1.Write a python function that copies file reading and writing upto 50 characters at a time

In [6]:
```
def copy_file():
    f=open('demo.txt','r')
    count=0
    content=f.read()
    raw=[]
    for i in content:
        if count<50:
            raw.append(i)
            count+=1
        print(content.read)
    f.close()
copy_file()
```

2.Print all numbers present in a text file and print number of blank spaces present in that file

In [36]:
```
f1=(open('first.txt','r'))
content=f1.read()
raw1=[]
count1=0
count2=0
for i in content:
    raw1.append(i)
    if i==' ':
        count1+=1
import re
numbers=re.findall(r'\d+',content)
print('Numbers are : ', numbers)


print('Number of spaces are ',count1)
```

```
Numbers are :  []
Number of spaces are  3
```

3. Write a function called sed that takes as argument a pattern string, a replacement string, and two fienames;. It should read the file first and write the contents into the second file. If the

pattern string appears anywhere in the file, it should be replaced with a replacement string. If an error occurs while opening, reading, writing, or closing strings, your program should catch the exception, print an error message, and exit

In [51]:
```
file=open('input.txt','w')
file.write('Allah is Omnipotent, and He is Above anything else!')

file.close()
```

In [52]:
```
file1=open('output.txt','w')
file1.write('The Prophet (PBUH) was the best human in realizing the denotation

file1.close()
```

In [65]:
```
def sed(pattern, replacement, in_f, out_f):
   try:
        with open(in_f, "r") as infile, open(out_f, "w") as outfile:
         for line in infile:
             modified_line=line.replace(pattern, replacement)
             outfile.write(modified_line)
   except Exception as e:

       print("An error occurred:", str(e))

sed("old pattern", "new pattern", "input.txt", "output.txt")
```

4

In [ ]:
```

```

5 write a python code to search for and replace with in the text file

In [68]:
```
f4=open('large_file.txt','w')
f4.write('Our Prophet Muhammad (sallallahu ‘alayhi wa sallam) said: “The seven
```

Out[68]: 160

In [81]:
```
file_path = 'large_file.txt'
search_text = (input('Enter the text that you want to replace'))
replace_text = 'Great'
with open(file_path, 'r') as file:
    file_content = file.read()
updated_content = file_content.replace(search_text, replace_text,4)
with open(file_path, 'w') as file:
    file.write(updated_content)
print(f"Text '{search_text}' has been replaced with '{replace_text}' in '{file_
```

```
Enter the text that you want to replacethe
Text 'the' has been replaced with 'Great' in 'large_file.txt'.
```

In [84]:
```
##multiple replacements
import re
file_path = 'large_file.txt'
replacements = {
    'is': 'am',
    'for': 'that'
}
with open(file_path, 'r') as file:
    file_content = file.read()
def multiple_replace(text, replacements):
    pattern = re.compile("|".join([re.escape(key) for key in replacements.keys(
    return pattern.sub(lambda x: replacements[x.group()], text)
updated_content = multiple_replace(file_content, replacements)
with open(file_path, 'w') as file:
    file.write(updated_content)
print("Multiple replacements have been performed in '{file_path}'.")
```

```
Multiple replacements have been performed in '{file_path}'.
```

6.write a python script that concatenates the contents of multiple text files in to a single output file.Allowthe user to specify output file and input file

In [14]:
```
def concatenate_files (input_files, output_file):
    try:
        with open(output_file, 'w') as output:
            for input_file in input_files:
                with open(input_file,'r' ) as file:
                    output.write(file.read())
        print(f"Concatenated {len(input_files)} files into {output_file}")
    except Exception as e:
        print("An error occurred: (str(e)}")
if __name__=="__main__":
    input_files = []
    while True:

        file_name = input("Enter an input file (or type 'empty' to finish): ")
        if file_name.lower() == 'empty':
            break
        input_files.append(file_name)

    output_file = input("Enter the output file name: ")

    concatenate_files (input_files, output_file)
```

```
Enter an input file (or type 'empty' to finish): empty
Enter the output file name: tauheer
Concatenated 0 files into tauheer
```

