

Functions



What we did:

In last class we started learning about python language syntax and wrote our first python program.

In this class we learned to write user defined functions.

How we did it:

We used some predefined functions of python such as `open()`, `read()`

```
rajeev@atlantis ~/D/gettingFilesList> python3
Python 3.6.9 (default, Apr 18 2020, 01:56:04)
[GCC 8.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> f = open("test.txt")
>>> f.read()
'This is a test file. This is a sample text.\n'
>>> █
```

We also understood how to use functions defined on the file object to read the files line by line.

```
>>> f = open("test.txt")
>>> fileLines = f.readlines()
>>> for line in fileLines:
...     print(line)
...
This is a test file. This is a sample text.
>>> █
```

We learnt to use split function with custom operators.

```
>>> introString = "My name is Wily, I am 15 years old."  
>>> words = introString.split()  
>>>  
>>> print(words)  
['My', 'name', 'is', 'Wily,', 'I', 'am', '15', 'years', 'old.']  
>>> □
```

With custom operator

```
>>> introString = "My name is Wily, I am 15 years old."  
>>> words = introString.split(",")  
>>> print(words)  
['My name is Wily', ' I am 15 years old.']  
>>> □
```

We learnt how to write user defined functions

We wrote our first function

```
>>> def greet(name):  
...     print("Hello, " + name + ". How are you?")  
...  
>>> greet("Rahul")  
Hello, Rahul. How are you?  
>>> □
```

Then we wrote a program to count the words from the file.

We defined the function called countWordsFromFile(). Which would take a name of the file as input

```
function.py test.txt  
1 def countWordsFromFile():  
2     fileName = input("Enter the file name:- ")  
3     □  
4
```

We opened the file in read mode

```
function.py test.txt  
1 def countWordsFromFile():  
2     fileName = input("Enter the file name:- ")  
3     file = open(fileName, 'r')  
4
```

Using for loop we split the line into words. We also declared a variable called `numberOfWords` and increment the count each time there is a word.

```
function.py      test.txt
1 def countWordsFromFile():
2     fileName = input("Enter the file name:- ")
3     file = open(fileName, 'r')
4     for line in file:
5         words = line.split()
6
7
```

```
function.py      test.txt
1 def countWordsFromFile():
2     fileName = input("Enter the file name:- ")
3
4     numberOfWords = 0
5
6     file = open(fileName, 'r')
7     for line in file:
8         words = line.split()
9
```

```
function.py      test.txt
1 def countWordsFromFile():
2     fileName = input("Enter the file name:- ")
3
4     numberOfWords = 0
5
6     file = open(fileName, 'r')
7     for line in file:
8         words = line.split()
9         numberOfWords = numberOfWords + len(words)
10
```

Then we printed the number of words and called the function.

```
function.py      test.txt
1  def countWordsFromFile():
2      fileName = input("Enter the file name:- ")
3
4      numberOfWords = 0
5
6      file = open(fileName, 'r')
7      for line in file:
8          words = line.split()
9          numberOfWords = numberOfWords + len(words)
10         print("Number of words:")
11         print(numberOfWords)
12
13
14     countWordsFromFile()
15
```

What's next?

In the next class, we will learn to take backup of files.