Text File Handling

Question 1

Write a function in python to read and print an entire text file named Sample1.txt

Source Code:

```
def read_and_print_file(filename):
    fh= open(filename, 'r')
    content = fh.read()
    print(content)
    fh.close()
 read_and_print_file("Sample1.txt")
```

Output:

```
hi
hello
1
hey
6
nice
4
hello
46
```

Question 2

Define a function named Alternate_Char() in python to print alternate characters from the text file named sample.txt

Source Code:

```
def alternate_char(filename):
    fh=open(filename, 'r')
    content=list(fh.read())
    for i in range(0,len(content),2):
        print(content[i])
    fh.close()
alternate_char("sample.txt")
```

Output:

```
h

h
e


h
e

e

4

h
e



4
```

Question 3

Write a program to print all the digits in a text file.

Source Code:

```
def num_count(filename):
    with open(filename, 'r') as file:
        content=list(file.read())
        for i in content:
            if i.isdigit():
                print(i)
num_count("Sample.txt")
```

Output:

```
1
6
4
4
6
```

Question 4

Define a function named CharCount(ch) to count the frequency of a specific character (accept from the user)in the file count.txt.

Source Code:

```
def charcount(ch):
    fh=open('count.txt','r')
    c1=0
    content=list(fh.read())
        for i in content:
            if i==ch:
                c1+=1
        print('Count of',ch,':',c1)
charcount('h')
```

Output:

```
Count of h : 5
```

Question 5

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

Source Code:

```
def line_cnt(fileloc):
    with open(fileloc, 'r') as file:
        content=file.readlines()
        print("Number of Lines:",len(content))
line_cnt("Count.txt")
```

Output:

```
Number of Lines: 10
```

Question 6

Write a program to read the first n lines of a file poem.txt

Source Code:

```
def n_line(fileloc):
    with open(fileloc, 'r') as file:
        content=file.readlines()
        n=int(input("Enter the number of lines to print:"))
        for i in range(n):
            print(content[i])
n_line("Poem.txt")
```

Output:

```
Enter the number of lines to print:4
Two roads diverged in a yellow wood,

And sorry I could not travel both

And be one traveler, long I stood

And looked down one as far as I could
```

Question 7

Write a program to print the lines of a file poem.txt along with line number.

Source Code:

```
def prn_line(fileloc):
    with open(fileloc, 'r') as file:
        content=file.readlines()
        for i in range(len(content)):
            print(i+1,'.',content[i])
prn_line("Poem.txt")
```

Output:

```
1 . Two roads diverged in a yellow wood,
2 . And sorry I could not travel both
3 . And be one traveler, long I stood
4 . And looked down one as far as I could
5 . To where it bent in the undergrowth;
6 .
7 . Then took the other, as just as fair,
8 . And having perhaps the better claim,
9 . Because it was grassy and wanted wear;
10 . Though as for that the passing there
11 . Had worn them really about the same,
12 .
13 . And both that morning equally lay
14 . In leaves no step had trodden black.
15 . Oh, I kept the first for another day!
16 . Yet knowing how way leads on to way,
17 . I doubted if I should ever come back.
18 .
19 . I shall be telling this with a sigh
20 . Somewhere ages and ages hence:
21 . Two roads diverged in a wood, and Iâ€”
22 . I took the one less traveled by,
23 . And that has made all the difference.
```

Question 8

Write a function in python to print alternate line of a text file try.txt

Source Code:

```
def alt_lines(filename):
    with open(filename, 'r') as file:
        content = file.readlines()
        for i in range(0, len(content), 2):
            print(content[i], end='')
alt_lines("try.txt")
```

Output:

```
Once upon a time in the quiet village of Willowbro
ok, there lived a young girl named Lily.
Lily spent her days exploring the woods, where eve
ry rustling leaf seemed to whisper secrets only sh
e could hear.
The pages were yellowed, and the words were faded,
but as she began to read, the stories came alive i
n her mind.
Lily's imagination ignited like a fire, and she co
uldn't help but dream of embarking on her own gran
d adventure.
As the days turned into weeks, Lily's passion for
adventure grew stronger.
And so, with a heart full of courage and a pocketf
ul of dreams, Lily stepped onto the path that woul
d lead her beyond the village, into a world waitin
g to be discovered.
```

Question 9

Write a Python program to read a random line from a file.

