

Name- Kiran Das
Regd No- 2241004069

Date:1-July-2025

Q1. From datafile find the name age and department of all employees whose name starts with 's' and ends with 'a'.

Example:- `awk '/^J/{ print $0 }'` datafile

Q2. Print all records where the record ends with n.

Q3. Print all records that start with J and ends with n.

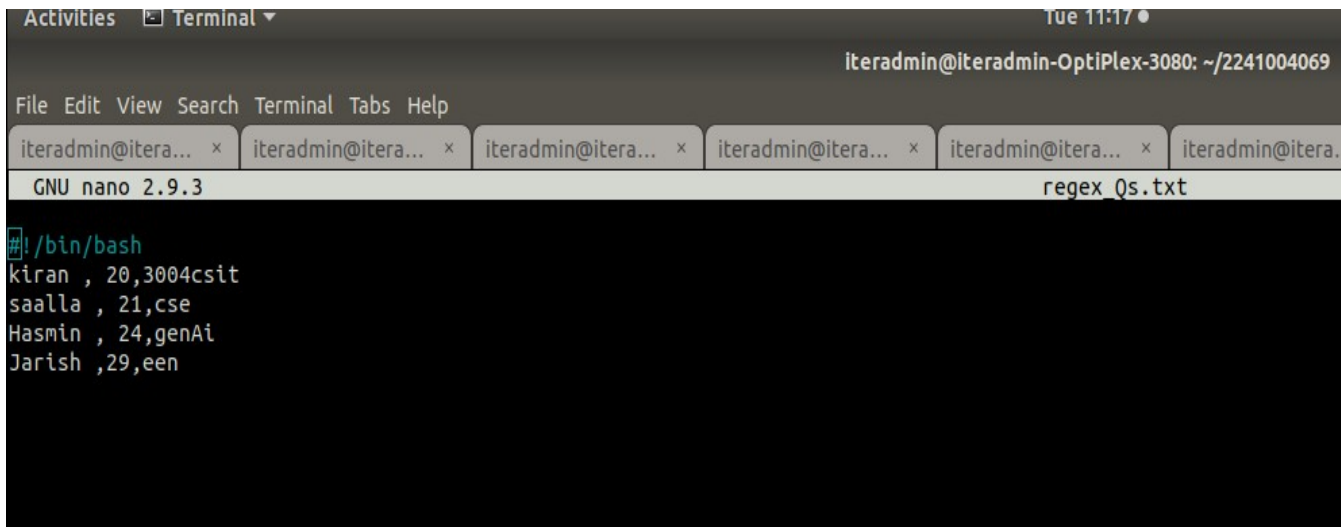
Q4. from ifconfig output find all IP addresses.

Q5. Replace all occurrences of 'll' with a single 'l'

Q6. Replace a word that starts with H.

Q7. From the text TestT100String only extract the digits.

Ans:



```
Activities Terminal Tue 11:17
iteradmin@iteradmin-OptiPlex-3080: ~/2241004069
File Edit View Search Terminal Tabs Help
iteradmin@itera... x iteradmin@itera... x iteradmin@itera... x iteradmin@itera... x iteradmin@itera... x iteradmin@itera...
GNU nano 2.9.3 regex_Qs.txt
#!/bin/bash
kiran , 20,3004csit
saalla , 21,cse
Hasmin , 24,genAi
Jarish ,29,een
```

```
iteradmin@iteradmin-OptiPlex-3080: ~/2241004069
File Edit View Search Terminal Tabs Help
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iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano regex_Qs.txt
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ awk ' $1 ~ /^s.*a$/ { print $1, $2, $3 }' regex_Qs.txt
saalla , 21,cse
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ awk '/n$/ { print }' regex_Qs.txt
Jarish ,29,een
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ awk '/^J.*n$/ { print } ' regex_Qs.txt
Jarish ,29,een
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ ifconfig | grep -oE 'inet (addr:)?([0-9]+\.){3}[0-9]+' | grep -oE '([0-9]+\.){3}[0-9]+'
172.18.0.1
172.17.130.117
127.0.0.1
192.168.122.1
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ sed 's/ll/l/g' regex_Qs.txt
#!/bin/bash
kiran , 20,3004csit
saala , 21,cse
Hasmin , 24,genAi
Jarish ,29,een

iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ sed 's/\bH\b*/Hello/g' regex_Qs.txt
#!/bin/bash
kiran , 20,3004csit
saalla , 21,cse
Hello , 24,genAi
Jarish ,29,een

iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ echo "TestT100String" | grep -oP '\d+'
100
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$
```

Q8. Write a Bash script to find the latest file in any given folder. The folder should be presented as a command line argument. Make a copy of the file and find the most occurring word in the file.

