3. Select a random file and do the following:

a. Count the no. of lines, words in the file
b. Display the list 10 lines of a file
c. Display the entire file
d. Search a word 'X' in the entire file and display the lines with it

ANSWER:

- Create a file and add text to it.

- Text content of the file named “sarath.txt”

```
Chapter 4 of the study proposes a new antenna structure for
textile substrate materials,
which is analyzed and compared with existing designs using various substrates su
and silk.
The analysis includes parameters such as reflection coefficient,
VSWR, Z-parameters, surface current distribution,
radiation pattern at resonant frequencies,
parametric sweep analysis for structure 1,
and bending analysis of the proposed structures.
The result analysis provides insights into the impedance matching, radiation cha
Overall, the proposed antenna structure performs better than existing designs, p
and the result analysis provides a comprehensive understanding of their performa

Induce some numerical performance updation in the above results
summary of textile antenna testing with various conditions
..nd substrate materials
~
~
~
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~
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~
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~
- sarath.txt [Modified] 18/18 100%
```

- Assign the file name to a variable and find the mentioned results.
    1. Num. of words
    2. Num. of lines
    3. First 10 lines of the file

```
localhost:~# filename=$(ls | grep sarath.txt)
localhost:~# echo "Number of words in $filename: $(wc -w < $filename)"
Number of words in sarath.txt: 129
localhost:~# echo "Number of lines in $filename: $(wc -l < $filename)"
Number of lines in sarath.txt: 18
localhost:~# echo "the first 10 lines of $filename"
the first 10 lines of sarath.txt
localhost:~# head $filename
Chapter 4 of the study proposes a new antenna structure for
textile substrate materials,
which is analyzed and compared with existing designs using various substrates su
ch as cotton, polyester,
and silk.
The analysis includes parameters such as reflection coefficient,
VSWR, Z-parameters, surface current distribution,
radiation pattern at resonant frequencies,
parametric sweep analysis for structure 1,
and bending analysis of the proposed structures.
The result analysis provides insights into the impedance matching, radiation cha
racteristics, and flexibility of the proposed antennas.
localhost:~#
```

    4. Total content of the file

```
localhost:~# echo "Contents of $filename:"
Contents of sarath.txt:
localhost:~# cat $filename
Chapter 4 of the study proposes a new antenna structure for
textile substrate materials,
which is analyzed and compared with existing designs using various substrates su
ch as cotton, polyester,
and silk.
The analysis includes parameters such as reflection coefficient,
VSWR, Z-parameters, surface current distribution,
radiation pattern at resonant frequencies,
parametric sweep analysis for structure 1,
and bending analysis of the proposed structures.
The result analysis provides insights into the impedance matching, radiation cha
racteristics, and flexibility of the proposed antennas.
Overall, the proposed antenna structure performs better than existing designs, p
articularly on polyester and cotton substrates,
and the result analysis provides a comprehensive understanding of their performa
nce under different conditions.

Induce some numerical performance updation in the above results
summary of textile antenna testing with various conditions
ànd substrate materials
```

5. Line that has specific character in the file – “z ”