Kata 10:Manejo de Errores

FileNotFoundError

```
1    def main():
2      open("/path/to/mars.jpg")
3
4    if __name__ == '__main__':
5        main()
6
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   JUPYTER

```
D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual>C:/Users/javie/AppData/Local/Programs/Python/Pyth
on39/python.exe "d:/javie/Documents/workspace/LaunchX-InnovaccionVirtual/Introducción Python/Módulo 10 -
Manejo de errores/open.py"
Traceback (most recent call last):
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
  errores\open.py", line 5, in <module>
    main()
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
  errores\open.py", line 2, in main
    open("/path/to/mars.jpg")
FileNotFoundError: [Errno 2] No such file or directory: '/path/to/mars.jpg'
```

Try Except

```
8    def main():
9        try:
10           configuration = open('config.txt')
11       except FileNotFoundError:
12           print("Couldn't find the config.txt file!")
13
14   if __name__ == '__main__':
15       main()
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   JUPYTER

```
on39/python.exe "d:/javie/Documents/workspace/LaunchX-InnovaccionVirtual/Introducción Python/Módulo 10 -
Manejo de errores/open.py"
Couldn't find the config.txt file!
```

Exception

```
28   def main():
29       try:
30           configuration = open('config.txt')
31       except Exception:
32           print("Couldn't find the config.txt file!")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   JUPYTER

```
on39/python.exe "d:/javie/Documents/workspace/LaunchX-InnovaccionVirtual/Introducción Python/Módulo 10 -
Manejo de errores/open.py"

D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual>C:/Users/javie/AppData/Local/Programs/Python/Pyth
on39/python.exe "d:/javie/Documents/workspace/LaunchX-InnovaccionVirtual/Introducción Python/Módulo 10 -
Manejo de errores/open.py"
```

Excepciones múltiples

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

Agrupacion de excepciones

```
44   def main():
45       try:
46           configuration = open('config.txt')
47       except FileNotFoundError:
48           print("Couldn't find the config.txt file!")
49       except IsADirectoryError:
50           print("Found config.txt but it is a directory, couldn't read it")
51       except (BlockingIOError, TimeoutError):
52           print("Filesystem under heavy load, can't complete reading configuration file")
```

As err

```
55   try:
56       open("mars.jpg")
57   except FileNotFoundError as err:
58       print("got a problem trying to read the file:", err)
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   JUPYTER

```
D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
got a problem trying to read the file: [Errno 2] No such file or directory: 'mars.jpg'
```

Errno

```
61   try:
62       open("config.txt")
63   except OSError as err:
64       if err.errno == 2:
65           print("Couldn't find the config.txt file!")
66       elif err.errno == 13:
67           print("Found config.txt but couldn't read it")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   JUPYTER

```
D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
Found config.txt but couldn't read it
```

Creación de excepciones (RuntimeError)

```
70    def water_left(astronauts, water_left, days_left):
71        daily_usage = astronauts * 11
72        total_usage = daily_usage * days_left
73        total_water_left = water_left - total_usage
74        return f"Total water left after {days_left} days is: {total_water_left} liters"
75
76    print(water_left(5, 100, 2))
```

```
D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
Total water left after 2 days is: -10 liters
```

```
79    def water_left(astronauts, water_left, days_left):
80        daily_usage = astronauts * 11
81        total_usage = daily_usage * days_left
82        total_water_left = water_left - total_usage
83        if total_water_left < 0:
84            raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left}
85        return f"Total water left after {days_left} days is: {total_water_left} liters"
86
87    print(water_left(5, 100, 2))
```

```
D:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
Traceback (most recent call last):
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
errores\open.py", line 87, in <module>
    print(water_left(5, 100, 2))
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
errores\open.py", line 84, 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 days!
```

TypeError

```
96     def water_left(astronauts, water_left, days_left):
97         daily_usage = astronauts * 11
98         total_usage = daily_usage * days_left
99         total_water_left = water_left - total_usage
100        if total_water_left < 0:
101            raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left}
102        return f"Total water left after {days_left} days is: {total_water_left} liters"
103
104    water_left("3", "200", None)
```

```
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
Traceback (most recent call last):
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
errores\open.py", line 104, in <module>
    water_left("3", "200", None)
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
errores\open.py", line 98, in water_left
    total_usage = daily_usage * days_left
TypeError: can't multiply sequence by non-int of type 'NoneType'
```

```python
107   def water_left(astronauts, water_left, days_left):
108       for argument in [astronauts, water_left, days_left]:
109           try:
110               # If argument is an int, the following operation will work
111               argument / 10
112           except TypeError:
113               # TypError will be raised only if it isn't the right type
114               # Raise the same exception but with a better error message
115               raise TypeError(f"All arguments must be of type int, but received: '{argument}'")
116       daily_usage = astronauts * 11
117       total_usage = daily_usage * days_left
118       total_water_left = water_left - total_usage
119       if total_water_left < 0:
120           raise RuntimeError(f"There is not enough water for {astronauts} astronauts after {days_left} days!")
121       return f"Total water left after {days_left} days is: {total_water_left} liters"
122
123   water_left("3", "200", None)
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   JUPYTER

```
>C:/Users/javie/AppData/Local/Programs/Python/Python39/python.exe "d:/javie/Documents/workspace/LaunchX-I
nnovaccionVirtual/Introducción Python/Módulo 10 - Manejo de errores/open.py"
Traceback (most recent call last):
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de
 errores\open.py", line 111, 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 "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores\open.py", line 123, in <modu
le>
    water_left("3", "200", None)
  File "d:\javie\Documents\workspace\LaunchX-InnovaccionVirtual\Introducción Python\Módulo 10 - Manejo de errores\open.py", line 115, 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: '3'
```