Ans:

```
iteradmin@iteradmin-OptiPlex-3080: ~/2241004069
File Edit View Search Terminal Tabs Help
iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iter
GNU nano 2.9.3 assQ1.sh
#!/bin/bash

[ -z "$1" ] && echo "Provide directory!" && exit 1

file=$(ls -t "$1" 2>/dev/null | head -1)
[ -z "$file" ] && echo "No files found!" && exit 1

cp "$1/$file" "$1/${file}_copy"

word=$(tr -s '[:space:]' '\n' < "$1/$file" | grep -Eo '\w+' | awk '{freq[$1]++} END {for (w in freq) print freq[w], w}' | sort -nr | head -1 | awk '{print $2}')
echo "Most frequent word: $word"
```

```
File Edit View Search Terminal Tabs Help
iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano assQ1.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ chmod +x assQ1.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ ./assQ1.sh /home/iteradmin/2241004069
Most frequent word: 1
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$
```

Q9. Write a Bash script to print the name of the the person who last logged into the system. From the home folder find out (if any) files for which this person is the owner. Can you find the total login time of this user?

Ans:

```
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano assQ2.sh
File Edit View Search Terminal Tabs Help
iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x iteradmin@i... x
GNU nano 2.9.3 assQ2.sh

#!/bin/bash

last_user=$(last | grep -vE 'reboot|wtmp' | awk 'NR==1 {print $1}')
echo "Last user: $last_user"

echo "Files owned by $last_user in /home:"
find /home -user "$last_user" 2>/dev/null

# Calculate total completed login time in minutes
total_minutes=$(last "$last_user" | grep -oE '\{[0-9]{1,2}:[0-9]{2}\}' | sed 's/[()]/g' | \
awk -F: '{sum += ($1 * 60) + $2} END {print sum}')

if [ -z "$total_minutes" ]; then
    echo "No completed login sessions found."
else
    # Try to estimate current login duration from 'who' and 'uptime'
    login_time=$(who | grep "^$last_user" | awk '{print $3, $4}' | head -1)

    if [ -n "$login_time" ]; then
        login_timestamp=$(date -d "$login_time" +%s)
        now=$(date +%s)
        diff=$(( (now - login_timestamp) / 60 ))
        echo "Approximate current login time: $diff minutes"
    else
        echo "No current login session found."
    fi
else
    echo "Total login time (completed sessions): $total_minutes minutes"
fi
```

```
File Edit View Search Terminal Tabs Help
iteradmin... x iteradmin... x iteradmin... x iteradmin... x iteradmin...
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano assQ2.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ chmod +x assQ2.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ ./assQ2.sh
Last user: iteradmi
Files owned by iteradmi in /home:
No completed login sessions found.
Approximate current login time: 270 minutes
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$
```

Q10. Write a Bash script to use find command to find the path of conf.d file. From the path replace all “/” symbols and replace them with “-” and print the path.

Ans:

```
File Edit View Search Terminal Tabs Help
iteradmin@iteradmin-O... x iteradmin@iteradmin-O... x iteradm
GNU nano 2.9.3

#!/bin/bash

path=$(find / -name "conf.d" 2>/dev/null | head -1)

if [ -z "$path" ]; then
    echo "conf.d not found"
    exit 1
fi

# Replace all / with -
mod_path=$(echo "$path" | sed 's/\//-/g')

echo "$mod_path"
```

```
Activities Terminal Tue 13:18 ●
iteradmin@iteradmin-OptiPlex-3080: ~/2241004069
File Edit View Search Terminal Tabs Help
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano assQ3.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ nano assQ3.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ chmod +x assQ3.sh
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$ ./assQ3.sh
-snap-core24-1006-etc-fonts-conf.d
iteradmin@iteradmin-OptiPlex-3080:~/2241004069$
```