

String Formatting & File Handling

String Formatting

"Hi python"

String Formatting

"Hi ____?"



name = "python"

String Concatenation

"Hi" + " " + name



name = "python"

String Concatenation

```
print("Hi", name)
```



```
name = "python"
```

String Concatenation

"Hi" + " " + name

print("Hi", name)



name = "python"

String Formatting

`f"Hi {name}"`



`name = "python"`

String Formatting

"Hi {}".format(name)

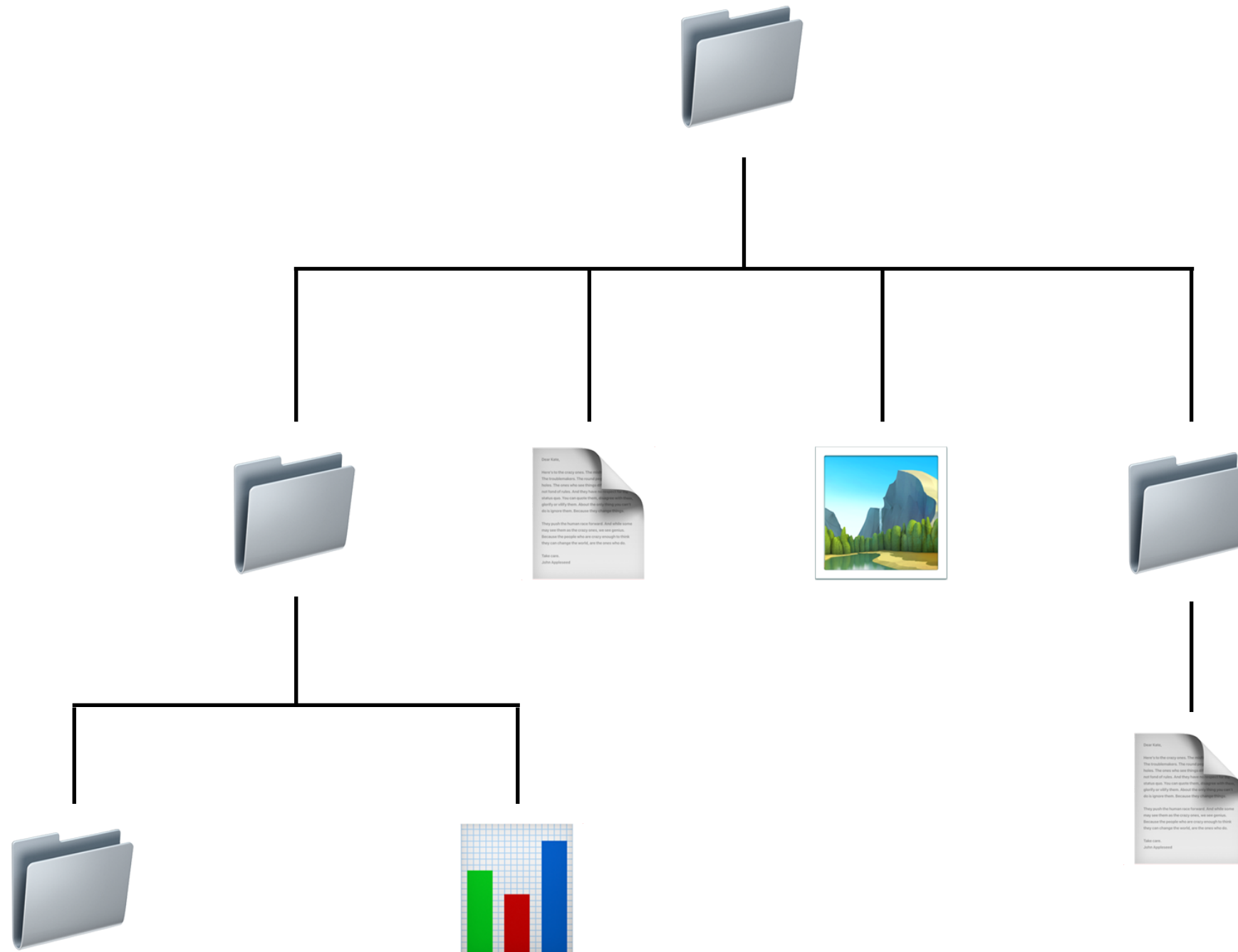


name = "python"