7.You are given a test file memory input.txt containing a list of one word for line you are a talkies to create a python program that tell you the contents of input.t processes the words and the rights the result to another or put file named output.txt

In [18]:
```
#  1)Read words from input file
f8=open('input.txt','r')
content1=f8.read()
print(content1)
```

```
Allah is Omnipotent, and He is Above anything else!
```

In [19]:
```
# 2) for each word in the input file,xaalculate length of word and store it in
# Initialize an empty dictionary to store word is the key and the length is val
word_lengths = {}

# Open the input file for reading
with open('input.txt', 'r') as file:
    # Iterate through each line in the file
    for line in file:
        # Split the line into words
        words = line.split()
        # Iterate through each word
        for word in words:
            # Calculate the length of the word
            word_length = len(word)
            # Store the word and its length in the dictionary
            word_lengths[word] = word_length

# Print the dictionary
for word, length in word_lengths.items():
    print(f'{word}: {length}')
```

```
Allah: 5
is: 2
Omnipotent,: 11
and: 3
He: 2
Above: 5
anything: 8
else!: 5
```

In [26]:
```
word_lengths = {}
with open('input.txt', 'r') as file:
    for line in file:
        words = line.split()
        for word in words:
            word_length = len(word)
            word_lengths[word] = word_length
with open('output.txt', 'w') as output_file:
    for word, length in word_lengths.items():
        output_file.write(f'{word}: {length}\n')
print("Transfer of dictionary to the output.txt was done successfully")
f9=open('output.txt','r')
content=f9.read()
print(content)
```

```
Transfer of dictionary to the output.txt was done successfully
Allah: 5
is: 2
Omnipotent,: 11
and: 3
He: 2
Above: 5
anything: 8
else!: 5
```

In [4]:
```
input_file_name = 'first.txt'
output_file_name = 'output.txt'

with open(input_file_name, 'r') as input_file:
    word_length_dict = {}
    for line in input_file:
        word = line.strip()
        length = len(word)
        word_length_dict[word] = length
with open(output_file_name, 'w') as output_file:
    for word, length in word_length_dict.items():
        output_file.write(f"{word}: {length}\n")
        print("Processing completed. Check 'output.txt' for results.")

f=open("output.txt")
print(f.read())
```

```
Processing completed. Check 'output.txt' for results.
Allah is the Greatest: 21
```

8.Assume that you are developing a student gradebook system for a school. The system should allow teachers to input student grades for various subjects, store the data in files, and provide students with the ability to view their grades.

Design a Python program that accomplishes the following tasks.
1.teacher should be able to input grades for students in different sub jects.
2.store the student grade data in separate text files for each subjec t.
3. subjects should be able to view their grades for each subject.
4.Implement error handling for file operations such as file not found or permission issues

In [5]:
```
import os


def input_grades(student_id, subject, grade):
    filename = f"{subject}_grades.txt"
    with open(filename, 'a') as file:
        file.write(f"{student_id}: {grade}\n")

def view_grades(student_id, subject):
    filename = f"{subject}_grades.txt"
    with open(filename, 'r') as file:
        lines = file.readlines()
        student_grades = [line.strip() for line in lines if line.startswith(f"{
        if student_grades:
            print(f"Grades for {student_id} in {subject}:")
            for grade in student_grades:
                print(grade)
        else:
            print(f"No grades found for {student_id} in {subject}.")


while True:
    print("Gradebook Menu:")
    print("1. Input Grades")
    print("2. View Grades")
    print("3. Exit")
    choice = input("Enter your choice (1/2/3): ")

    if choice == "1":
        student_id = input("Enter Student ID: ")
        subject = input("Enter Subject: ")
        grade = input("Enter Grade: ")
        input_grades(student_id, subject, grade)
    elif choice == "2":
        student_id = input("Enter Student ID: ")
        subject = input("Enter Subject: ")
        view_grades(student_id, subject)
    elif choice == "3":
        print("Exiting.")
    break
```

```
Gradebook Menu:
1. Input Grades
2. View Grades
3. Exit
Enter your choice (1/2/3): 1
Enter Student ID: 987
Enter Subject: t
Enter Grade: 5
```

In [ ]:

In [ ]: