Problem 8: Write a shell script that accepts a filename as an input and performs the following activities on the given file. The program asks for a string of characters (that is, any word) to be provided by the user. The file will be searched to find whether it contains the given word. If the file contains the given word, the program will display (a) the number of occurrences of the word. The program is also required to display (b) the line number in which the word has occurred. (Note: the word may occur more than once in a given line) If the file does not contain the word, an appropriate error message will be displayed

Code :- Below is the relevant script required to execute the given operation

```sh
#!/bin/sh

#counting the occurence of a word in a file
read -p "Enter the file name :- " file_path
read -p "Enter the word to analysed :- " word

#getting the total word count
word_count=$(grep -w -o -n $word $file_path | wc -l)

if [ "$word_count" -gt 0 ]; then #print the total word count
    echo "Total word count :- $word_count"
else #case for word count = 0
    echo "Word Not Found !"
    exit
fi

#count the occurence of word in each line of the file
count=0
for i in $(grep -w -o -n $word $file_path | cut -d : -f 1 | uniq
-c);do
    if [ "$count" -eq 0 ];then
        count=$i
    else
        echo "line $i -> $count" #print the count of occurence
of the word in the file
        count=0
    fi
done
```

Output Snapshot

1. test.txt

```
 1    hello
 2    i
 3    ma
 4    here
 5    ma
 6    ma
 7    ma ma ma ma ma amamam
 8    ma
 9    hello
10    boss
11    ma
```

2. Terminal Snapshot

```
base  debargha  debargha-Vostro-3480  ~  os_assignment1   $   ./prob8.sh
Enter the file name :- test.txt
Enter the word to analysed :- ma
Total word count :- 10
line 3 -> 1
line 5 -> 1
line 6 -> 1
line 7 -> 5
line 8 -> 1
line 11 -> 1
base  debargha  debargha-Vostro-3480  ~  os_assignment1   $   _
```