File System

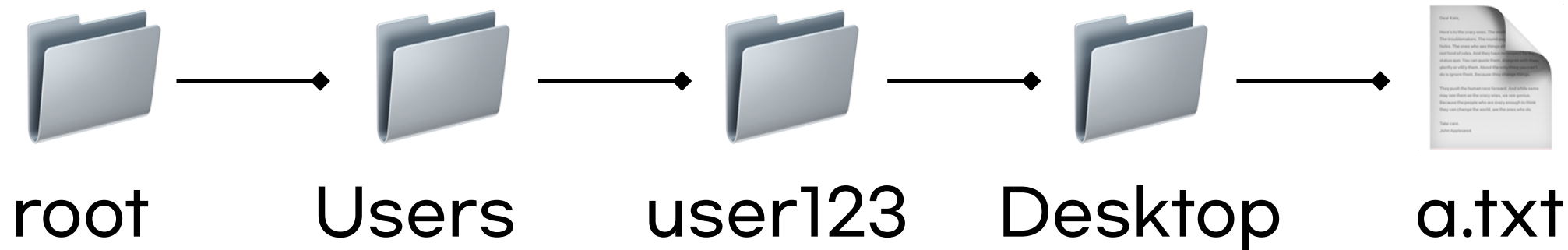


File System



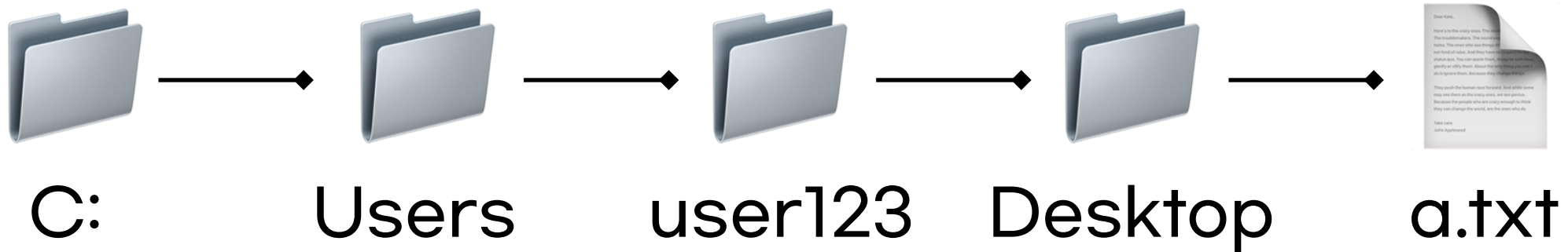
File Path

/Users/user123/Desktop/a.txt

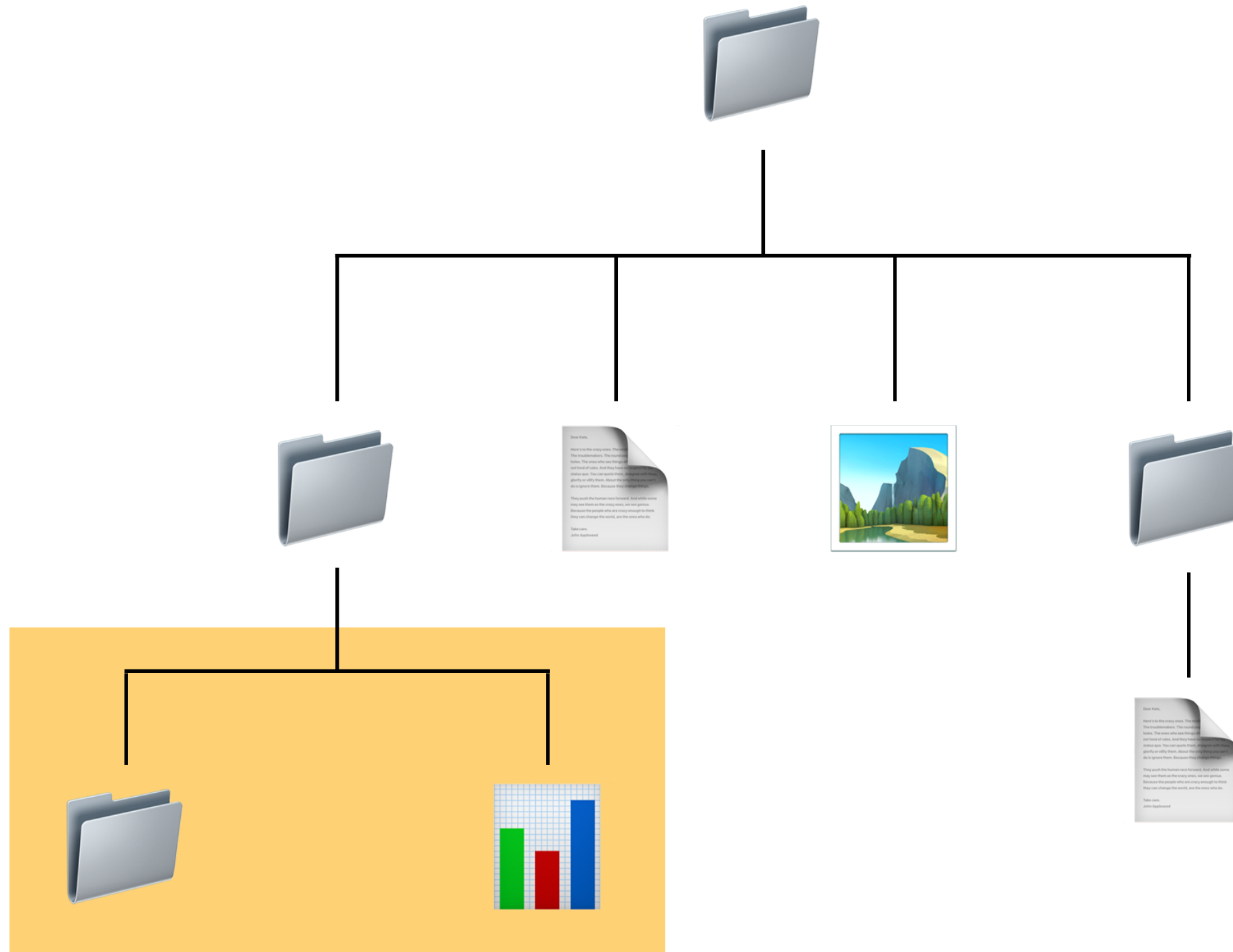


File Path

C:\Users\User123\Desktop\A.txt

