**QUESTION 1**

* **CODE :-**

def create\_file\_with\_content(filename):

with open(filename, 'w') as file:

file.write("Neither apple nor pine are in pineapple. Boxing rings are square.\n")

file.write("Writers write, but fingers don’t fing. Overlook and oversee are opposites.\n")

file.write("A house can burn up as it burns down. An alarm goes off by going on.\n")

**# a) Read back the entire file content using read() and display it**

def read\_file\_using\_read(filename):

with open(filename, 'r') as file:

content = file.read()

print("a) Entire file content:")

print(content)

**# b) Append more text to the file and display the content with line numbers**

def append\_and\_display(filename, additional\_text):

with open(filename, 'a') as file:

file.write(additional\_text + '\n')

with open(filename, 'r') as file:

content = file.readlines()

print("\nb) File content with line numbers:")

for i, line in enumerate(content, start=1):

print(f"{i}: {line.strip()}")

**# c) Display the last line of the file**

def display\_last\_line(filename):

with open(filename, 'r') as file:

lines = file.readlines()

last\_line = lines[-1]

print(f"\nc) Last line of the file: {last\_line.strip()}")

**# d) Display the first line from the 10th character onwards**

def display\_first\_line\_from\_10th\_char(filename):

with open(filename, 'r') as file:

first\_line = file.readline()

truncated\_line = first\_line[9:]

print(f"\nd) First line from the 10th character onwards: {truncated\_line.strip()}")

**# e) Read and display a specific line from the file based on user input**

def read\_specific\_line(filename, line\_num):

with open(filename, 'r') as file:

lines = file.readlines()

if 1 <= line\_num <= len(lines):

print(f"\ne) Line {line\_num}: {lines[line\_num - 1].strip()}")

else:

print("\ne) Invalid line number.")

**# f) Find the frequency of words beginning with each letter**

def word\_frequency\_by\_letter(filename):

word\_counts = {}

with open(filename, 'r') as file:

lines = file.readlines()

for line in lines:

words = line.split()

for word in words:

# Remove punctuation and convert to lowercase

word = word.strip('.,!?').lower()

if word:

initial\_letter = word[0]

if initial\_letter in word\_counts:

word\_counts[initial\_letter] += 1

else:

word\_counts[initial\_letter] = 1

print("\nf) Frequency of words beginning with each letter:")

for letter, count in sorted(word\_counts.items()):

print(f"Words beginning with {letter}: {count}")

filename = "q1data.txt"

create\_file\_with\_content(filename)

a = "y"

while a == "y":

op = input("Enter the part of the question you want to do (a-f): ")

c = op.lower()

if c == "a":

read\_file\_using\_read(filename)

elif c == "b":

append\_and\_display(filename, input("Enter text to append: "))

elif c == "c":

display\_last\_line(filename)

elif c == "d":

display\_first\_line\_from\_10th\_char(filename)

elif c == "e":

line\_num = int(input("Enter the line number to read: "))

read\_specific\_line(filename, line\_num)

elif c == "f":

word\_frequency\_by\_letter(filename)

else:

print("Invalid choice.")

a = input("Do you want to continue? (y/n) ").lower()

* **OUTPUT :-**

Enter which part of the question you want to do (a-f): a

a) Entire file content:

Neither apple nor pine are in pineapple. Boxing rings are square.

Writers write, but fingers don’t fing. Overlook and oversee are opposites.

A house can burn up as it burns down. An alarm goes off by going on.

Do you want to continue? (y/n) y

Enter which part of the question you want to do (a-f): b

Enter text to append: Maths isn’t mathing.

b) File content with line numbers:

1: Neither apple nor pine are in pineapple. Boxing rings are square.

2: Writers write, but fingers don’t fing. Overlook and oversee are opposites.

3: A house can burn up as it burns down. An alarm goes off by going on.

4: Maths isn’t mathing.

Do you want to continue? (y/n) y

Enter which part of the question you want to do (a-f): c

c) Last line of the file: Maths isn’t mathing.

Do you want to continue? (y/n) y

Enter which part of the question you want to do (a-f): d

d) First line from the 10th character onwards: pple nor pine are in pineapple. Boxing rings are square.

Do you want to continue? (y/n) y

Enter which part of the question you want to do (a-f): e

Enter the line number to read: 2

e) Line 2: Writers write, but fingers don’t fing. Overlook and oversee are opposites.

Do you want to continue? (y/n) y

Enter which part of the question you want to do (a-f): f

f) Frequency of words beginning with each letter:

Words beginning with a: 10

Words beginning with b: 5

Words beginning with c: 1

Words beginning with d: 2

Words beginning with f: 2

Words beginning with g: 2

Words beginning with h: 1

Words beginning with i: 2

Words beginning with m: 2

Words beginning with n: 2

Words beginning with o: 5

Words beginning with p: 2

Words beginning with r: 1

Words beginning with s: 1

Words beginning with u: 1

Words beginning with w: 2

Do you want to continue? (y/n) n

