

Chapter 5: File Handling

Reading from Files:

Python provides mainly *three types* of *read functions* to *read* from a data *file*.

i) `read()`:

Reads at most *n bytes*; if no *n* is specified, reads the *entire file*.

This function *returns* the *bytes* in the form of a *string*.

Syntax:

<filhandle>.read([n])

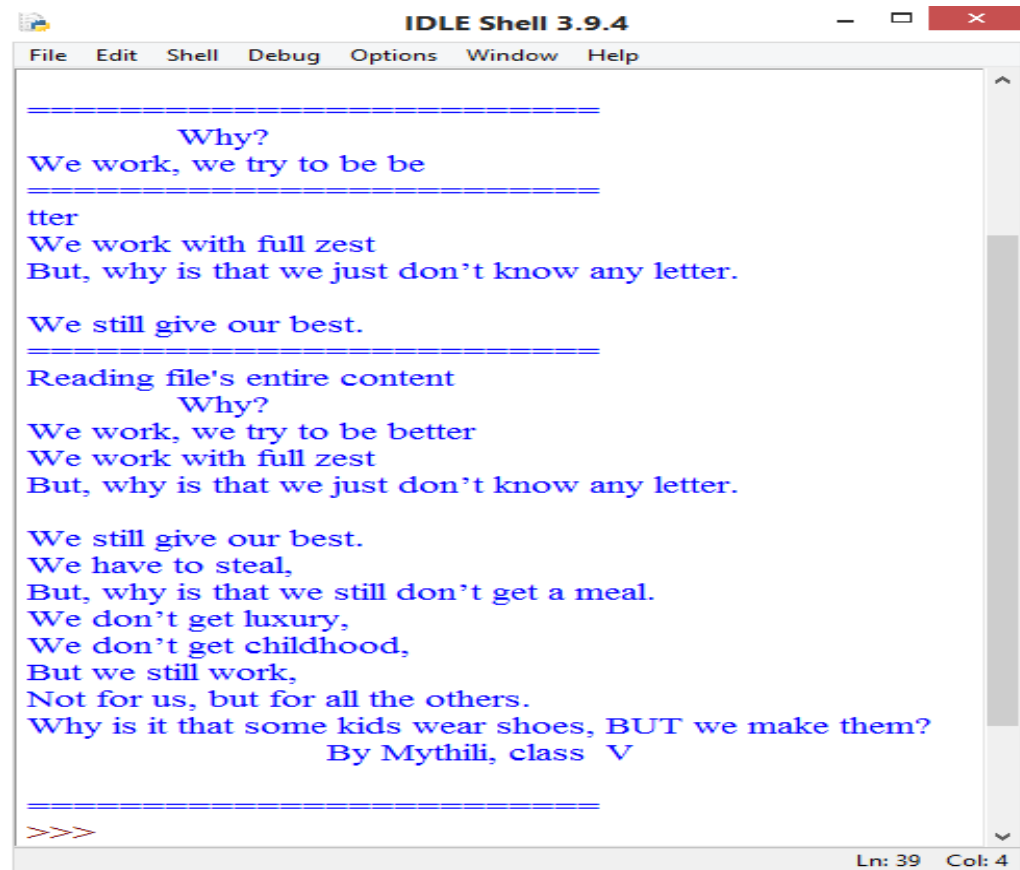
Example

#prg 1. Write a Python program to illustrate the use of read() method

```
print("\n=====")
myfile=open(r'E:\textfiles\poem.txt','r')
str1=myfile.read(30)          # Reading 30 bytes
print(str1)
print("=====")
str2=myfile.read(100)         # Reading 100 bytes
print(str2)
myfile.close()
print("=====")

print("Reading file's entire content")
myfile=open(r'E:\textfiles\poem.txt','r')
abc=myfile.read()             # Reading entire content
print(abc)
myfile.close()
print('=====')
```

Output:



```
=====
Why?
We work, we try to be be
=====
tter
We work with full zest
But, why is that we just don't know any letter.

We still give our best.
=====
Reading file's entire content
Why?
We work, we try to be better
We work with full zest
But, why is that we just don't know any letter.

We still give our best.
We have to steal,
But, why is that we still don't get a meal.
We don't get luxury,
We don't get childhood,
But we still work,
Not for us, but for all the others.
Why is it that some kids wear shoes, BUT we make them?
By Mythili, class V
=====
>>>
```

ii) **readline():**

Reads a line of *input*; if *n* is specified reads at most *n bytes*. *Returns* the *read bytes* in the form of a *string ending with ln (line) character* or returns a *blank string of no more bytes are left for reading* in the *file*.