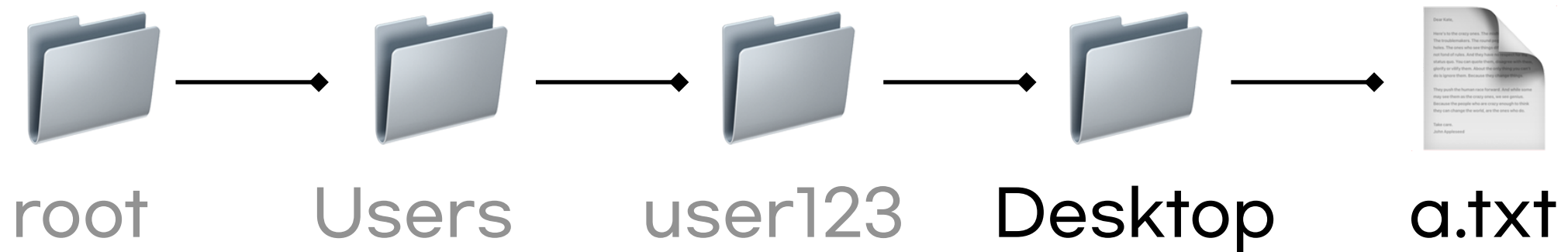


Relative Path



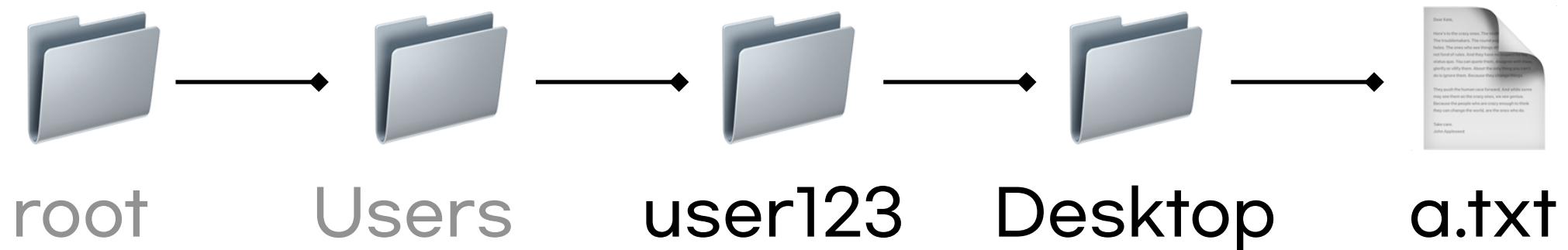
File Path

`./a.txt`



File Path

`./Desktop/a.txt`



File Handling



File Handling

```
f = open(file_path, mode)
