

## UNIX TOOLS AND SHELL SCRIPTING LAB WEEK-3

ROLL NO : 422108

SECTION:A

TITLE : Write shell script for searching for various patterns using grep, pr, head, tail, cut, paste, sort, uniq, and tr.

CODE:

```
#!/bin/bash

# Define input file
input_file="example.txt"

# Define patterns to search for
patterns=("pattern1" "pattern2" "pattern3")

# Search for patterns using grep
for pattern in "${patterns[@]}; do
    echo "Search results for pattern: $pattern"
    grep "$pattern" "$input_file"
    echo "-----"
done

# Use pr to paginate the search results
echo "Paginated search results using pr:"
pr -t -e24 "$input_file" | head -n 50 | tail -n +2

# Use cut to extract specific columns
echo "Extracting specific columns using cut:"
cut -d',' -f1,3 "$input_file"

# Use paste to merge columns
echo "Merging columns using paste:"
paste -d',' <(cut -d',' -f1 "$input_file") <(cut -d',' -f3 "$input_file")

# Use sort and uniq to find unique lines
echo "Unique lines using sort and uniq:"
sort "$input_file" | uniq

# Use tr to translate characters
echo "Replacing characters using tr:"
```

```
tr '[:lower:]' '[:upper:]' < "$input_file"
```

```
student@ai-hp-prodesk-601-g4-mt: ~/422108
student@ai-hp-prodesk-601-g4-mt:~/422108$ chmod +x assign.sh
student@ai-hp-prodesk-601-g4-mt:~/422108$ ./assign.sh
Search results for pattern: IT
1004,David,IT,70000
1007,Michael,IT,72000
-----
Search results for pattern: Finance
1002,Alice,Finance,60000
1006,Sophia,Finance,62000
1009,James,Finance,63000
-----
Search results for pattern: Sales
1005,Eva,Sales,48000
1010,Emma,Sales,50000
-----
Paginated search results using pr:
1001,John,Digital Marketing,50000
1002,Alice,Finance,60000
1003,Bob,Human Resources,55000
1004,David,IT,70000
1005,Eva,Sales,48000
1006,Sophia,Finance,62000
1007,Michael,IT,72000
1008,Olivia,Human Resources,58000
1009,James,Finance,63000
1010,Emma,Sales,50000
Extracting specific columns using cut:
EmployeeID,Department
1001,Digital Marketing
1002,Finance
1003,Human Resources
1004,IT
1005,Sales
1006,Finance
1007,IT
1008,Human Resources
1009,Finance
1010,Sales
Merging columns using paste:
EmployeeID,Department
1001,Digital Marketing
1002,Finance
1003,Human Resources
1004,IT
1005,Sales
1006,Finance
1007,IT
1008,Human Resources
1009,Finance
1010,Sales
```

```
1003,Human Resources
1004,IT
1005,Sales
1006,Finance
1007,IT
1008,Human Resources
1009,Finance
1010,Sales
Merging columns using paste:
EmployeeID,Department
1001,Digital Marketing
1002,Finance
1003,Human Resources
1004,IT
1005,Sales
1006,Finance
1007,IT
1008,Human Resources
1009,Finance
1010,Sales
Unique lines using sort and uniq:
1001,John,Digital Marketing,50000
1002,Alice,Finance,60000
1003,Bob,Human Resources,55000
1004,David,IT,70000
1005,Eva,Sales,48000
1006,Sophia,Finance,62000
1007,Michael,IT,72000
1008,Olivia,Human Resources,58000
1009,James,Finance,63000
1010,Emma,Sales,50000
EmployeeID,Name,Department,Salary
Replacing characters using tr:
EMPLOYEEID,NAME,DEPARTMENT,SALARY
1001,JOHN,DIGITAL MARKETING,50000
1002,ALICE,FINANCE,60000
1003,BOB,HUMAN RESOURCES,55000
1004,DAVID,IT,70000
1005,EVA,SALES,48000
1006,SOPHIA,FINANCE,62000
1007,MICHAEL,IT,72000
1008,OLIVIA,HUMAN RESOURCES,58000
1009,JAMES,FINANCE,63000
1010,EMMA,SALES,50000
student@ai-hp-prodesk-601-g4-mt:~/422108$
```