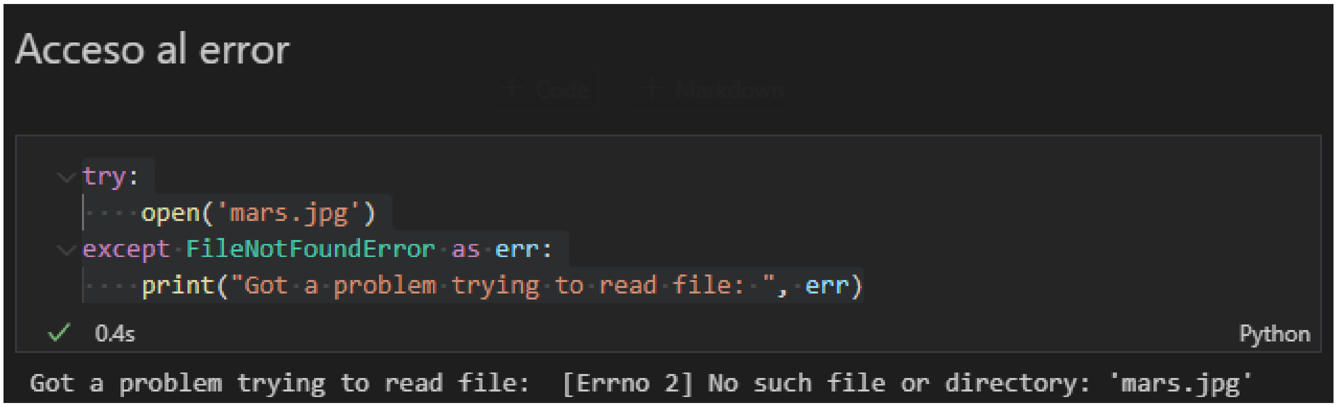
```
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ rm -d config.txt
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ python3 config.py
Couldn't find the config.txt file!
wicho@wicho-Presario-CQ43-Notebook-PC:~/Escritorio/Modulo 10$ 
```

Agrupación de excepciones



```python
def main():
    try:

        configuration = open("config.txt")
    except FileNotFoundError as e:
        print("Couldn't find the config.txt file!")
    except IsADirectoryError as e:
        print("Found config.txt but it is a directory, couldn't read it.")
    except (BlockingIOError, TimeoutError) as e:
        print("Filesystem under heavy load, can't complete reading configuration file.")

if __name__ == '__main__':
    main()