Syntax:

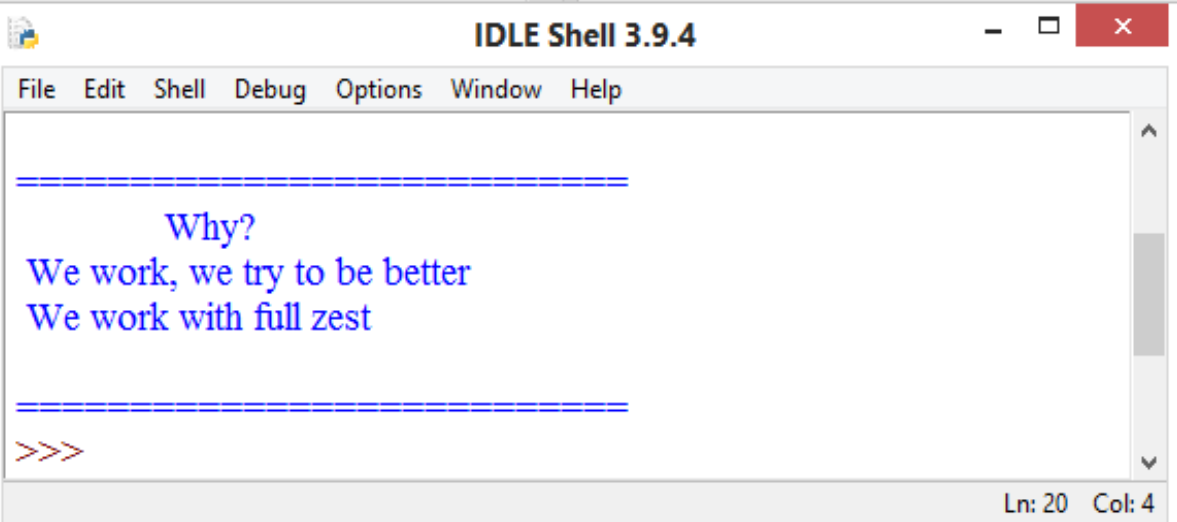
<filhandle>.readline([n])

Example 1:

#prg. To reading a file's three lines - line by line

```
print("\n=====")
myfile=open(r'E:\textfiles\poem.txt',"r")
str1=myfile.readline()
print(str1,end=' ')
str2=myfile.readline()
print(str2, end=' ')
str3=myfile.readline()
print(str3, end=' ')
myfile.close()
print("\n=====")
```

Outout:



```
=====
Why?
We work, we try to be better
We work with full zest
=====
>>>
```

