Python assignment3

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1. Write python program to read the entire test.txt file.

demo.py

```
with open('test.txt') as f:
    content = f.read()
    print(content)
```

```
What is Python language?
Python is a widely used high-level, general-purpose, interpreted, dynamic programming
language.Its design philosophy emphasizes code readability, and its syntax allows
programmers to express concepts in fewer lines of code than possible in
languages such as C++ or Java.
Python supports multiple programming paradigms, including object-oriented, imperative and
functional programming or procedural styles. It features a dynamic type system and
automatic memory management and has a large and comprehensive standard library.The best way
we learn anything is by practice and exercise questions. We  have started this section for
those (beginner to intermediate) who are familiar with Python.
[Finished in 131ms]
```

2. Write python program to read first “n” lines of a file.

demo.py

```
# reading first n lines of a file.
n = int(input("How many lines u wanna read "))
with open('test.txt') as f:
    for i in range(n):
        line = f.readline()
        print(line, end="")

```

```
How many lines u wanna read 3
What is Python language?
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languages such as C++ or Java.
PS E:\pythonfiles>
```

3. Write python program to append text to a file and display the text.

demo.py

```
1  with open('myfile.txt', 'a') as f:
2      f.write("\nThis is ITW1 class")
3
4  with open('myfile.txt') as f:
5      print(f.read())
6
```

```
Hello Everyone !
This is ITW1 class
[Finished in 81ms]
```

4. Write python program to read last “n” lines of a file.

demo.py

```
1  n = int(input("How many lines u wanna read from last "))
2  # readlines() method returns a list of lines in file.
3  with open('test.txt') as f:
4      for line in f.readlines()[-n:]:
5          print(line, end="")
```

```
PS E:\pythonfiles> python demo.py
How many lines u wanna read from last 2
languages such as C++ or Java.
Python supports multiple programming paradigms, including object-oriented, imperative and functional prog
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 large and comprehensive standard library.The best way we learn anything is by practice and exercise ques
tions. We  have started this section for those (beginner to intermediate) who are familiar with Python.
PS E:\pythonfiles>
```

5. Write python program to remove an empty tuple(s) from a list of tuples

```python
def removeEmptyTuples(lst):
    # removes empty tuples from a list of tuples.
    i = 0
    while i < len(lst):
        if len(lst[i]) == 0:
            del lst[i]
        else:
            i += 1

sample =  [(), (), ('',), ('a', 'b'), ('a', 'b', 'c'), ('d')]
removeEmptyTuples(sample)
print(sample)
```

```
[('',), ('a', 'b'), ('a', 'b', 'c'), 'd']
[Finished in 90ms]
```

6. Write python program to count the number of lines in a text file.

```python
# printing no of lines in a file.
with open('test.txt') as f:
    content = f.read()

listOfLines = content.split('\n')
print(len(listOfLines))
```

```
4
[Finished in 78ms]
```

7. Write python program to count the frequency of words in a file.

```
demo.py
2  with open('test.txt') as f:
3      content = f.read()
4
5  from collections import Counter
6
7  words = content.split()
8  print(Counter(words))
```

```
Counter({'and': 6, 'is': 3, 'Python': 3, 'a': 3, 'programming': 3, 'dynamic': 2, 'code': 2, 'to': 2, 'in': 2,
'or': 2, 'What': 1, 'language?': 1, 'widely': 1, 'used': 1, 'high-level,': 1, 'general-purpose,': 1,
'interpreted,': 1, 'language.Its': 1, 'design': 1, 'philosophy': 1, 'emphasizes': 1, 'readability,': 1,
'its': 1, 'syntax': 1, 'allows': 1, 'programmers': 1, 'express': 1, 'concepts': 1, 'fewer': 1, 'lines': 1,
'of': 1, 'than': 1, 'possible': 1, 'languages': 1, 'such': 1, 'as': 1, 'C++': 1, 'Java.': 1, 'supports': 1,
'multiple': 1, 'paradigms,': 1, 'including': 1, 'object-oriented,': 1, 'imperative': 1, 'functional': 1,
'procedural': 1, 'styles.': 1, 'It': 1, 'features': 1, 'type': 1, 'system': 1, 'automatic': 1, 'memory': 1,
'management': 1, 'has': 1, 'large': 1, 'comprehensive': 1, 'standard': 1, 'library.The': 1, 'best': 1, 'way':
1, 'we': 1, 'learn': 1, 'anything': 1, 'by': 1, 'practice': 1, 'exercise': 1, 'questions.': 1, 'We': 1,
'have': 1, 'started': 1, 'this': 1, 'section': 1, 'for': 1, 'those': 1, '(beginner': 1, 'intermediate)': 1,
'who': 1, 'are': 1, 'familiar': 1, 'with': 1, 'Python.': 1})
[Finished in 95ms]
```

8. Write python program to get the file size of a text file in bytes.

```
demo.py
1  import os
2
3  fileSize = os.path.getsize('test.txt')
4  print("file size in bytes of 'test.txt' is", fileSize)
```

```
file size in bytes of 'test.txt' is 767
[Finished in 76ms]
```

9. Write python program to write a list content to a file.

demo.py

```
colors = input("Enter the list of colors -").split()

with open('myfile.txt', 'w') as f:
    for color in colors:
        f.write(color + '\n')

with open('myfile.txt') as f:
    print("Displaying myfile.txt")
    print(f.read())
```

```
PS E:\pythonfiles> python demo.py
Enter the list of colors -Red Green White Black Pink Yellow
Displaying myfile.txt
Red
Green
White
Black
Pink
Yellow

PS E:\pythonfiles>
```

10. Write python program to combine each line from first file with the corresponding line in second file.

demo.py

```
with open('file1.txt') as f1, open('file2.txt') as f2:
    content1 = f1.readlines()
    content2 = f2.readlines()

for line1, line2 in zip(content1, content2):
    print(line1.rstrip())
    print(line2.rstrip())

```

```
Python exercises
Red
Java exercises
Green
[Finished in 79ms]
```

11. Write python program to read a random line from a file.

demo.py

```
with open('test.txt') as f:
    content = f.readlines()

import random
randomLine = random.choice(content)
print(randomLine.rstrip())
```

```
What is Python language?
[Finished in 86ms]
```

12. Write python program that accepts sequence of lines as input and prints the lines after making all characters in the sentence capitalized.

demo.py

```
lines = []
while True:
    line = input()
    if line:
        lines.append(line.upper())
    else:
        break
for line in lines:
    print(line)
```

```
PS E:\pythonfiles> python demo.py
hello everyone
practice makes perfect

HELLO EVERYONE
PRACTICE MAKES PERFECT
PS E:\pythonfiles>
```

13. Write python code to split the word from the input file.

demo.py

```
with open('file1.txt') as f:
    lines = f.readlines()

for line in lines:
    print(line.split())
```

```
['Python', 'exercises']
['Java', 'exercises']
[Finished in 83ms]
```

14. Write python code to find the current working directory also do the following operations:
A. creating a new directory.
B. create a new text file in the new directory.
C. delete the new directory

demo.py

```
import os
import shutil

print("Current working directory is", os.getcwd())
os.mkdir('newdir')
print("'newdir' is created")
with open('newdir/myfile.txt', 'w') as f:
    print("'myfile' is created in 'newdir'")
    f.write("this file is in 'newdir' directory")

shutil.rmtree('newdir')
print("'newdir' is removed")

```

```
Current working directory is E:\pythonfiles
'newdir' is created
'myfile' is created in 'newdir'
'newdir' is removed
[Finished in 130ms]
```