```

Acceso al mensaje de error

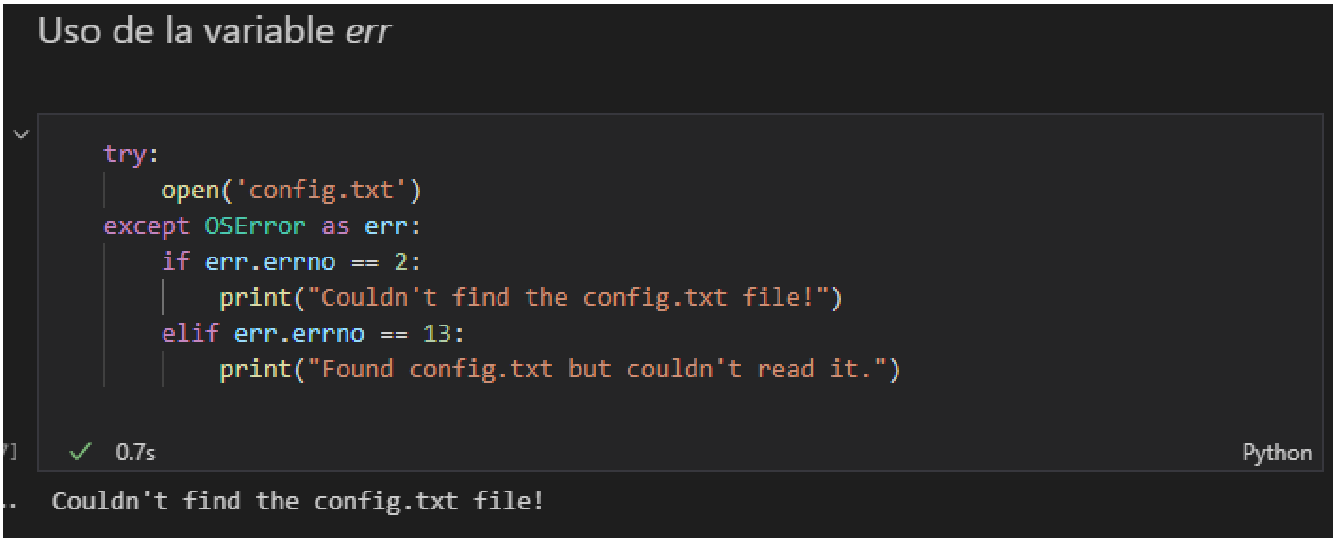


Acceso al error

```python
try:
    open('mars.jpg')
except FileNotFoundError as err:
    print("Got a problem trying to read file: ", err)
```

```
Got a problem trying to read file:  [Errno 2] No such file or directory: 'mars.jpg'
```

Uso de la variable err



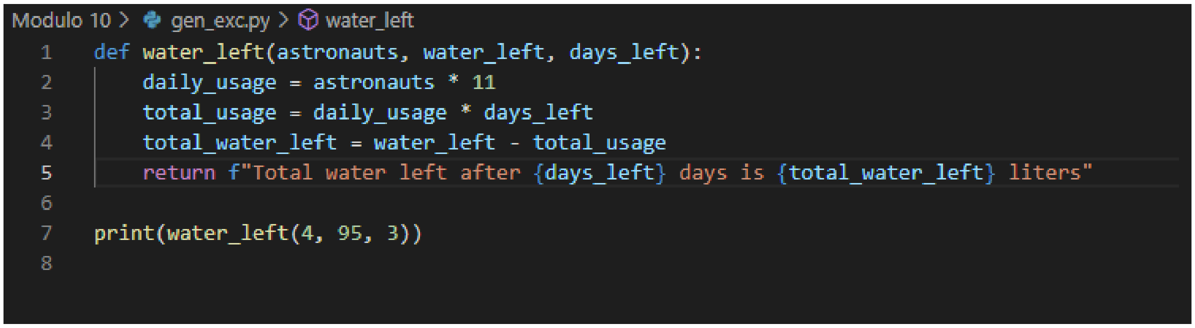
Uso de la variable *err*

```python
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.")
```

```
Couldn't find the config.txt file!
```

