***Assignment 6:*** *Given a sample log file, write a script using grep to extract all lines containing "ERROR". Use awk to print the date, time, and error message of each extracted line.*

*Data Processing with sed*

***cript using grep, awk, and sed to process the log file:***

***Script***

*Bash*

*#!/bin/bash*

*# Log file name*

*LOG\_FILE="log\_file.txt"*

*# Extract lines containing "ERROR" using grep*

*grep "ERROR" "$LOG\_FILE" |*

*# Use awk to print date, time, and error message*

*awk '{print "Date: "$1, "Time: "$2, "Error: "$3}'*

*# Alternatively, use sed to extract and format data*

*echo "Using sed:"*

*sed -n '/ERROR/ {*

*s/^\([[:alnum:]]\{4\}-[[:alnum:]]\{2\}-[[:alnum:]]\{2\}\) \([[:alnum:]]\{2\}:[[:alnum:]]\{2\}:[[:alnum:]]\{2\}\) \(.\*\)$/*

*Date: \1\nTime: \2\nError: \3\n/*

*p*

*}' "$LOG\_FILE"*

***Log File Format***

*Log*

*2022-01-01 12:00:00 ERROR This is an error message*

*2022-01-01 12:01:00 INFO This is an info message*

*2022-01-01 12:02:00 ERROR Another error message*

***How to Run***

1. *Open a text editor (e.g., Nano, Gedit).*
2. *Copy and paste the script.*
3. *Save the file (e.g., log\_processing.sh).*
4. *Replace "log\_file.txt" with your actual log file name.*
5. *Open the terminal.*
6. *Navigate to the directory where you saved the file.*
7. *Make the script executable: chmod +x log\_processing.sh*
8. *Run the script: ./log\_processing.sh*

***Explanation***

1. *grep "ERROR" extracts lines containing "ERROR".*
2. *awk prints the date, time, and error message.*
3. *sed extracts and formats data using regular expressions.*