```

File Handling

```
f = open(file_path, mode)
```



read

write

append

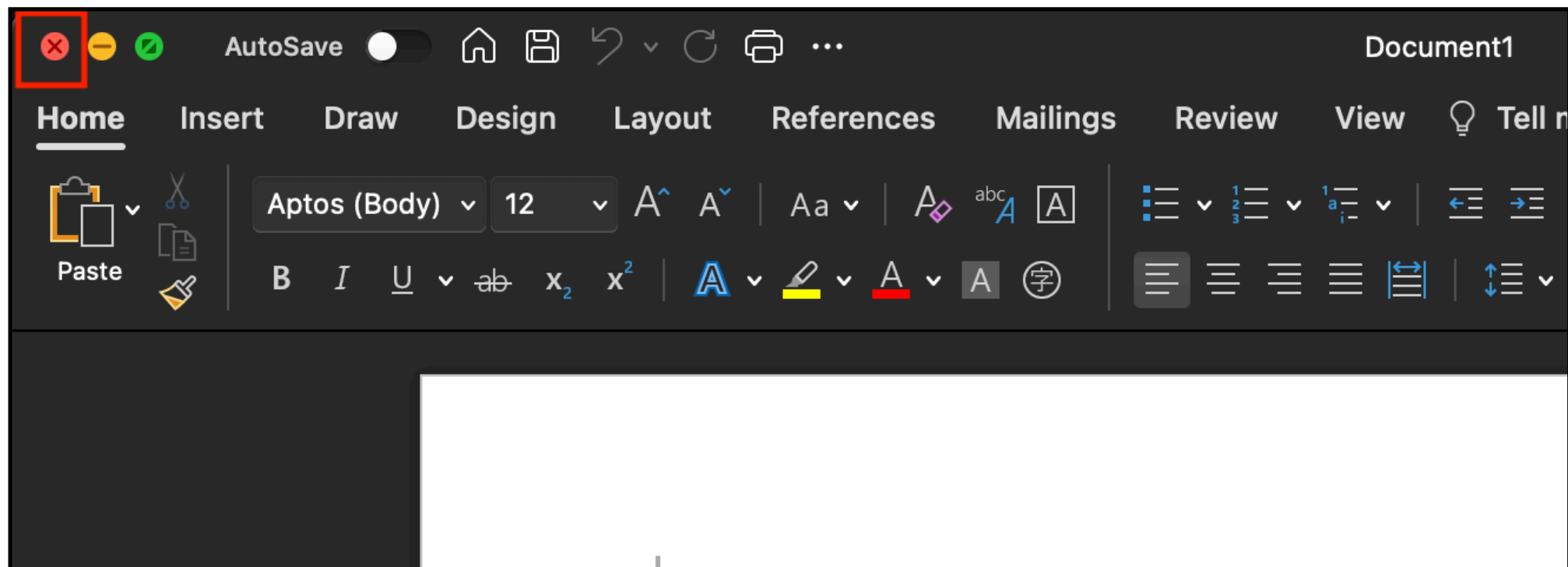
File Handling

```
f = open(file_path, mode)
```

```
# do some jobs...
```

```
f.close()
```