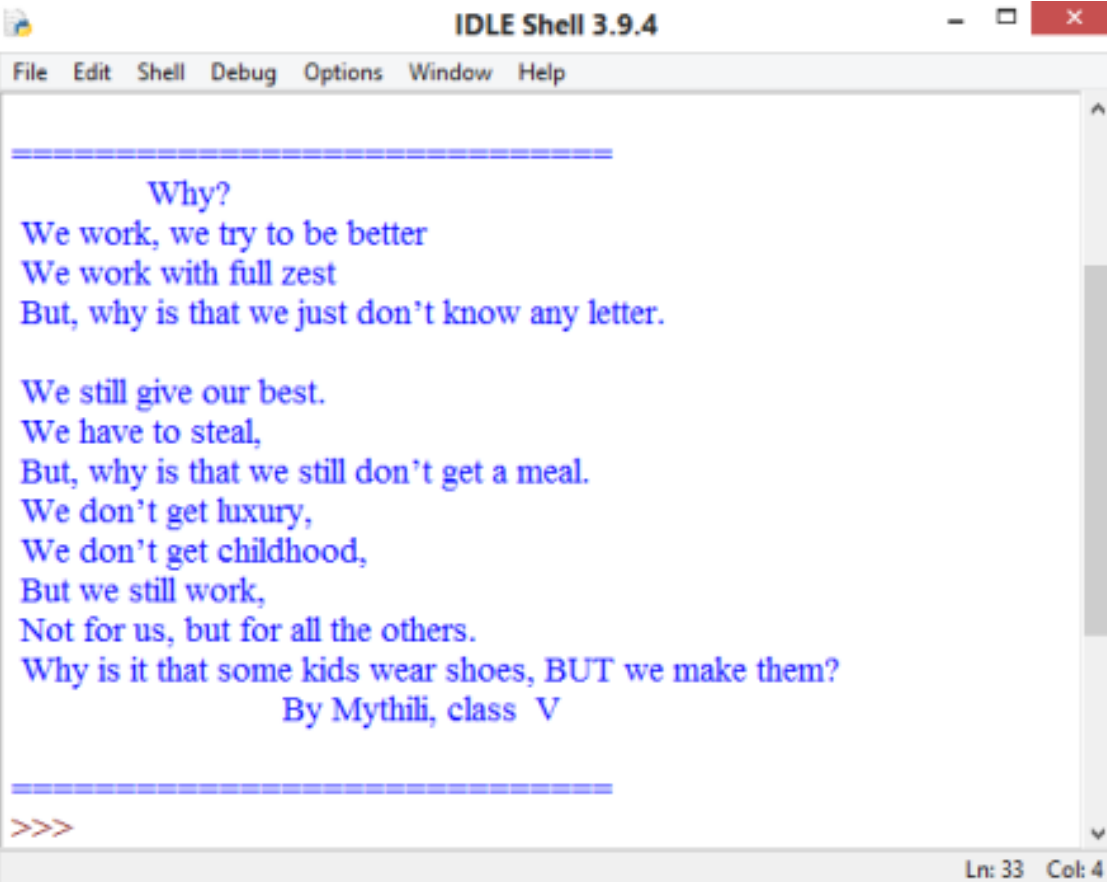
Ln: 20 Col: 4

Example 2:

#prg. To reading a complete file - line by line

```
print("\n=====")
myfile=open(r'E:\textfiles\poem.txt','r')
Str= " "
while Str:
    Str=myfile.readline()
    print(Str,end= ' ')
myfile.close()
print("\n=====")
```

Output:



```
=====
Why?
We work, we try to be better
We work with full zest
But, why is that we just don't know any letter.

We still give our best.
We have to steal,
But, why is that we still don't get a meal.
We don't get luxury,
We don't get childhood,
But we still work,
Not for us, but for all the others.
Why is it that some kids wear shoes, BUT we make them?
                By Mythili, class V
=====
>>>
```

Ln: 33 Col: 4

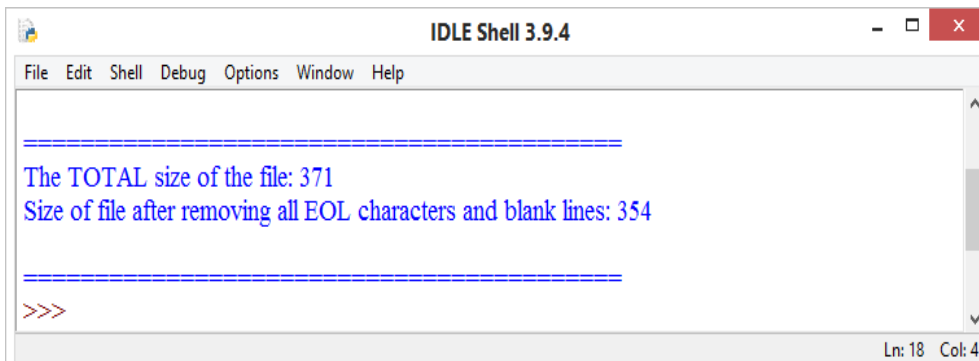
Note:

The `readline()` function reads the *leading and trailing spaces (if any)* along with trailing newline character (`'\n'`) also while reading the line. We can remove these *leading and trailing white spaces (spaces or tabs or newlines)* using `strip()` (without any argument)

#Prg. Displaying the size of a file after removing EOL characters, leading and trailing white spaces and blank lines. (Use of strip())

```
print("\n=====")
myfile = open(r'E:\textfiles\poem.txt', "r")
str1 = " "
size = 0
tsize = 0
while str1:
    str1 = myfile.readline()
    tsize = tsize + len(str1)
    size = size + len(str1.strip())
print("The TOTAL size of the file:", tsize)
print("Size of file after removing all EOL characters and blank lines:", size)
print("\n=====")
myfile.close()
```

Output:



```
=====
The TOTAL size of the file: 371
Size of file after removing all EOL characters and blank lines: 354
=====
>>>
```

Ln: 18 Col: 4

- iii) **readlines():**
reads all lines and returns them in a *list*.

