Task : 6 Date: 01/09/25

Task 6 - Implement various text file operations.

Problem 6.1: You need to write the sentence "Error objects are thrown when runtime errors occur. The error object can also be used as a base object for user-defined exceptions" into a text file named log.txt. Implement a function that performs this task.

Aim:- To write a python program implement various text file operations.

Algorithm:-

1. Write to a file.
   - Define write file (filename) function:
   - open a file named "log.txt" in write mode.
   - write the following text to the file:
   - "Error objects are thrown when runtime errors occur. The error object can also be used as a base object for user-defined expections"
   - close the file.
2. Read from a file.
   - Define readfile (filename) functions:
   - open the file specified by filename in read mode using a with statement.
   - Read the entire content of the file.
   - Print the content.
3. Execute the program:
   - call writefile ("write") to write the predefined text to "log.txt":
   - call readfile ("text") to attempt to read from a file named "text" and print its content.

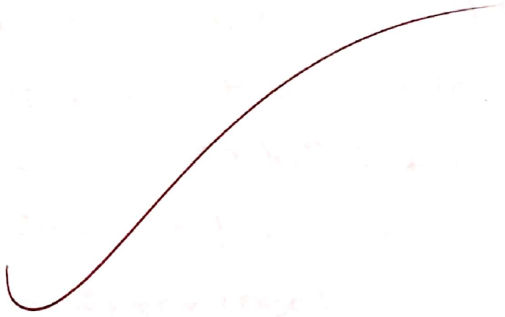
Program:

```
def writefile (filename):
    f = open ("log.txt","w")
    f.write ("Error objects are thrown when runtime
    errors occur. The error object can also be used as
    a base object for user-defined expections")
```

output:-

Error objects are thrown when runtime error occur. The error object can also be used as a base object for user-defined exceptions.

```
f.close()
def readfile(filename):
 with open(filename,"r") as file:
  content = file.read().
   print(content).
write file("write").
read file("text").
```



Result:- Thus, the Python program implement various text file operations was successfully executed and the output was verified.

VEL TECH	
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PERFORMANCE (5)	
RESULT AND ANALYSIS (5)	
VIVA VOCE (5)	
RECORD (5)	
TOTAL (30)	
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Problem 6.2: You have a text file log.txt containing logs of a system. Write a function that counts the number of lines containing the word "ERROR".

Aim: To write a python program implement various text file operations.

Algorithm: 1. Initialize error counter:

- Define the function count_error_lines(filename)
- Initialize error_count to 0.

2. Open and Read file:

- Open the file specified by filename in read mode using a with statement.

3. Check each line for "ERROR":

- Loop through each line in the file:
- If the line contains the word "ERROR", increment error_count by 1.

4. Return error count:

- After reading all the lines, return the value of error_count.

5. Execute the program.

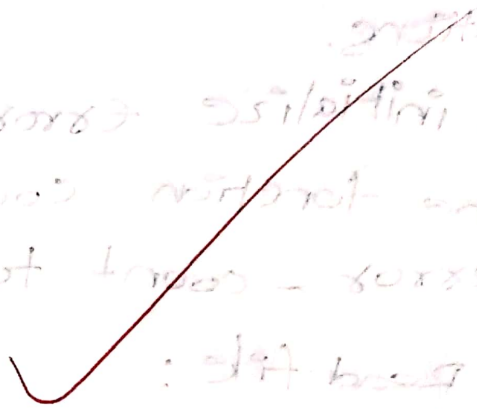
- Call count_error_lines("log.txt") to count the number of lines with the word "ERROR in the file "log.txt".
- Print the result with the message: "Number of lines with 'ERROR': {error_lines}".

Program:-

```
def count_error_lines(filename):
    error_count = 0
    with open(filename, "r") as file:
        for line in file:
            if "ERROR" in line:
                error_count += 1
    return error_count
```

Output:-

Number of lines with 'ERROR' is 2.

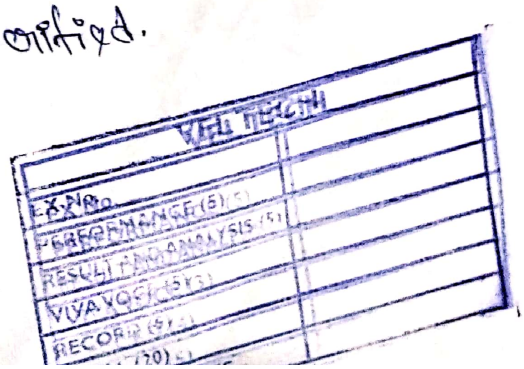


```
error_line:
count_error_line("log.txt").
print(f"Number of lines with 'ERROR':
  {error_line}").
log.txt.
```

"ERROR objects are thrown when runtime error occur.

The error object can also be used as a base object for user-defined exceptions."

Result:- Thus, the python program implement various text file operations was successfully executed and the output was verified.



Problem 6.3 you need to write a report containing the details (Name, departments) of the employee in list. write a python function that writes this report to a file named.
employee_report.txt.

Aim:- To write a python program implementing various text file operations.

Algorithm:-

1. create employee data:
   - Define the function write_employee_report. (filename):
   - create a list employees containing dictionaries. each with "name" and "department" keys for individual employees.
2. open file for writing:
   - open the file specified by filename in write mode using a with statement.
3. write employee data to file:
   - loop through each employee in the employees list.
   - for each employee format a string as "Name: {employee['name']}, Department: {employee['department']}".
   - write the formatted string to the file, followed by a newline character (\n).
4. Execute the program:
   - call. write_employee_report("employee_report.txt") to write the employee data to the file. "employee_report.txt".

Output:-

Name : Alice, Department : HR.

Name : Bob, Department : Engineering.

Name : Charlie, Department : finance.

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Program.

```
def write_employee_report(filen
    employees = [
{ "name": "Alice", "department":
{ "name": "Bob", "department": "Engineering",
{ "name": "charlie", "department": "finance" }.
]
    with open(filename, "w") as file:
    for employee in employees:
line = f"Name: {employee['name']},
Department: {employee['department']}\n"
        file.write(line).

# example usage:
write_employee_report("employee_report.txt")
```

VEL TECH	
EX No.	6
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	3
TOTAL (15)	13
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Result:- Thus, the Python program Implement various .txt file operations was successfully executed and the output was verified.

VEL TECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (5)	
VIVA VOCE (5)	
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TOTAL (20)	
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