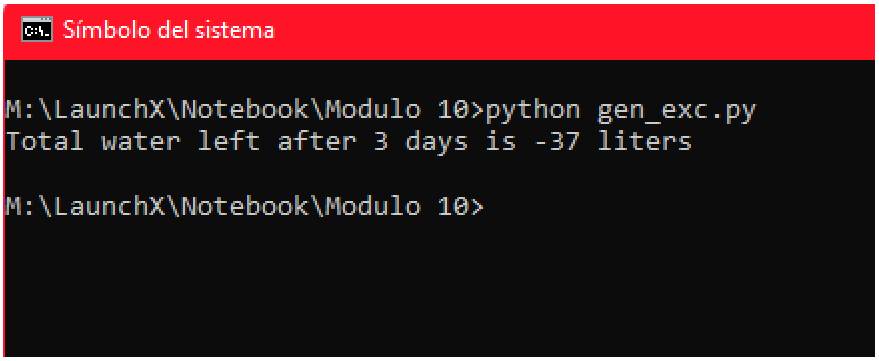
GENERACIÓN DE EXCEPCIONES

Creación de función



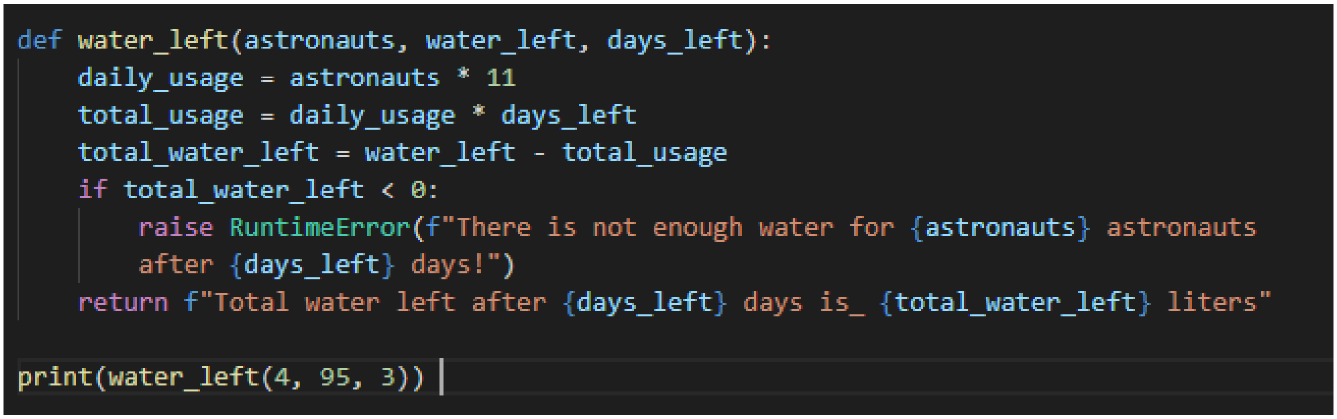
```python
def water_left(astronauts, water_left, days_left):
    daily_usage = astronauts * 11
    total_usage = daily_usage * days_left
    total_water_left = water_left - total_usage
    return f"Total water left after {days_left} days is {total_water_left} liters"

print(water_left(4, 95, 3))

```

Ejecución del código



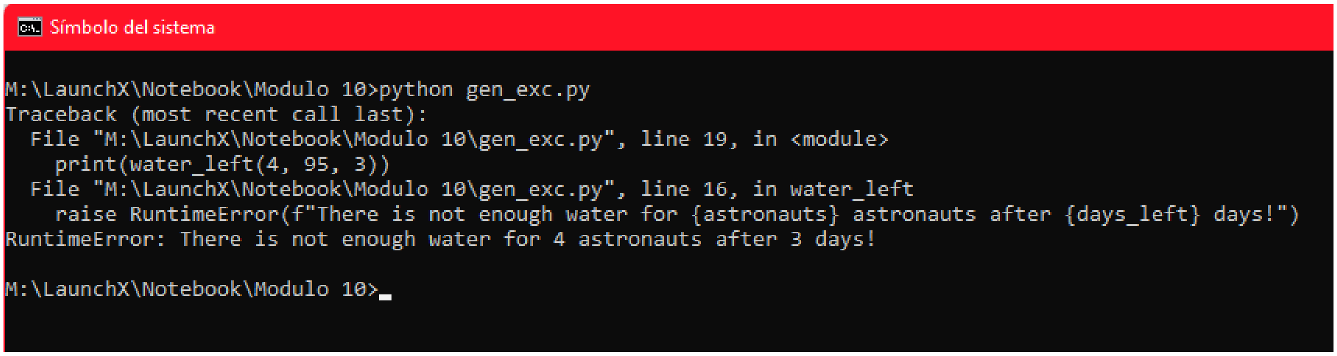
```
M:\LaunchX\Notebook\Modulo 10>python gen_exc.py
Total water left after 3 days is -37 liters

M:\LaunchX\Notebook\Modulo 10>
```