Syntax:

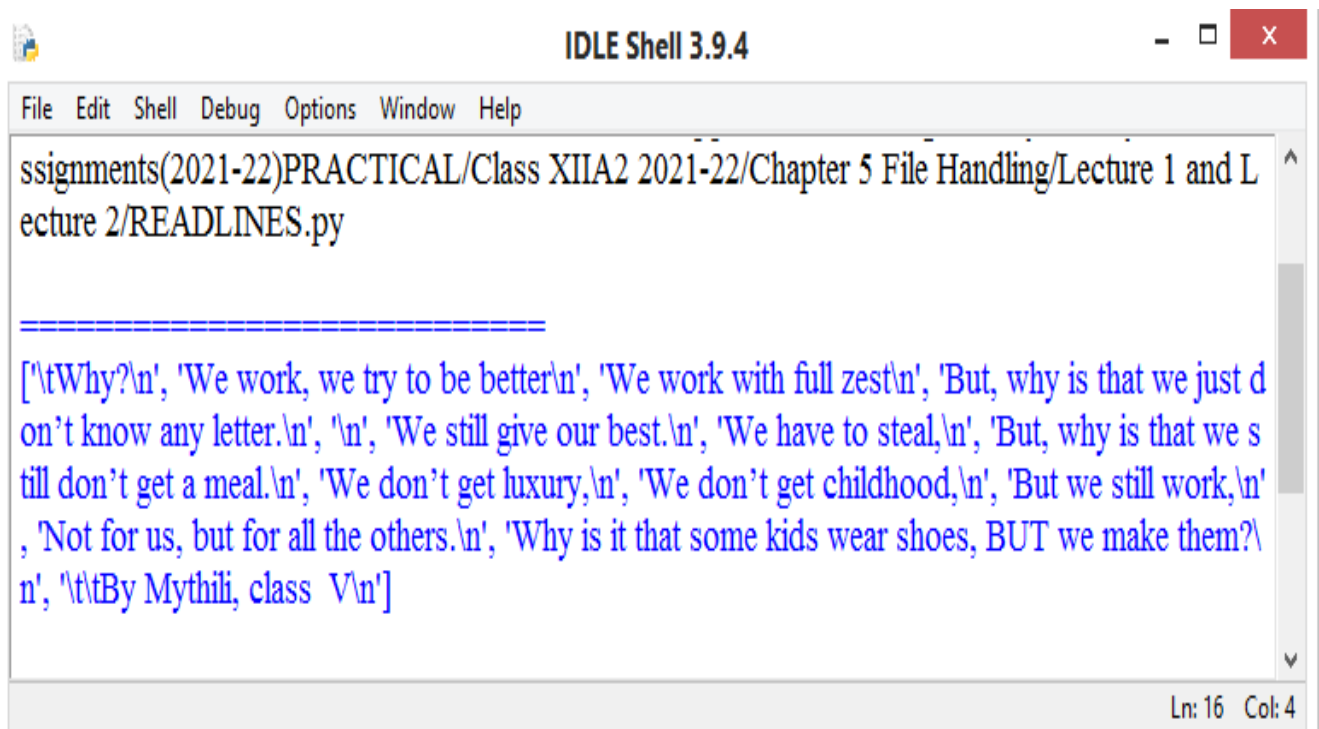
<filehandle>.readlines()

Example:

Reading a complete file-in a list.

```
print("\n=====")
myfile = open(r'E:\textfiles\poem.txt','r')
s = myfile.readlines()
print(s)
myfile.close()
print("\n=====")
```

Output:



Output of the script in IDLE Shell 3.9.4:

```
ssignments(2021-22)PRACTICAL/Class XIIA2 2021-22/Chapter 5 File Handling/Lecture 1 and L  
ecture 2/READLINES.py
```

```
=====
```

```
['\tWhy?\n', 'We work, we try to be better\n', 'We work with full zest\n', 'But, why is that we just d\n', 'on\'t know any letter.\n', '\n', 'We still give our best.\n', 'We have to steal\n', 'But, why is that we s\n', 'till don\'t get a meal.\n', 'We don\'t get luxury,\n', 'We don\'t get childhood,\n', 'But we still work,\n', ', Not for us, but for all the others.\n', 'Why is it that some kids wear shoes, BUT we make them?\n', '\n', '\t\tBy Mythili, class V\n']
```

Ln: 16 Col: 4

Prg. Write a program to display the size of a file in bytes.

```
print("\n=====")
ABC=open(r"E:\textfiles\poem.txt","r")
Str=ABC.read()
size=len(Str)
print("Size of the given file poem.txt is:",size,'bytes')
ABC.close()
print("\n=====")
```

Output:



Prg. Write a program to display the number of lines in the file

```
ABC=open(r"E:\textfiles\poem.txt","r")
Str=ABC.readlines()
linecount=len(Str)
print("Number of lines in poem.txt is:",linecount)
ABC.close()
```

Output:

