

10th Feb Assignment

February 21, 2023

1 Assignment 10

Q1. Which function is used to open a file? What are the different modes of opening a file? Explain each mode of file opening.

Ans. `open()` function is used to open a file. The different mode of file opening are:

- write
- read
- append
- exclusive(x)
- binary(b)
- text
- update(+)

```
[1]: #write mode  
f=open('jpk.txt','w')  
f.write('New file created')  
f.close()
```

```
[2]: #read mode  
f=open('jpk.txt','r')  
f.read()
```

```
[2]: 'New file created'
```

```
[3]: #append mode  
f=open('jpk.txt','a')  
f.write('Jp is good boy')  
f.close()
```

```
[4]: #x mode  
#create a new file and open it for writing  
f=open('Jpk.txt','x')  
f.write('This is new file')  
f.close()
```

```
[5]: #binarymode
f=open('jpk.bin','wb')
f.write(b'\x01\x02\x03')
f.close()
```

```
[6]: #text mode
f=open('jpk.txt','rt')
f.read()
```

```
[6]: 'New file createdJp is good boy'
```

```
[7]: f.close()
```

```
[8]: #plus mode
f=open('jpk.txt','w+')
```

```
[9]: f.write('This is my second line')
```

```
[9]: 22
```

```
[10]: f.read()
```

```
[10]: ''
```

```
[11]: f.close()
```

Q2. Why close() function is used? Why is it important to close a file?

Ans. The close() method of a file object flushes any unwritten information and closes the file object, after which no more writing can be done.

It is important to close file because files are limited resources managed by the operating system, making sure files are closed after use will protect against hard-to-debug issues like running out of file handles or experiencing corrupted data. The best defense is always to open files with a context manager

Q3. Write a python program to create a text file. Write 'I want to become a Data Scientist' in that file. Then close the file. Open this file and read the content of the file.

```
[12]: #python program to create a text file
f=open('file.txt','w')
```

```
[13]: #write message to this file
f.write('I want to become a Data Scientist')
```

```
[13]: 33
```

```
[14]: f.close()
```

```
[16]: #opening file in read mode  
f=open('file.txt','r')
```

```
[17]: #read the message from file  
f.read()
```

```
[17]: 'I want to become a Data Scientist'
```

```
[18]: f.close()
```

Q4. Explain the following with python code: read(), readline() and readlines().

```
[23]: ##Lets create a file  
f=open('Line.txt','w')
```

```
[24]: f.write('I am boy\n')  
f.write('I am a girl')
```

```
[24]: 11
```

```
[25]: f.close()
```

```
[36]: #opening file in read mode  
f=open('Line.txt','r')
```

```
[37]: f.read()
```

```
[37]: 'I am boy\nI am a girl'
```

```
[38]: f.close()
```

```
[39]: #again opening file in read mode  
f=open('Line.txt','r')
```

```
[40]: f.readline()
```

```
[40]: 'I am boy\n'
```

```
[41]: f.readline()
```

```
[41]: 'I am a girl'
```

```
[42]: f.close()
```

```
[43]: #again opening file in read mode
f=open('Line.txt','r')
```

```
[44]: f.readlines()
```

```
[44]: ['I am boy\n', 'I am a girl']
```

```
[45]: f.close()
```

Q5. Explain why with statement is used with open(). What is the advantage of using with statement and open() together?

Ans.The with statement works with the open() function to open a file.

The main advantage of using with statement with open() is we don't have to close the file manually it automatically close the file without telling it but without with statement we have to use the close() method to close the file.

Q6. Explain the write() and writelines() functions. Give a suitable example.

```
[46]: #creating a file
f=open('write.txt','w')
```

```
[47]: f.write('This is a cow\n')
f.write('This is a boy')
```

```
[47]: 13
```

```
[48]: f.close()
```

```
[49]: f=open('write.txt','r')
```

```
[50]: f.read()
```

```
[50]: 'This is a cow\nThis is a boy'
```

```
[51]: f.close()
```

```
[52]: #creating a file
f=open('writelines.txt','w')
```

```
[53]: lst=['Hi how are you\n','I am fine\n','What about you']
```

```
[54]: f.writelines(lst)
```

```
[55]: f.close()
```

```
[56]: f=open('writelines.txt','r')
```

```
[57]: f.read()
```

```
[57]: 'Hi how are you\nI am fine\nWhat about you'
```

```
[58]: f.close()
```