Source Code:

```
import random as r
def rand_line(fileloc):
    with open(fileloc,'r') as file:
        content=file.readlines()
        rn=r.randint(0,len(content)-1)
        print(content[rn])
rand_line("Try.txt")
```

Output:

```
The pages were yellowed, and the words were faded, but as she began to read, the stories came alive i
n her mind.
```

Question 10

Write a Python program to read last n lines of a file.

Source Code:

```
def last_n_lines(fileloc):
    with open(fileloc, 'r') as file:
        content = file.readlines()
        n = int(input("Enter the number of lines to print from the end: "))
        for line in content[-n:]:
            print(line, end='')
last_n_lines("Poem.txt")
```

Output:

```
Enter the number of lines to print from the end: 2
I took the one less traveled by,
And that has made all the difference.
```

Question 11

Write a Python program to read a file line by line and store it into a list.

Source Code:

```
def line_list(fileloc):
    with open(fileloc, 'r') as file:
        content=file.readlines()
        lis=[]
        for i in content:
            print(i)
            lis.append(i)
        print(lis)
line_list("Try.txt")
```

Output:

```
['Once upon a time in the quiet village of Willowbrook, there lived a young girl named Lily. \n', 'She had a heart as wild as the meadows that surrounded her home.\n', 'Lily spent her days exploring the woods, where every rustling leaf seemed to whisper secrets only she could hear.\n', 'One sunny morning, as the birds serenaded the world with their songs, Lily stumbled upon an old, weathered book hidden beneath a tangle of ivy. \n', 'The pages were yellowed, and the words were faded, but as she began to read, the stories came alive in her mind.\n', 'The book revealed tales of enchanted lands, brave knights, and mythical creatures. \n', "Lily's imagination ignited like a fire, and she couldn't help but dream of embarking on her own grand adventure. \n", 'She yearned to explore distant lands, cross treacherous mountains, and uncover hidden mysteries.\n', "As the days turned into weeks, Lily's passion for adventure grew stronger. \n", "She decided to leave the safety of Willowbrook and set out to create her own story, to chase the unknown, and to let her heart guide her through the pages of her own life's book. \n", 'And so, with a heart full of courage and a pocketful of dreams, Lily stepped onto the path that would lead. \n”]
```

Question 12

Write a program to print the line with maximum length in a file.

Source Code:

```
def max_len(fileloc):
    mx=''
    mxlen=0
    with open(fileloc,'r') as file:
        content=file.readlines()
        for i in content:
            if len(i)>mxlen:
                mxlen=len(i)
                mx=i
    print("Longest Line:",mx)
max_len("Try.txt")
```

Output:

Longest Line: She decided to leave the safety of Willowbrook and set out to create her own story, to chase the unknown, and to let her heart guide her through the pages of her own life's book.

Question 13

Write a Python program to count the frequency of words in a file

Source Code:

```
def word_count(fileloc):
    count = 0
    with open(fileloc, 'r') as file:
        word_to_search = input("Enter the word to be searched: ")
        content = file.read()
        words = content.split()
        for word in words:
            if word == word_to_search:
                count += 1
    print("Count of", word_to_search, ":", count)
word_count("Try.txt")
```

Output:

```
Enter the word to be searched: a
Count of a : 8
```

Question 14

Write a python program to find and print the longest word in the text file “words.txt”.

Source Code:

```
def max_word(fileloc):
    longest_word = ""
    max_length = 0
    with open(fileloc, 'r') as file:
        content = file.read()
        words = content.split()
        for word in words:
            if len(word) > max_length:
                max_length = len(word)
                longest_word = word
    print("Longest word:", longest_word)
max_word("Try.txt")
```

Output:

```
Longest word: Willowbrook,
```

Question 15

Count and print the number of times the following words appear in the text file “Words.txt”

a)“and”

b) “is”

Source Code:

```
def count_words(fileloc):
    c1 = 0
    c2 = 0
    with open(fileloc, 'r') as file:
        content = file.read()
        words = content.split()
        for word in words:
            if word == 'and':
                c1 += 1
            elif word == 'is':
                c2 += 1
        print('Count of "and":', c1)
        print('Count of "is":', c2)
count_words("Words.txt")
```

Output:

```
Count of "and": 8
Count of "is": 5
```

Question 16

Write a program to display the contents of a text file “file1.txt” with all the words capitalized.

