Part -1

In [1]:
```
1  # types of functions in Python
2  # file and file operations in python
```

In [2]:
```
1  # 1 without and without return value
```

In [3]:
```
1  # file and files opertaions in Python
```

In [4]:
```
1  # file is a collection is records
2  # file operations in Python
3  # open file
4  ## read r+
5  ## write w+ w
6  ## appened a,a+
7  ## close
```

In [5]:
```
1  pwd()
```

Out[5]: '/home/jashmika/Desktop/Ds-2'

In [6]:
```
1  fopen=open('data.txt','w')
2  fw=fopen.write("Good Evening")
3  print(fw)
4  fopen.close()
```

12

In [8]:
```
1  fadd=open('data.txt','a')
2  fa=fadd.write("Good Evening\n"*10)
3  fadd.close()
```

```
In [11]:    1  fread=open('data.txt','r')
            2  fr=fread.read()
            3  print(fr)
            4  fread.close()
```

```
Good EveningGood Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
Good Evening
```

```
In [12]:    1  fread=open('data.txt','r')
            2  fr=fread.readlines()
            3  print(fr)
            4  fread.close()
```

```
['Good EveningGood Evening\n', 'Good Evening\n', 'Good Evening\n', 'Good Ev
ening\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening\n', 'Good Eveni
ng\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening
\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening
\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening\n', 'Good Evening
\n']
```

```
In [14]:    1  with open('data1.txt','w') as ds:
            2      ff=ds.write("Good Eveinging Every One")
            3      print(ff)
            4  ds.close()
```

```
24
```

```
In [15]:    1  with open('data2.txt','w') as fd:
            2      fr=fd.write("Good Eveing"*10)
            3      print(fr)
            4      fd.close()
```

```
110
```

```
In [16]:   1  fr=fd.read()
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-16-0cb8f5e40e88> in <module>
----> 1 fr=fd.read()

ValueError: I/O operation on closed file.
```

```
In [9]:   1  # number of line in afile
          2  ## number of words in file
          3  ## number of chr in file
          4  with open('data.txt','r') as fg:
          5      k=fg.read()
          6      cnt=1
          7      wc=1
          8      for i in k:
          9          if i=="\n":
         10              cnt=cnt+1
         11              wc=k.split()
         12  print("Number of lines in a file",cnt)
         13  print("number of words in file ",len(wc))
         14  print("number of chr in file",len(k))
```

```
Number of lines in a file 21
number of words in file  42
number of chr in file 272
```

Part - 2

FIles in Python

- Open() ->
    - r -> Read the file from existing file
    - w -> Write data to new file/ if file exist remove all the data and add new data
    - a -> Write the data to the existing file
- Do some operations
    - read the data
    - write the data
- Close()