Creación de excepción para el negativo



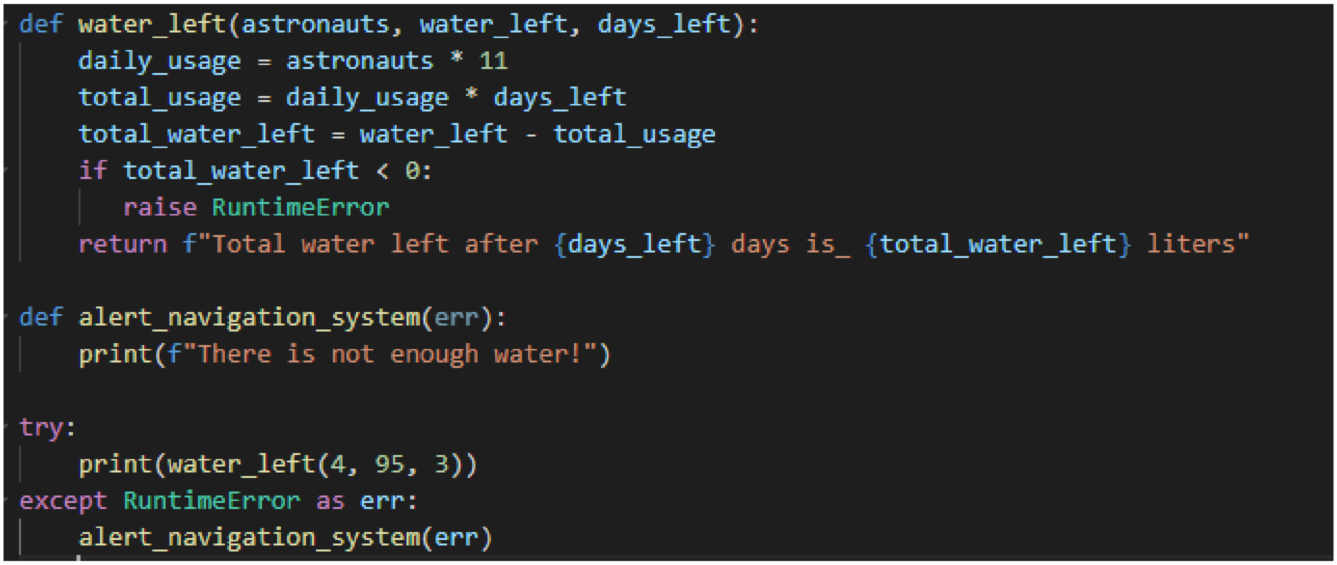
```python
def water_left(astronauts, water_left, days_left):
    daily_usage = astronauts * 11
    total_usage = daily_usage * days_left
    total_water_left = water_left - total_usage
    if total_water_left < 0:
        raise RuntimeError(f"There is not enough water for {astronauts} astronauts
   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

print(water_left(4, 95, 3))
```