Source Code:

```
def cap(fileloc):
    with open(fileloc, 'r') as file:
        content=file.read()
        a=content.upper()
        print(a)
cap('lines.txt')
```

Output:

```
HI
HELLO
WYD
HI
HELLO
WYD
HI
HELLO
WYD
HI
HELLO
WYD
```

Question 17

Write a program to write n lines into text a file “lines.txt” using write function

Source Code:

```
def write_n_lines(filename, n):
    with open(filename, 'w') as file:
        for i in range(n):
            line = input("Enter line: ")
            file.write(line + '\n')
write_n_lines("write_lines.txt",  3)
```

Output:

```
Enter line: Hi
Enter line: Hello
Enter line: HYD!!
```

Question 18

Write a program to write a list containing strings into a text file “write_lines.txt”

Source Code:

```
def append_lines_to_file(filename, lines):
    with open(filename, 'w') as file:
        for line in lines:
            file.writelines(line + '\n')
lines_input = input("Enter a list of lines
(enclosed in []): ")
lines_to_append = eval(lines_input)
append_lines_to_file("write_lines.txt",
lines_to_append)
```

Output:

```
Enter a list of lines (enclosed in []):
['hello','hi','hyd!!']
```

Question 19

Write a program to copy the contents of “text1.txt” into another file “text2.txt”

Source Code:

```
def copy_file(source_filename, destination_filename):
    with open(source_filename, 'r') as source_file:
        content = source_file.read()
    with open(destination_filename, 'w') as
destination_file:
        destination_file.write(content)
    with open(destination_filename,'r') as
destination_file_read:
        data=destination_file_read.read()
        print(data)
copy_file("text1.txt", "text2.txt")
```

Output:

```
HI
HELLO
WYD
```

Question 20

Write a program to copy the contents of “try.txt” into “final.txt”. While copying the content from the text file “try.txt” into “final.txt” append “#” after each and every character.

Source Code:

```
def copy_and_append(filename_source, filename_destination):
    with open(filename_source, 'r') as source_file:
        content = source_file.read()
        modified_content = '#'.join(content)
    with open(filename_destination, 'w') as destination_file:
        destination_file.write(modified_content)
    with open(filename_destination, 'r') as destination_file_read:
        data=destination_file_read.read()
        print(data)
copy_and_append("try.txt", "final.txt")
```

Output:

```
T#R#Y# #F#I#L#E#
#H#I#
#H#E#L#L#O#
#H#Y#D#
#!#
#D#P#S#B#N#
#N#A#I#R
```

Question 21

Write a program to create a new file named “new.txt” by removing lines that begin with lowercase characters from “old.txt”

Source Code:

```
def lc_char_rem(fileloc):
    new_lines = []
    with open(fileloc, 'r') as file:
        content = file.readlines()
        for line in content:
            if not
line.strip().startswith(tuple("abcdefghijklmnopqrst
uvwxyz")):
                new_lines.append(line)
                with open("new.txt", 'w') as nfile:
                    nfile.writelines(new_lines)
        with open ('new.txt','r') as file1:
            print(file1.read())
lc_char_rem("old.txt")
```

Output:

```
Old FilE
Hi
HellO
Hyd
!
DpsbN
Nair
```

Question 22

Write a program to create a new file named "new.txt" by removing lines that end with an uppercase letter from "old.txt"

Source Code:

```
def uc_char_rem(fileloc):
    new_lines = []
    with open(fileloc, 'r') as file:
        content = file.readlines()
        for line in content:
            if not
line.strip().endswith(tuple("ABCDEFGHIJKLMNOPQRSTU
VWXYZ")):
                new_lines.append(line)
                with open("new.txt", 'w') as nfile:
                    nfile.writelines(new_lines)
        with open ('new.txt','r') as file1:
            print(file1.read())
uc_char_rem("old.txt")
```

Output:

```
Hi
Hyd
hi hello
!
Nair
```

Question 23

Write a program to create a new file named “word_new.txt” from “word_old.txt” by copying only those words which are five characters in length.

