Python - Input/Output

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File Mode

01

'r'
Read Mode

'w'
Write Mode
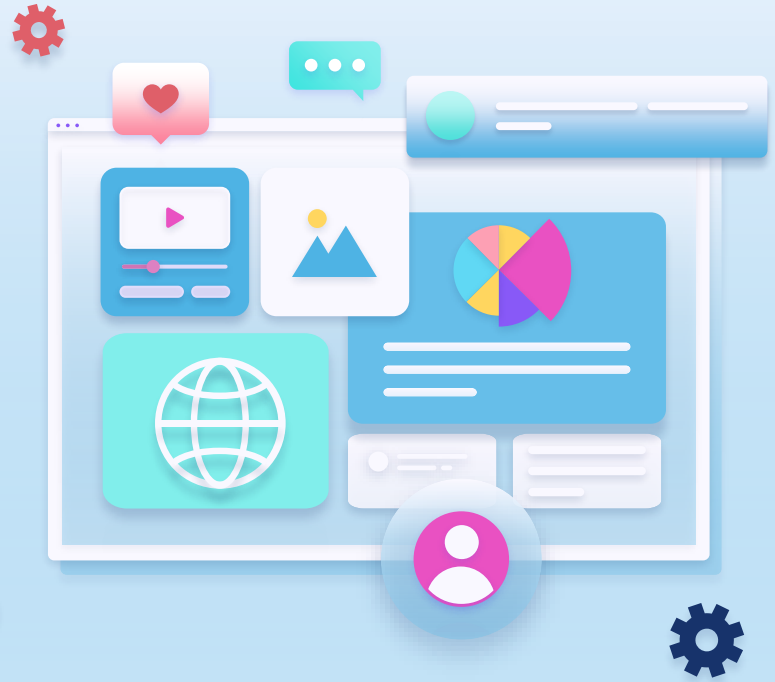
'a'
Append Mode
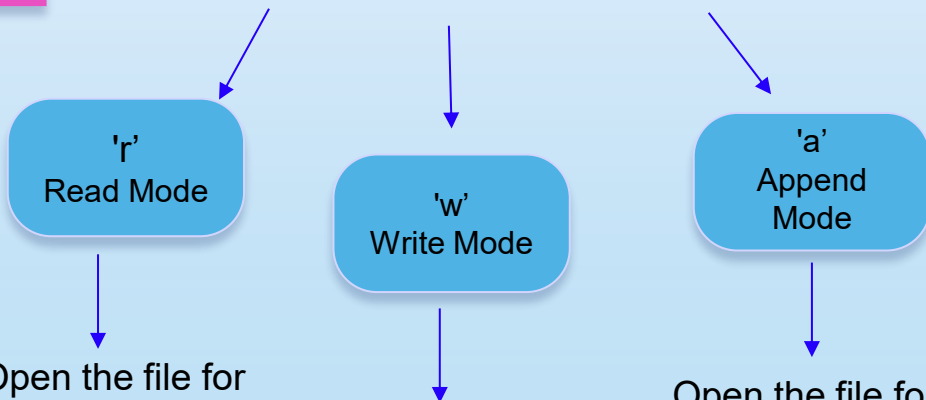
Open the file for reading only. File must exist.

Open the file for writing. Overwrites existing content or creates a new file.

Open the file for appending (adding to the end). Creates the file if it doesn't exist

Encoding

هو طريقة أو نظام يحوّل الحروف والكلمات اللي نكتبها زي "ريم " إلى أرقام يفهمها الكمبيوتر.
الكمبيوتر ما يفهم "ريم" ولا "hello " يفهمها على شكل أصفار وآحاد binary : (0 و 1)
علشان كذا لازم نحوّل النص إلى أرقام وهذي مهمة encoding

The most Popular
type of Encoding

UTF-8
Unicode Transformation
Format - 8-bit

موقع يحول الحرف إلى
UNICODE:
https://unicode-table.com/

موقع يحول
Unicode إلى Binary :
https://www.rapidtables.com/convert/number/decimal-to-binary.html

تفتح لنا الملف – Open the file : **Open()**

علشان: نقراء منه أو نكتب فيه او نضيف عليه
لكن إذا استخدمنا **Open()** لحالها
لازم نسكر الملف بنفسنا بـ
file.close()
وإذا نسينا؟ ممكن يصير تسريب أو مشاكل!

تفتح لك الملف وتسكره لك
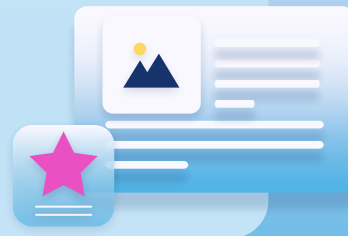تلقائيًا سواء اشتغل الكود
صح أو صار فيه خطأ.

هنا تجي فائدة
with

with open ()

Task

0. Read file

We defined a function called read_file.

It takes one parameter called filename .

If no file name is provided, it will default to an empty string.

```python
#!/usr/bin/python3

def read_file(filename=""):

with open(filename, 'r', encoding="utf-8") as f:

    read_data = f.read()

    print(read_data, end=' ')
```

0. Read file

```
def say_hello (name = "Guest"):
    print (" Hello " , name )
        say_hello ("sara")
            say_hello()
```

sara

```
def say_hello (name ):
    print (" Hello " , name )
        say_hello ("sara")
            say_hello()
```

error

```
#!/usr/bin/python3

def read_file(filename=""):

with open(filename, 'r', encoding="utf-8") as f:

    read_data = f.read()

    print(read_data, end=' ')
```

0. Read file

We open the file safely using with.

'r' is for reading the file

Encoding "utf-"8 ensures proper reading of characters.

```python
#!/usr/bin/python3

def read_file(filename=""):

with open(filename, 'r', encoding="utf-8") as f:

    read_data = f.read()

    print(read_data, end=' ')
```

1. Write to a file

We defined a function called write_file

It takes two parameters:
filename: the file name (default is empty).
text: the text to write to the file

```python3
#!/usr/bin/python3

def write_file(filename="", text=""):

    with open(filename, 'w', encoding="utf-8") as f:

        return f.write(text)
```

1. Write to a file

We open the file using with safe way

'w' means write mode:
- If the file exists, it will be overwritten.If it doesn't exist, it will be created.
- encoding="utf- "8supports characters like Arabic.
- as f gives the file a temporary name f.

We use f.write(text)
to write text to the file.
The function returns
the number of characters written.

```python3
#!/usr/bin/python3

def write_file(filename="", text=""):

with open(filename, 'w', encoding="utf-8") as f:

 return f.write(text)
```

2. Append to a file

We open the file using
with safe way

'a' means append mode: adds text to
the end of the file without erasing it.

We use f.write(text)
 to write text to the file.
The function returns
 the number of characters written.

```python
#!/usr/bin/python3

def write_file(filename="", text=""):

with open(filename, 'a', encoding="utf-8") as f:

 return f.write(text)
```

Thank you