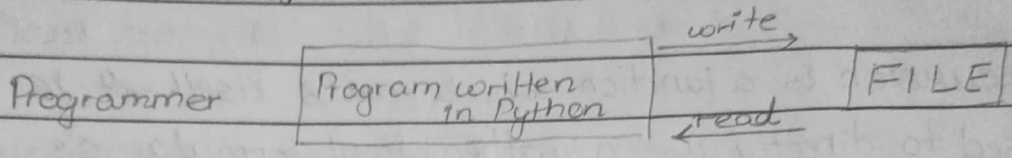
* CHAPTER-9 : File I/O

- The RAM is volatile and all its contents are lost once a program terminates. In Order to persist the data forever, we use files.

- A file is data stored in a storage device. A python program can talk to the file by reading content from it and writing content to it.



RAM : volatile
HDD : non-volatile.

- Types Of files
① Text files (.txt, .c etc)
② Binary files(.jpg, .dat etc)

Python has a lot of functions for reading, updating and deleting files.

- Opening a file.
Python has an Open () function for Opening files. It takes 2 parameters : filename and mode.

Open ("this.txt", "r")
↳ mode of opening (read mode)
↓ filename
↓ Open is a built-in function

Data: ________ Page: ________

- Reading a file in Python

f= Open ("this.txt", "r")
↳ ~~mode of opening~~ open file in VS code

text = f.read() → Read its content

print(text) → Print its Content

f.Close () → Close the file

We Can also specify the number of character in read() function : f.read (2)
↳ Reads first 2 character

- Other methods to read the file

We can also use f.readline() function to read on full line at a time.

f.readline() → Reads one line from the file

- Modes of Opening a file

r → open for reading
w → open for writing
a → open for appending
+ → open for updating

'rb' will open for read in binary mode.
'rt' will open for read in text mode.

- Writing files in Python

In order to write to a file, we first open it in write or append mode after which, we use the python's f.write () method to write to the file!

```
f = open ("this.txt", "w")
    f.write ("This is nice") → can be called multiple times
    f.close ()
```

- with statement

The best way to open and close the file automatically is with statement

```
with Open ("this.txt") as f:
        f.read()
```

↳ Dont need to write f.close() as it is done automatically.