Source Code:

```
def char_rem(fileloc):
    new_lines = []
    with open(fileloc, 'r') as file:
        content = file.readlines()
        for line in content:
            if len(line.strip()) == 5:
                new_lines.append(line)
                with open("word_new.txt", 'w') as
nfile:
                    nfile.writelines(new_lines)
        with open("word_new.txt", 'r') as nfile:
            print(nfile.read())
char_rem("word_old.txt")
```

Output:

```
HellO
DpsbN
```

Question 24

Assuming that a text file “poem.txt” has some content, write a program to create “file2.txt” that contains only those words from the file “ poem.txt” that do not start with an uppercase vowel.

Source Code:

```
def chr_v_rem(fileloc):
    new = []
    with open(fileloc, 'r') as file:
        content = file.readlines()
        for line in content:
            if line.isspace():
                pass
            elif not line.isspace():
                if not line.strip()[0] in ('A',
'E', 'I', 'O','U'):
                    new.append(line)
                    with open("file2.txt", 'w') as
new_file:
                        new_file.writelines(new)
    with open ('file2.txt' ,'r') as read_file:
        print(read_file.read())
chr_v_rem("poem.txt")
```

Output:

```
Two roads diverged in a yellow wood
To where it bent in the undergrowth
Then took the other, as just as fair
Because it was grassy and wanted wear
Though as for that the passing there
Had worn them really about the same
Yet knowing how way leads on to way
Somewhere ages and ages hence
Two roads diverged in a wood and Ice
```

Question 25

Accept the names of players for two teams into the files named “Team1.txt” and “Team2.txt” respectivelywith each team having 6 players. Create a new file named “FinalTeam.txt” which has alternate names from“Team1.txt” and “Team2.txt”

Team1.txt	Team2.txt	FinalTeam.txt
Suman	Yash	Suman
Kiran	Ranjan	Ranjan
Bheem	Jagan	Bheem
Ram	Mohan	Mohan
Tom	Rajesh	Tom
Harry	Suresh	Suresh

Source Code:

```
def alt(fileloc1, fileloc2):
    newlst = []
    with open(fileloc1, 'r') as team1:
        contm1 = team1.readlines()
    with open(fileloc2, 'r') as team2:
        contm2 = team2.readlines()
    for i in range(0, len(contm1), 2):
        newlst.append(contm1[i])
        newlst.append(contm2[i+1])
    with open("FinalTeam.txt", 'w') as file:
        file.writelines(newlst)
    with open("FinalTeam.txt", 'r') as file_read:
        print('Final Team:')
        print(file_read.read())
alt("Team1.txt", "Team2.txt")
```

Output:

```
Final Team:
Suman
Ranjan
Bheem
Mohan
Tom
Suresh
```

Question 26

Write a program to open the file “new.txt” created in question number 22 and add all the words of file named “sample.txt” that start with 't' or 'T' (Note: Existing content of “new.txt” must be retained)

Source Code:

```
def merge_files(fileloc, fileloc1):
    new_lines = []
    with open(fileloc, 'a') as file1:
        with open(fileloc1, 'r') as file2:
            content = file2.readlines()
            for line in content:
                if line.strip().startswith(('t',
'T')):
                    new_lines.append(line)
        file1.write('\n'+'\n'.join(new_lines))
    with open(fileloc,'r') as read_file:
        print(read_file.read())
merge_files("new.txt", "sample.txt")
```

Output:

```
Old FilE
Hi
HellO
Hyd
!
DpsbN
Nair
Tijori

Triathlon

ticket
```

Question 27

Write a Menu Based Python program to count the number of spaces, digits, words and lines from a text file called “D: \Exam\word.txt”. The menu should be