File Handling

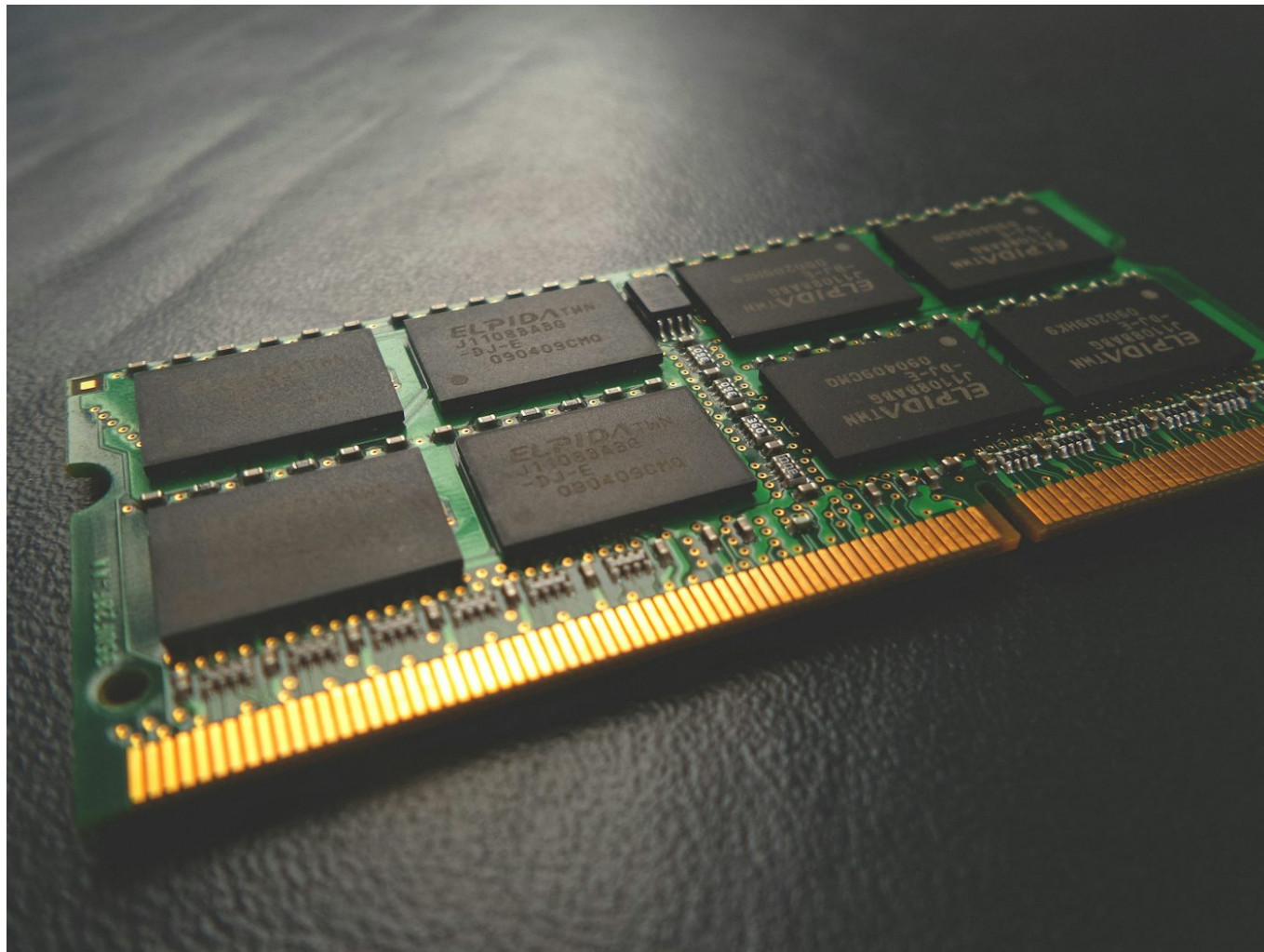


CPU



Worker

Memory



Temporary
Storage

Memory



Memory



Memory



File Handling

```
with open(file_path, mode) as f:  
    # do some jobs...
```



File Handling

```
f.write("hello")
```

Newline

~~W~~n

Newline

Hi ~~W~~npython



Hi

python

File Handling

`f.read()`

File Handling

`f.readlines()`

List Comprehension

a = [1, 2, 3, 4]

List Comprehension

```
for i in a:  
    print(i)
```

List Comprehension

`a = [1, 2, 3, 4]`



`b = [2, 3, 4, 5]`

List Comprehension

```
b = []
```

```
for i in a:
```

```
    b.append(i + 1)
```

List Comprehension

```
b = [for i in a]
```



```
for i in a:
```

```
    b.append(i + 1)
```

