In [1]:

```python
# Write a File
# write() # I/P--> string
temp = open("students.txt",'w') # python <-------> File
temp.write(input("Enter Somthing:"))
print("Completed"+('.'*20))
temp.close() # python <----X---> File
```

Enter Somthing:hello python
Completed....................

In [13]:

```python
# writelines() #I/P --> List
names = ['narayana\n','indupriya\n','surya\n','ravi\n','kiran\n']

t= open(r"C:\Users\HP\Desktop\names.txt",'w')
t.writelines(names)
t.close()
print('check output once!')
```

check output once!

In [ ]:

```python
# Escape sequences -->  \n \t .. ...
```

In [ ]:

```python
# Overcome Escape Sequences
# \ replace with \\
# \ replace with /
# r -> raw path/raw location
```

In [6]:

```python
location= 'C:\\Users\\HP\\Desktop\\'
```

In [7]:

```python
print(location)
```

C:\Users\HP\Desktop\

In [8]:

```python
location = "C:/Users/HP/Desktop/"
```

In [10]:

```python
location =r"C:\Users\HP\Desktop"
```

In [14]:

```
# Read file  read mode(r)
'''
Read mode Rules
---------------
-> file creation is not possible
-> write() not working
-> read() working
'''
```

. . .

In [19]:

```
file = open('C:\\Users\\HP\\Desktop\\names.txt','r') # 'r' is a default mode for open()
file_data = file.read() # O/P-->  string
print("students.txt".center(50,'~')) # 50-string length
print(file_data)
file.close()
```

~~~~~~~~~~~~~~~~~~~~students.txt~~~~~~~~~~~~~~~~~~~~
narayana
indupriya
surya
ravi
kiran

In [20]:

```
# Modes in File Handling
'''
r -> read mode
x -> create mode
w -> write mode
a -> append mode
r+ -> read & write mode
rb -> read in binary
wb -> write in binary
wb+ -> read & write in binary
ab+ -> appendeing & reading in binary
'''
```

. . .

In [21]:

```
# Append Mode (a)
a= open("laptop.txt",'a')
a.write("\nHello This is append line\n")
a.close()
print("Done")
```

Done

In [22]:

```python
file2 = open('laptop.txt')
print(file2.read())
file2.close()
```

```
hello python
Hello This is append line
```

In [ ]:

```python
# Read Have 3 methods
# read(length) #O/P -> datatype-> str
# readline(length)  #O/P -> datatype-> str
# readlines(length)  #O/P -> datatype-> List
```

In [28]:

```python
# read(length) Example
file2 = open('laptop.txt')
print(file2.read(int(input("Enter Len: "))))
file2.close()
```

```
Enter Len: 2000
hello python
Hello This is append line
```

In [31]:

```python
# readline(length) Ex
file2 = open('laptop.txt')
print(file2.readline(50)) # always returns sinlgle line
file2.close()
```

```
hello python
```

In [35]:

```python
# readlines(length) Ex
file2 = open('laptop.txt')
print(file2.readlines(20)) # O/P  --> List
file2.close()
```

```
['hello python\n', 'Hello This is append line\n']
```

```python
# Example
new = open("college.txt",'r+')
new.write(input("ENter String:- "))
new.seek(0) # changing Postion of Control
print(new.read())
print(new.name)
print(new.mode)
print(new.closed)
new.close()
print(new.closed)
```

```
ENter String:- college
collegee once
college.txt
r+
False
True
```

TASKS

- Create N no. of Text files
- Print sum of Digits using Text File

Comprehentions

- List Comprehntion
- Tuple Comprehention
- Set Comprehention
- Dictionary Comprehention

```python
# List Comprehentions
# store 1 to 10 numbers in list
numbers = [1,2,3,4,5,6,7,8,9,10]
```

```python
numbers
```

Out[42]:

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

In [43]:

```python
# Store 1 to 100 numbers in list
num=[]
for i in range(1,100+1):
    num.append(i)
print(num)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,
22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40,
41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59,
60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78,
79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97,
98, 99, 100]
```

In [ ]:

```python
# Syntax of List Comprehention
# variable = [temvariable for temvariable in range/iterable data]
```

In [44]:

```python
# Store 1 to 100 numbers in list using comprehention

list_temp =[j for j in range(1,101)]
```

In [45]:

```python
print(list_temp)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,
22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40,
41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59,
60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78,
79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97,
98, 99, 100]
```

In [46]:

```python
t= [mn for mn in "python": print("hi")]
```

```
...
```

In [50]:

```python
# store Even Numbers b/w 100 to 150  using comprehention
print([p for  p in list(range(101,150,1))])
```

```
[101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115,
116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 1
31, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 14
6, 147, 148, 149]
```

In [51]:

```python
# List Comprehention using if
# print Even/Odd using if else
print(["Even" if i%2==0 else "Odd" for i in range(20,30)])
```

['Even', 'Odd', 'Even', 'Odd', 'Even', 'Odd', 'Even', 'Odd', 'Even', 'Odd']

In [52]:

```python
# Transpose of a Matrix using List Comprehention
matrix =[[1,2],[3,4],[5,6],[7,8]]
transpose  = [[row[i] for  row in matrix] for i in range(2)]
print(transpose)
```

[[1, 3, 5, 7], [2, 4, 6, 8]]

In [57]:

```python
num =[[1,"narayana"],[2,"indupriya"],[3,'surya']]
temp = [[sub[j] for sub in num] for j in range(2)]
```