- all data should in strings

```
In [1]:   ▶|    1  f = open('file.txt')
                2
                3  f.close()
```

```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
<ipython-input-1-6cdd2f7a0574> in <module>
----> 1 f = open('file.txt')
      2
      3 f.close()

FileNotFoundError: [Errno 2] No such file or directory: 'file.txt'
```

```
In [2]:   ▶|    1  f = open('file.txt', 'w')
                2
                3  f.close()
```

```
In [4]:   ▶|    1  for i in range(1, 11):
                2      f = open('file' + str(i) + '.txt', 'w')
                3
                4      f.close()
```

```
In [5]:   ▶|    1  f = open('file.txt', 'w')
                2  f.write(5)
                3  f.close()
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-5-e769fce05913> in <module>
      1 f = open('file.txt', 'w')
----> 2 f.write(5)
      3 f.close()

TypeError: write() argument must be str, not int
```

```
In [7]:   ▶|    1  f = open('file.txt', 'w')
                2  for i in range(1, 101):
                3      f.write('21APSSDC'+ str(i) + '\n')
                4  f.close()
```

```
In [10]:  ▶|    1  f = open('file.txt', 'a')
                2  for i in range(1, 101):
                3      f.write('22APSSDC'+ str(i) + '******')
                4  f.close()
```

```
In [12]:  ▶  1  f = open('file.txt', 'r')
             2
             3  data = f.read()
             4
             5  print(data.lower())
             6  print(type(data))
             7
             8  f.close()
```

```
21apssdc1
21apssdc2
21apssdc3
21apssdc4
21apssdc5
21apssdc6
21apssdc7
21apssdc8
21apssdc9
21apssdc10
21apssdc11
21apssdc12
21apssdc13
21apssdc14
21apssdc15
21apssdc16
21apssdc17
21apssdc18
21apssdc19
21apssdc20
```

```
In [14]:  ▶  1  f = open('file.txt', 'r')
             2
             3  data = f.readline()
             4
             5  print(data)
             6  print(f.readline())
             7  print(type(data))
             8
             9  f.close()
```

```
21APSSDC1

21APSSDC2

<class 'str'>
```

```
In [16]:   1  f = open('file.txt', 'r')
           2
           3  data = f.read(15)
           4
           5  print(data)
           6
           7  print(type(data))
           8
           9  f.close()
```

```
21APSSDC1
21APS
<class 'str'>
```

```
In [17]:   1  f = open('file.txt', 'r')
           2
           3  data = f.read(15)
           4  print(data)
           5  data = f.read(15)
           6  print(data)
           7  print(type(data))
           8
           9  f.close()
```

```
21APSSDC1
21APS
SDC2
21APSSDC3

<class 'str'>
```

```
In [20]:   1  f = open('file.txt', 'r')
           2
           3  data = f.readlines()
           4  print(data[:10])
           5  print(type(data))
           6
           7  f.close()
```

```
['21APSSDC1\n', '21APSSDC2\n', '21APSSDC3\n', '21APSSDC4\n', '21APSSDC5\n',
 '21APSSDC6\n', '21APSSDC7\n', '21APSSDC8\n', '21APSSDC9\n', '21APSSDC10\n']
<class 'list'>
```

```
In [23]:    1  f = open('file.txt', 'r')
            2
            3  data = f.readlines()
            4  print(data)
            5  print(type(data))
            6
            7  f.close()
```

```
['21APSSDC1\n', '21APSSDC2\n', '21APSSDC3\n', '21APSSDC4\n', '21APSSDC5
\n', '21APSSDC6\n', '21APSSDC7\n', '21APSSDC8\n', '21APSSDC9\n', '21APSSD
C10\n', '21APSSDC11\n', '21APSSDC12\n', '21APSSDC13\n', '21APSSDC14\n',
'21APSSDC15\n', '21APSSDC16\n', '21APSSDC17\n', '21APSSDC18\n', '21APSSDC
19\n', '21APSSDC20\n', '21APSSDC21\n', '21APSSDC22\n', '21APSSDC23\n', '2
1APSSDC24\n', '21APSSDC25\n', '21APSSDC26\n', '21APSSDC27\n', '21APSSDC28
\n', '21APSSDC29\n', '21APSSDC30\n', '21APSSDC31\n', '21APSSDC32\n', '21A
PSSDC33\n', '21APSSDC34\n', '21APSSDC35\n', '21APSSDC36\n', '21APSSDC37
\n', '21APSSDC38\n', '21APSSDC39\n', '21APSSDC40\n', '21APSSDC41\n', '21A
PSSDC42\n', '21APSSDC43\n', '21APSSDC44\n', '21APSSDC45\n', '21APSSDC46
\n', '21APSSDC47\n', '21APSSDC48\n', '21APSSDC49\n', '21APSSDC50\n', '21A
PSSDC51\n', '21APSSDC52\n', '21APSSDC53\n', '21APSSDC54\n', '21APSSDC55
\n', '21APSSDC56\n', '21APSSDC57\n', '21APSSDC58\n', '21APSSDC59\n', '21A
PSSDC60\n', '21APSSDC61\n', '21APSSDC62\n', '21APSSDC63\n', '21APSSDC64
\n', '21APSSDC65\n', '21APSSDC66\n', '21APSSDC67\n', '21APSSDC68\n', '21A
PSSDC69\n', '21APSSDC70\n', '21APSSDC71\n', '21APSSDC72\n', '21APSSDC73
\n', '21APSSDC74\n', '21APSSDC75\n', '21APSSDC76\n', '21APSSDC77\n', '21A
PSSDC78\n', '21APSSDC79\n', '21APSSDC80\n', '21APSSDC81\n', '21APSSDC82
\n', '21APSSDC83\n', '21APSSDC84\n', '21APSSDC85\n', '21APSSDC86\n', '21A
```

```
In [24]:    1  f = open('file.txt', 'r')
            2
            3  data = f.readlines()
            4  print(data[:10])
            5
            6  f.close()
```

```
['21APSSDC1\n', '21APSSDC2\n', '21APSSDC3\n', '21APSSDC4\n', '21APSSDC5\n',
'21APSSDC6\n', '21APSSDC7\n', '21APSSDC8\n', '21APSSDC9\n', '21APSSDC10\n']
```

```
In [25]:  1  f = open('file.txt', 'r')
          2
          3  data = f.readlines()
          4
          5  for line in data:
          6      print(line)
          7
          8  f.close()
```

21APSSDC1

21APSSDC2

21APSSDC3

21APSSDC4

21APSSDC5

21APSSDC6

21APSSDC7

21APSSDC8

21APSSDC9

21APSSDC10

- r+
- w+
- a+

```
In [27]:  1  f = open('file.txt', 'r+')
          2
          3  data = f.read()
          4  f.write(data)
          5
          6
```

Out[27]: 9536

```
In [28]:  1  f = open('file.txt', 'r+')
          2
          3  data = f.read()
          4  f.write(data)
          5
          6  f.close()
```

```
In [29]:  ▶   1  with open('file.txt', 'r+') as f:
              2      f.write('\n Day12 APSSDC Session')
              3
              4  print(f.read())
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-29-07fda4a8b057> in <module>
      2      f.write('\n Day12 APSSDC Session')
      3
----> 4 print(f.read())

ValueError: I/O operation on closed file.
```

```
In [30]:  ▶   1  with open('file.txt', 'r+') as f:
              2      f.write('\n Day12 APSSDC Session')
              3
              4      print(f.read())
```

```
1APSSDC3
21APSSDC4
21APSSDC5
21APSSDC6
21APSSDC7
21APSSDC8
21APSSDC9
21APSSDC10
21APSSDC11
21APSSDC12
21APSSDC13
21APSSDC14
21APSSDC15
21APSSDC16
21APSSDC17
21APSSDC18
21APSSDC19
21APSSDC20
21APSSDC21
```

copy data from 1 file to many

```
In [33]:  ▶   1  with open('file.txt', 'r+') as f:
              2      data = f.read()
              3
              4  for i in range(1, 10):
              5      with open('file'+str(i)+'.txt', 'r+') as f:
              6          f.write(data)
```

```
In [34]:  ▶   1  with open('file.txt', 'w') as f:
              2      f.write('New data to file')
```

```
In [35]:  ▶|   1  with open('file.txt', 'a') as f:
              2      f.write('New data to file')
```

```
In [36]:  ▶|   1  d = {}
              2
              3  print(type(d))
```
```
<class 'dict'>
```

```
In [37]:  ▶|   1  s = set()
              2
              3  print(type(s))
```
```
<class 'set'>
```