List Comprehension

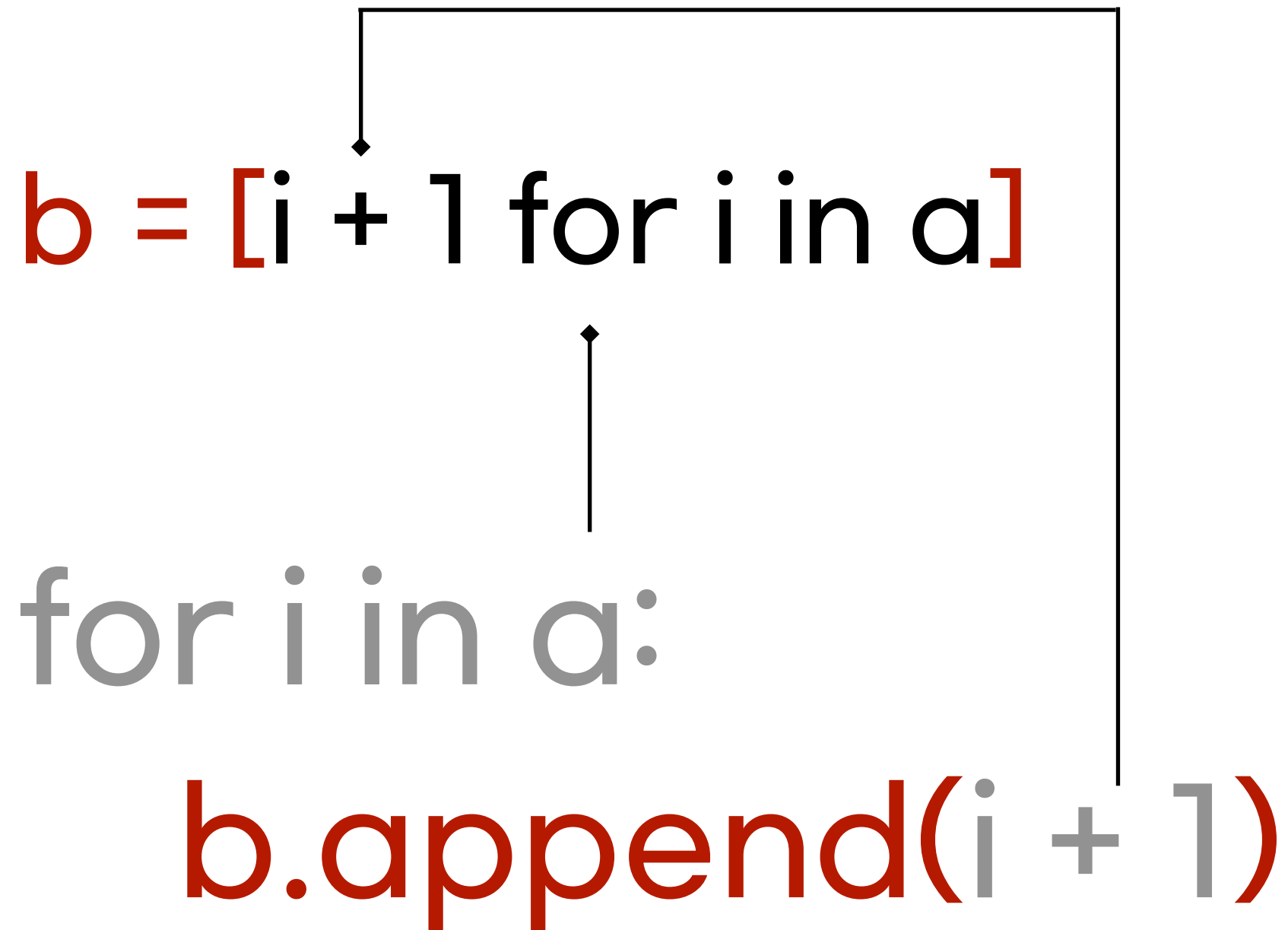
The diagram illustrates the transformation of a loop into a list comprehension. It features three lines of code. The top line is a list comprehension: `b = [i + 1 for i in a]`, where `i`, `+`, and `1` are highlighted in red. The middle line is a loop header: `for i in a:` in gray. The bottom line is a loop body: `b.append(i + 1)`, where `i` and `1` are in gray. A vertical arrow points from the gray `i` in the loop header to the red `i` in the list comprehension. A horizontal line connects the gray `i + 1` in the loop body to the red `+` and `1` in the list comprehension, with a downward arrow pointing to the red `1`.

```
b = [i + 1 for i in a]
```

```
for i in a:
```

```
    b.append(i + 1)
```

List Comprehension



List Comprehension

`a = [1, 2, 3, 4]`

`b = [i + 1 for i in a]`