1. Add fresh contents to file
2. Display (contents of file & counters)
3. Exit

Source Code:

```
def fns(content):
    cspace = 0
    cdigit = 0
    cwords = 0
    clines = 0
    contentl = content.split('\n')
    clines = len(contentl)
    for i in content:
        if i.isdigit():
            cdigit += 1
        elif i.isspace():
            cspace += 1
    words = content.split()
    cwords = len(words)
    return cspace, cdigit, cwords, clines
def menu():
    cspace, cdigit, cwords, clines = 0, 0, 0, 0
    while True:
        print('''1.Add fresh contents to file
                 2.Display (contents of file & counters)
                 3.Exit ''')
        ch = int(input("Enter the Choice Number: "))
        if ch == 1:
            elements = input("Enter the list of elements to be
inserted (comma-separated): ")
            with open('D:/Exam/word.txt', 'a') as file:
                file.write('\n'.join(elements) + '\n')
        elif ch == 2:
            with open('D:/Exam/word.txt', 'r') as file:
                content = file.read()
                cspace, cdigit, cwords, clines = fns(content)
                print(content)
                print("Count of Space:", cspace)
```

```
                print("Count of Digit:", cdigit)
                print("Count of Words:", cwords)
                print("Count of Lines:", clines)
        elif ch == 3:
            break
        else:
            print("Invalid Option")
menu()
```

Output:

```
1.Add fresh contents to file
                2.Display (contents of file & counters
)
3.                  Exit
Enter the Choice Number: 1
Enter the list of elements to be inserted (comma-separa
ted): 1,2,3
1.Add fresh contents to file
                2.Display (contents of file & counters
)
3.                  Exit
Enter the Choice Number: 2
1
,
2
,
3

Count of Space: 5
Count of Digit: 3
Count of Words: 5
Count of Lines: 6
1.Add fresh contents to file
                2.Display (contents of file & counters
)
3.                  Exit
Enter the Choice Number: 4
Invalid Option
1.Add fresh contents to file
```

```
                2.Display (contents of file & counters
)
                3.Exit
Enter the Choice Number: 3
```

Question 28

Write a Menu Based Python Program to count the number of uppercase letters and digits from a text file calle d “word.txt”. Also make a copy of the file into “word2.txt”.

The menu should be.

1. Add fresh contents to file
2. Make a Copy of the file
3. Display (contents of original file, copied file & counters)
4. Exit

Source Code:

```
def  main_menu_copy(filename):
    while True:
        print("Menu:")
        print("1. Add fresh contents to file")
        print("2. Make a Copy of the file")
        print("3. Display (contents of original file, c
opied file & counters)")
        print("4.  Exit")
        choice = input("Enter your choice: ")

        if choice == "1":
            new_content = input("Enter your new list of
content to add: ")
            with open(filename, 'w') as file:
                file.writelines(new_content)
        elif choice == "2":
            with open(filename, 'r') as source_file:
                content = source_file.read()
```

```
                with open("word2.txt", 'w') as destinat
ion_file:
                    destination_file.write(content)
                    print("File copied successfully.")
        elif choice == "3":
            uppercase_count = 0
            with open(filename, 'r') as source_file, op
en("word2.txt", 'r') as copied_file:
                content = source_file.read()
                copied_content = copied_file.read()
                for i in copied_content:
                    if i.isupper():
                        uppercase_count += 1
                print(f"Original content:\n{content}")
                print(f"Copied  content:\n{copied_conten
t}")
                print(f"Uppercase letters count in copi
ed content: {uppercase_count}")
        elif choice == "4":
            break
        else:
            print("Invalid choice. Please select a vali
d option.")
main_menu_copy("word.txt")
```

Output:

```
Menu:
1. Add fresh contents to file
2. Make a Copy of the file
3. Display (contents of original file, copied file & count
ers)
4. Exit
Enter your choice: 1
Enter your new list of content to add: [1,2,3]
Menu:
1. Add fresh contents to file
2. Make a Copy of the file
```

```
3. Display (contents of original file, copied file & counters)
4. Exit
Enter your choice: 2
File copied successfully.
Menu:
1. Add fresh contents to file
2. Make a Copy of the file
3. Display (contents of original file, copied file & counters)
4. Exit
Enter your choice: 3
Original content:
[1,2,3]
Copied content:
[1,2,3]
Uppercase letters count in copied content: 0
Menu:
1. Add fresh contents to file
2. Make a Copy of the file
3. Display (contents of original file, copied file & counters)
4. Exit
Enter your choice: 8
Invalid choice. Please select a valid option.
Menu:
1. Add fresh contents to file
2. Make a Copy of the file
3. Display (contents of original file, copied file & counters)
4. Exit
Enter your choice: 4
```

Question 29

Write a program to perform the following operations according to the sequence of steps given below.

