

QUESTION 6 ANSWERS

```
coder@dce7ae72477b:~$ vi input.txt
coder@dce7ae72477b:~$ vi metrics.sh
coder@dce7ae72477b:~$ chmod +x metrics.sh
coder@dce7ae72477b:~$ ./metrics.sh input.txt
Longest word: analysis
Shortest word: a
Average length word: 4.18
Total Unique words: 11
coder@dce7ae72477b:~$
```

```
world this is a test of the bash script metrics analysis
```

```
"input.txt" 2L, 59C
```

```
2,57
```

```
All
```

```
Terminal - coder@dce7ae72477b: ~
File Edit View Terminal Tabs Help

#!/bin/bash
if [ $# -ne 1 ]; then
    echo "Usage: $0 <inputfile>"
    exit 1
fi
file=$1
if [ ! -f "$file" ]; then
    echo "Error: File does not exist."
    exit 1
fi
words=$(tr -cs '[:alnum:]' '\n' < "$file" | grep -v '^$')
longest=$(echo "$words" | awk '{ if(length($0) > max_len){ max_len=length($0); max_word=$0 } } END{ print max_word }')
shortest=$(echo "$words" | awk '{ if(NR==1 || length($0) < min_len){ min_len=length($0); min_word=$0 } } END{ print min_word }')
total_chars=$(echo "$words" | awk '{s+=length} END{print s}')
total_words=$(echo "$words" | wc -l)
if [ "$total_words" -eq 0 ]; then
    avg=0
else
    avg=$(awk "BEGIN {printf \"%.2f\\n\", $total_chars / $total_words}")
fi
unique=$(echo "$words" | tr '[:upper:]' '[:lower:]' | sort | uniq | wc -l)
echo "Longest word: $longest"
echo "Shortest word: $shortest"
echo "Average length word: $avg"
echo "Total Unique words: $unique"

~
"metrics.sh" 25L, 882C 18,4 All
```

I wrote a shell script that analyzes a text file to determine the longest word, shortest word, average word length, and total number of unique words. The script processes the text using pipes with commands like `tr`, `sort`, `uniq`, and `wc`. Word length calculations were done using standard text processing utilities.