

Ex 4a. Reading data from text files does exploring various commands

Aim

Write a python program to Reading data from text files

Procedure

Python provides inbuilt functions for creating, writing, and reading files. There are two types of files that can be handled in python, normal text files and binary files (written in binary language, 0s, and 1s).

- **Text files:** In this type of file, Each line of text is terminated with a special character called EOL (End of Line), which is the new line character ('\n') in python by default.
- **Binary files:** In this type of file, there is no terminator for a line, and the data is stored after converting it into machine-understandable binary language.

There are 6 access modes in python.

1. **Read Only ('r') :** Open text file for reading.
2. **Read and Write ('r+'):** Open the file for reading and writing
3. **Write Only ('w') :** Open the file for writing.
4. **Write and Read ('w+') :** Open the file for reading and writing.
5. **Append Only ('a'):** Open the file for writing.
6. **Append and Read ('a+') :** Open the file for reading and writing.

There are three ways to read data from a text file.

- **read() :** Returns the read bytes in form of a string. Reads n bytes, if no n specified, reads the entire file.
`File_object.read([n])`
- **readline() :** Reads a line of the file and returns in form of a string. For specified n, reads at most n bytes. However, does not reads more than one line, even if n exceeds the length of the line.
`File_object.readline([n])`
- **readlines() :** Reads all the lines and return them as each line a string element in a list.
`File_object.readlines()`

Program

```
# Program to show various ways to read and
```

```
# write data in a file.
```

```
file1 = open("myfile.txt","w")
```

```
L = ["This is Kings Engg College \n","Located at Chennai \n"," Welcome to KEC \n"]
```

```
# \n is placed to indicate EOL (End of Line)
```

```
file1.write("Hello \n")
```

```
file1.writelines(L)
```

```
file1.close() #to change file access modes
```

```
file1 = open("myfile.txt","r+")
```

```
print("Output of Read function is ")
```

```
print(file1.read())
```

```
print()
```

```
# seek(n) takes the file handle to the nth
```

```
# bite from the beginning.
```

```
file1.seek(0)
```

```
print( "Output of Readline function is ")
```

```
print(file1.readline())
```

```
print()
```

```
file1.seek(0)
```

```
# To show difference between read and readline
```

```
print("Output of Read(9) function is ")
```

```
print(file1.read(9))
```

```
print()
```

```
file1.seek(0)
```

```
print("Output of Readline(9) function is ")
```

```
print(file1.readline(9))
```

```
file1.seek(0)
```

```
# readlines function
```

```
print("Output of Readlines function is ")
```

```
print(file1.readlines())
```

```
print()
```

```
file1.close()
```

Output

```
Output of Read function is  
Hello  
This is Kings Engg College  
Located at Chennai  
Welcome to KEC
```

```
Output of Readline function is  
Hello
```

```
Output of Read(9) function is  
Hello  
Th
```

```
Output of Readline(9) function is  
Hello
```

```
Output of Readlines function is  
['Hello \n', 'This is Kings Engg College \n', 'Located at Chennai \n',  
' Welcome to KEC \n']
```

Result:

Reading data from text files does exploring various commands are successfully executed.