1. Open and display the contents of a file whose location is entered by the user.
2. Call a user defined function named ReplaceAll(oldword, newword) that changes all the occurrences of oldword with newword in the file opened above and returns the changed content. (Note: oldword and newword are entered by the user and are passed to the functions as arguments) 3. Display the changed content.

Source Code:

```
def ReplaceAll(oldword, newword, content):
    new_content = content.replace(oldword, newword)
    return new_content

filename = input("Enter the file name: ")
with open(filename, 'r') as file:
    content = file.read()
    old_word = input("Enter the word to replace: ")
    new_word = input("Enter the new word: ")
    changed_content = ReplaceAll(old_word, new_word, co
ntent)
    print("Changed content:")
    print(changed_content)
```

Output:

```
Enter the file name: try.txt
Enter the word to replace: a
Enter the new word: hi
Changed content:
Once upon hi time in the quiet villhige of Willowbrook, there lived hi young girl nhimed Lily.
She hhid hi hehirt his wild his the mehidows thhit surr ounded her home.
Lily spent her dhiys exploring the woods, where every r ustling lehif seemed to whisper secrets only she could hehir.
One sunny morning, his the birds serenhided the world w ith their songs, Lily stumbled upon hin old, wehithered book hidden benehith hi thingle of ivy.
The phiges were yellowed, hind the words were fhided, b ut his she beghin to rehid, the stories chime hilive in her mind.
The book revehiled thiles of enchhinted lhinds, brhive knights, hind mythichil crehitures.
Lily's imhiginhition ignited like hi fire, hind she cou ldn't help but drehim of embhirking on her own grhind h idventure.
She yehirned to explore disthint lhinds, cross trehiche rous mounthiins, hind uncover hidden mysteries.
As the dhiys turned into weeks, Lily's phission for hid venture grew stronger.
She decided to lehive the shifety of Willowbrook hind s et out to crehite her own story, to chhise the unknown, hind to let her hehirt guide her through the phiges of her own life's book.
And so, with hi hehirt full of courhige hind hi pocketf ul of drehims, Lily stepped onto the phith thhit would lehid her beyond the villhige, into hi world whiiting t o be discovered.
```

Question 30

Write a program to perform the following operations according to the sequence of steps given below.

1. Accept n names from the user and store in a text file named “nameslist.txt”
2. Display the contents of the file “nameslist.txt”
3. Create a new file named “lexical_nameslist.txt” that stores the names of “nameslist.txt” sorted lexicographically (i.e. alphabetic order)
4. Display the contents of “lexical_nameslist.txt”

Source Code:

```
def  accept_and_store_names(filename):
    n = int(input("Enter the number of names: "))
    names = []
    for _ in range(n):
        name = input("Enter a name: ")
        names.append(name)
    with open(filename, 'w') as file:
        for name in names:
            file.write(name + '\n')

def display_file_contents(filename):
    with open(filename, 'r') as file:
        content = file.read()
        print(content)

def  sort_names_and_display(filename_source,  filename_de
stination):
    with open(filename_source, 'r') as source_file:
        names = source_file.read().split()
        sorted_names = sorted(names)
        with open(filename_destination, 'w') as destina
tion_file:
            destination_file.write('\n'.join(sorted_nam
es))
            print("Sorted names:")
```

```
print('\n'.join(sorted_names))

accept_and_store_names("nameslist.txt")
print("Contents of the file:")
display_file_contents("nameslist.txt")
sort_names_and_display("nameslist.txt", "lexical_namesl
ist.txt")
print("Contents of the sorted file:")
display_file_contents("lexical_nameslist.txt")
```

Output:

```
Enter the number of names: 3
Enter a name: Mark
Enter a name: Antony
Enter a name: Stark
Contents of the file:
Mark
Antony
Stark

Sorted names:
Antony
Mark
Stark
Contents of the sorted file:
Antony
Mark
Stark
```