Q1. Display Line Numbers Write a Python program that reads a file (data.txt) and displays each line with its line number.

```
with open("data.txt","r") as file:
    for line_number,line in enumerate (file,start=1):
        print(f" {line_number}: {line.strip()}")

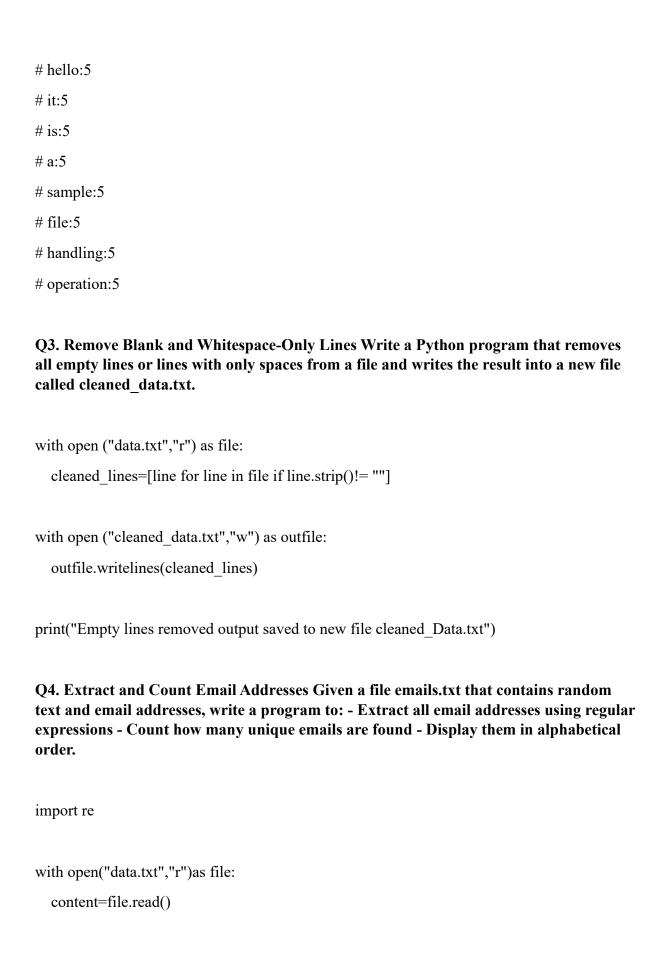
# 1:hello it is a sample file handling operation
# 2:hello it is a sample file handling operation
# 3:hello it is a sample file handling operation
# 4:hello it is a sample file handling operation
# 5:hello it is a sample file handling operation
# 5:hello it is a sample file handling operation
```

Q2. Write a program that reads data.txt and counts how many times each unique word appears in the file. Ignore case and punctuation.

```
import string
word_count={}

with open("data.txt","r") as file:
    for line in file:
        line=line.lower()
        line=line.translate(str.maketrans("","",string.punctuation))
        words=line.split()
        for word in words:
            word_count[word]=word_count.get(word,0)+1

for word,count in word_count.items():
        print(f"{word}:{count}")
```



```
pattern = r'[a-zA-Z0-9. \%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]\{2,\}'
emails=re.findall(pattern,content)
unique emais = sorted(set(emails))
print(f"Total unique emails found: {len(unique emais)}")
print("\n Emails in alphabetical order:")
for email in unique emais:
  print(email)
Q5. Rename All .txt Files in a Folder Write a Python program that renames all .txt files
in a given folder by prefixing them with the word processed. Example: notes.txt
becomes processed notes.txt
import os
folder path =
r"C:\Users\rajmd\OneDrive\Desktop\ASD\Assignments\PYTHON\Assignment5"
for filename in os.listdir(folder path):
  if filename.endswith(".txt") and not filename.startswith("processed "):
    old_path = os.path.join(folder_path,filename)
    new filename = f"processed {filename}"
    new path=os.path.join(folder path,new filename)
    os.rename(old path,new path)
    print(f"Renamed:{filename}->{new filename}")
```

print("Renaming done")

- # Renamed:cleaned_data.txt->processed_cleaned_data.txt
- # Renamed:data.txt->processed_data.txt
- # Renaming done