Ejecución



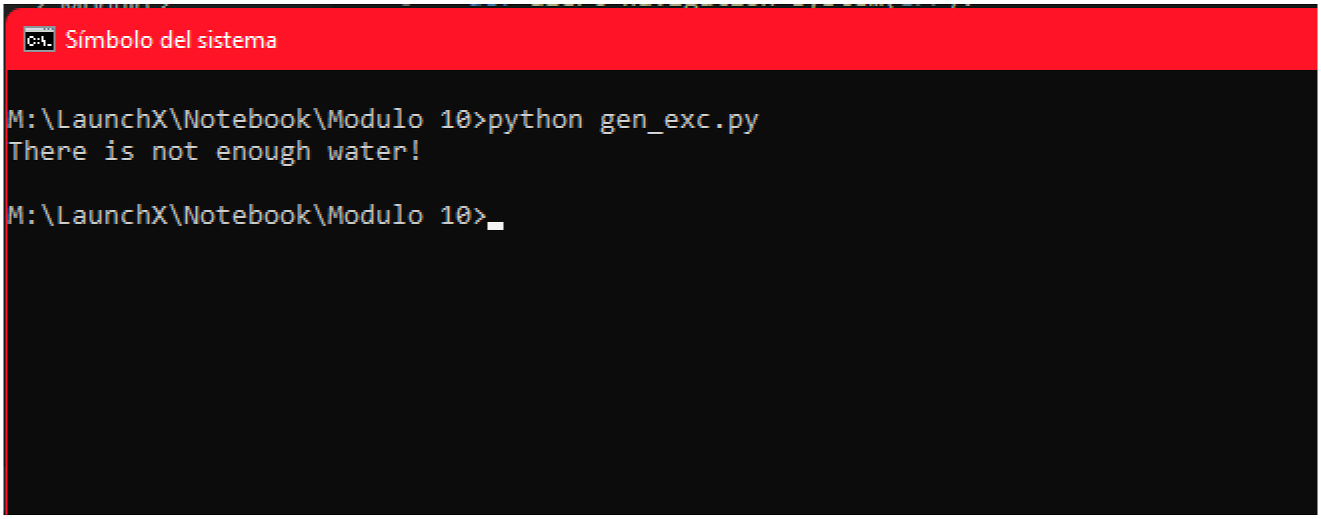
```
M:\LaunchX\Notebook\Modulo 10>python gen_exc.py
Traceback (most recent call last):
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 19, in <module>
    print(water_left(4, 95, 3))
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 16, in water_left
    raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left} days!")
RuntimeError: There is not enough water for 4 astronauts after 3 days!

M:\LaunchX\Notebook\Modulo 10>
```

Uso del Try-Except con RuntimeError



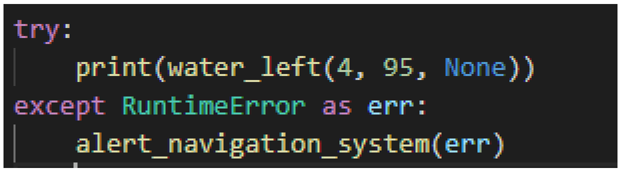
```python
def water_left(astronauts, water_left, days_left):
    daily_usage = astronauts * 11
    total_usage = daily_usage * days_left
    total_water_left = water_left - total_usage
    if total_water_left < 0:
        raise RuntimeError
    return f"Total water left after {days_left} days is_ {total_water_left} liters"

def alert_navigation_system(err):
    print(f"There is not enough water!")

try:
    print(water_left(4, 95, 3))
except RuntimeError as err:
    alert_navigation_system(err)
```

Ejecución del código



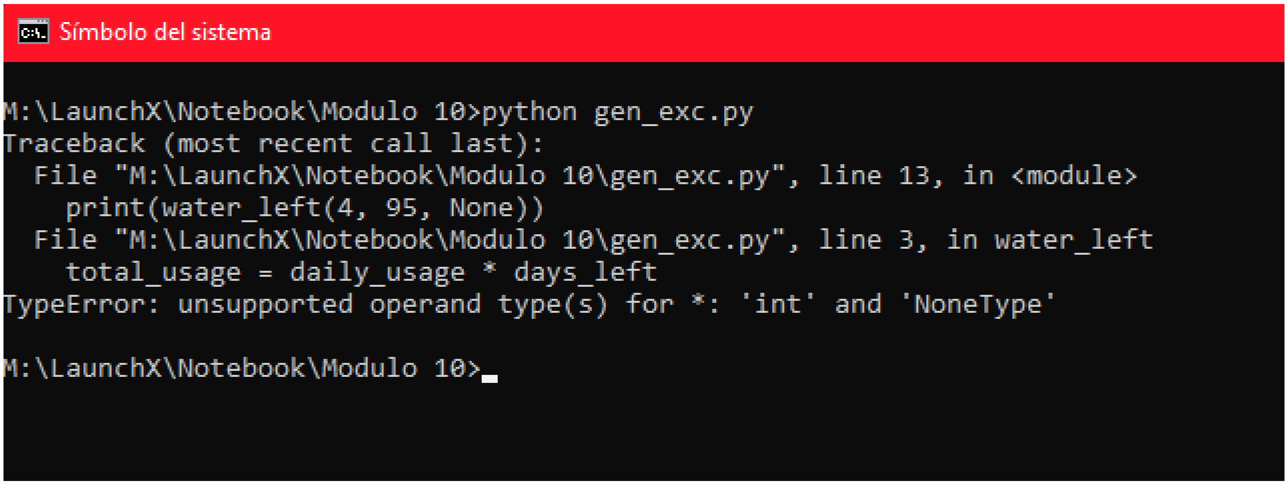
```
M:\LaunchX\Notebook\Modulo 10>python gen_exc.py
There is not enough water!

M:\LaunchX\Notebook\Modulo 10>
```

Uso de un tipo no admitido



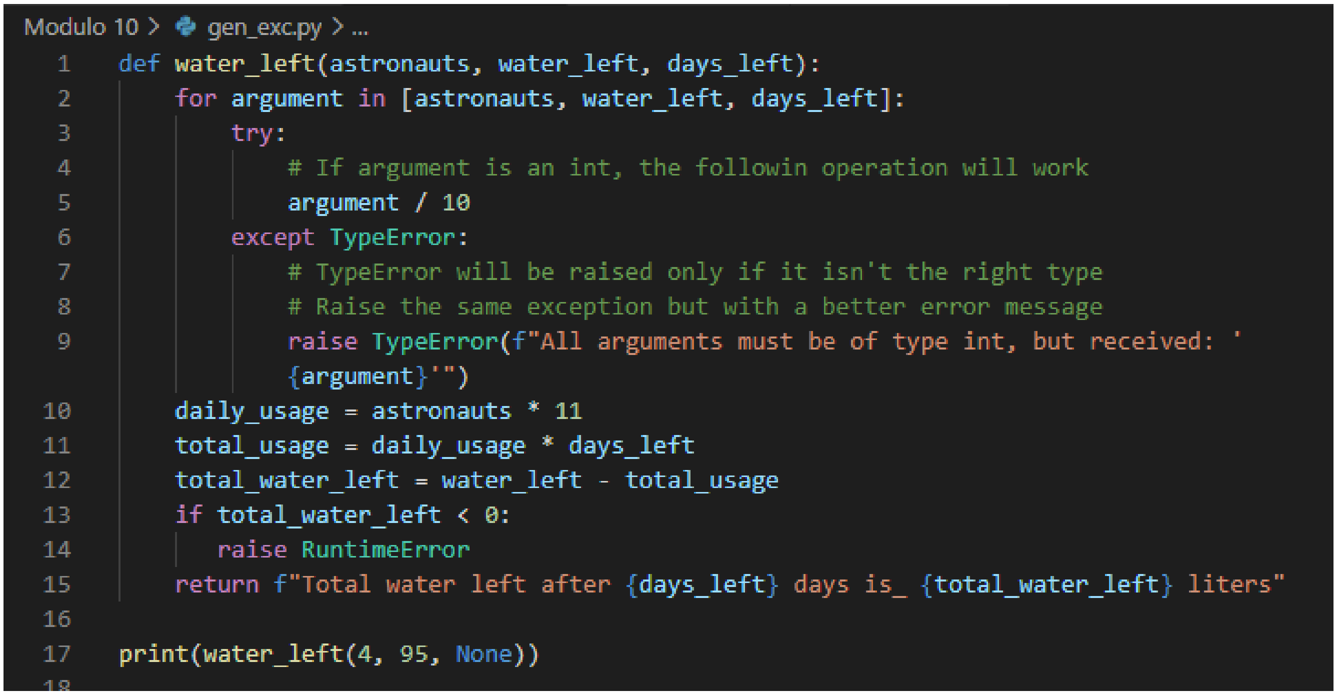
```python
try:
    print(water_left(4, 95, None))
except RuntimeError as err:
    alert_navigation_system(err)
```

Ejecución



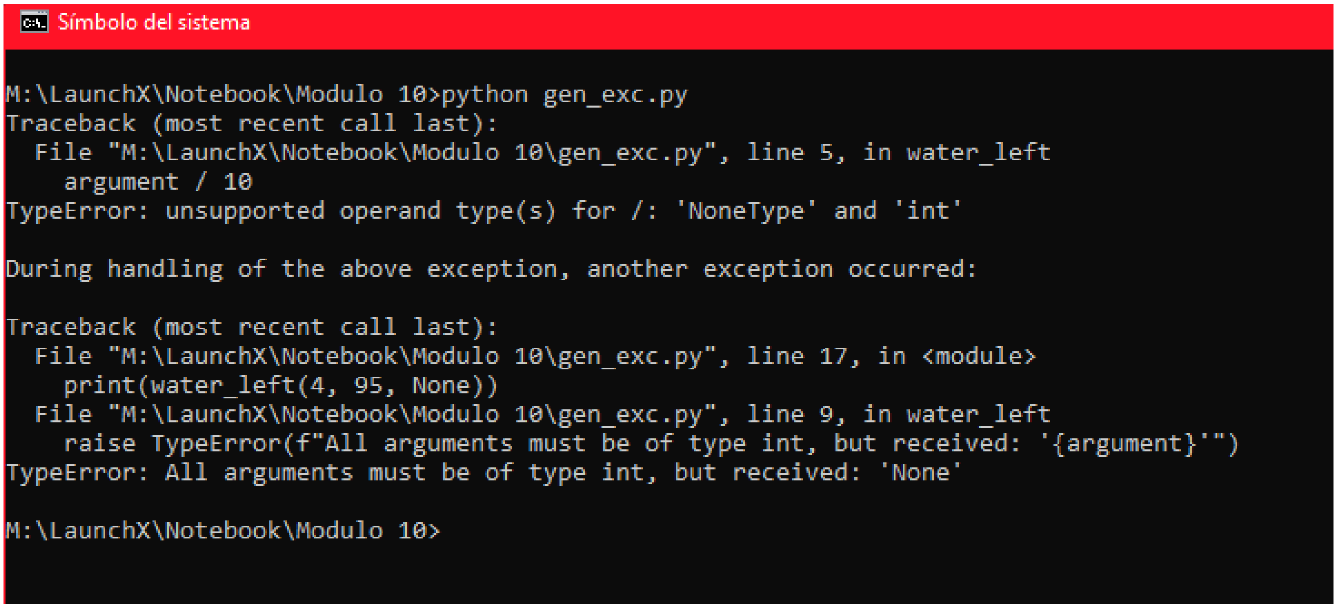
```
M:\LaunchX\Notebook\Modulo 10>python gen_exc.py
Traceback (most recent call last):
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 13, in <module>
    print(water_left(4, 95, None))
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 3, in water_left
    total_usage = daily_usage * days_left
TypeError: unsupported operand type(s) for *: 'int' and 'NoneType'

M:\LaunchX\Notebook\Modulo 10>
```

Corrección haciendo uso de except TypeError



```python
def water_left(astronauts, water_left, days_left):
    for argument in [astronauts, water_left, days_left]:
        try:
            # If argument is an int, the followin 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
    return f"Total water left after {days_left} days is_ {total_water_left} liters"

print(water_left(4, 95, None))
```

Ejecución del código



```
M:\LaunchX\Notebook\Modulo 10>python gen_exc.py
Traceback (most recent call last):
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 5, in water_left
    argument / 10
TypeError: unsupported operand type(s) for /: 'NoneType' and 'int'

During handling of the above exception, another exception occurred:

Traceback (most recent call last):
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 17, in <module>
    print(water_left(4, 95, None))
  File "M:\LaunchX\Notebook\Modulo 10\gen_exc.py", line 9, 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: 'None'

M:\LaunchX\Notebook\Modulo 10>
```