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#Assignment 1: FILE HANDLING IN SHELL SCRIPT

#!/bin/bash

#default

choice=0

filename="file.txt"

name="anonymous"

vcompany="anonymous"

model="anonymous"

vnumber="anonymous"

create()

{

read -p 'Enter the filename: ' filename #read input on same line

if [-e \$filename] #search for existence of file

then

echo "File already present"

else

touch \$filename #create file

printf "Owner\t\tCompany\t\tModel\t\tNumber\n" >> \$filename

ls -l \$filename #checks if the file is created or not

printf "Welcome to \$filename\n"

fi

}

write()

{

```

read -p 'Enter the filename to write: ' filename
if [ -e $filename ]
then
    read -p 'Enter no. of records to insert: ' rec
    while [ $rec -gt 0 ]          #gt - greater than
    do
        read -p 'Enter the owner name: ' name
        read -p 'Enter the vehicle company: ' vcompany
        read -p 'Enter the model: ' model
        read -p 'Enter the vehicle number: ' vnumber
        printf "$name\t\t$vcompany\t\t$model\t\t$vnumber\n" >> $filename
        rec=$((rec-1))          #decrement rec
    done
else
    echo "File does not exist"
fi
}

```

```

Display()
{
    read -p 'Enter the filename: ' filename
    if [ -e $filename ]
    then
        echo "The content of the file is as follows :- "
        cat $filename
        #echo "The content sorted file is as follows :- "
        #sort $filename
    else
        echo "File does not exist"
    fi
}

```

```
fi
}
```

Search()

```
{
  read -p 'Enter the filename: ' filename
  if [ -e $filename ]
  then
    read -p "Enter the name to be searched : " tempname
    grep -i -n "$tempname" $filename && echo "Found"
    #grep-find and fetch, -i(neglect case sensitivity), -n(numerical)
    grep -i "$tempname" $filename || echo "Not Found"
  else
    echo "File does not exist"
  fi
}
```

modify()

```
{
  read -p 'Enter the filename: ' filename
  if [ -e $filename ]
  then
    echo "Choose the attribute to modify:- "
    echo "1.Owner Name"
    echo "2.Vehice company"
    echo "3.Model"
    echo "4.Vehicle number"
    read option
```

```

if [ $option -le 0 ] || [ $option -gt 4 ]    #le-less than
then
    echo "Enter valid option !"
else
    case $option in
1)read -p "Enter owner name you want to modify: " name
    read -p "Enter new owner name: " newname
    sed -i "s/$name/$newname/g" $filename
        #sed-find and replace ,s/ - substitute, /g - global
    echo "MODIFICATION SUCCESSFUL !!!"
;;
2)read -p "Enter vehicle company you want to modify: " vcompany
    read -p "Enter new vehicle company: " newvcompany
    sed -i "s/$vcompany/$newvcompany/g" $filename
    echo "MODIFICATION SUCCESSFUL !!!"
;;
3)read -p "Enter model you want to modify: " model
    read -p "Enter new model name: " newmodel
    sed -i "s/$model/$newmodel/g" $filename
    echo "MODIFICATION SUCCESSFUL !!!"
;;
4)read -p "Enter vehicle number you want to modify: " number
    read -p "Enter new vehicle number: " newnumber
    sed -i "s/$number/$newnumber/g" $filename
    echo "MODIFICATION SUCCESSFUL !!!"
;;

*)echo "Wrong option"

;;

```

```

#method 2: removes whole line and appends modified

#echo -e "Enter name to be edited:- \n"

#read name

#grep -n "$name" $filename


#echo -e "Enter the line number to edit:- \n"

#read lineno


#for line in `grep -n "$name" $filename`
#do

#  number=`echo "$line"|cut -c1`
#  if [ "$number" == "$lineno" ]
#    then
#      echo -e "ENTER THE MODIFICATION DETAILS:- \n"
#      write
#      sed -i -e "${lineno}s/.*/$insert/" $filename
#      echo -e "MODIFICATION SUCCESSFUL !!! \n"
#    fi

#done

esac

fi

else

echo "File does not exist"

fi

}

Delete()

{

```

```

read -p 'Enter the filename: ' filename

if [ ! -s $filename ];
then
    echo -e "File empty !!! \n"
else
    echo -e "Enter content to delete:- \n"
    read fnem
    grep -n "$fnem" $filename    #fetch numerical

    echo -e "Enter the line number to delete:- \n"
    read lineno

    for line in `grep -n "$fnem" $filename`
    do

        number=`echo $line|cut -c1`

        if [ "$number" == "$lineno" ];
        then
            sed -i -e "${lineno}d" $filename    #Delete last line only if it contains the pattern
            echo -e "\nRECORD DELETION SUCCESSFUL!!!! \n"
        fi

    done

fi

}

del_file()
{

```

```
read -p "Enter the filename to be deleted : " delname

if [ -e $delname ]

then

    rm $delname

    echo "File deleted successfully"

else

    echo "File doesn't exist"

fi

}
```

```
while [ $choice -ne 7 ]

do

    #display the menu

    echo -e "\n***VEHICLE DATABASE***"

    echo "1 -> Create a file"

    echo "2 -> Write to the file"

    echo "3 -> Display file"

    echo "4 -> Search from the file"

    echo "5 -> Modify record"

    echo "6 -> Delete record"

    echo "7 -> Delete File"

    echo "8 -> Exit"
```

```
read -p 'Enter your choice: ' choice
```

```
case $choice in
```

```
1 ) create
```

```
;;
```

2) write

;;

3) Display

;;

4) Search

;;

5) modify

;;

6) Delete

;;

7) del_file

;;

8) printf "\nThank You!!"

;;

*) echo "Wrong option"

;;

esac

done


```
Activities Terminal
Aug 24 8:09 PM
mihir@pop-os: ~/TE/OS-lab

mihir@pop-os:~/TE/OS-lab$ ./a1.sh

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 1
Enter the filename: vehicle
-rw-rw-r-- 1 mihir mihir 38 Aug 24 20:01 vehicle
Welcome to vehicle

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 2
Enter the filename to write: vehicle
Enter no. of records to insert: 3
Enter the owner name: mihir
Enter the vehicle company: audi
Enter the model: R8
Enter the vehicle number: 9999
Enter the owner name: mihir
Enter the vehicle company: jaguar
Enter the model: xf
Enter the vehicle number: 9999
Enter the owner name: mihir
Enter the vehicle company: tata
Enter the model: xenon
Enter the vehicle number: 4782

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
```

```
Activities Terminal
Aug 24 8:09 PM
mihir@pop-os: ~/TE/OS-lab

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 3
Enter the filename: vehicle
The content of the file is as follows :-
Owner      Company      Model      Number
mihir      audi         R8         9999
mihir      jaguar       XF         9999
mihir      tata        xenon      4782

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 4
Enter the filename: vehicle
Enter the name to be searched : xf
3:mihir      jaguar       XF         9999
Found
mihir      jaguar       XF         9999

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 4
Enter the filename: vehicle
Enter the name to be searched : bmw
Not Found

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
```

```
Activities Terminal Aug 24 8:09 PM
mhir@pop-os: ~/TE/OS-lab

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 5
Enter the filename: vehicle
Choose the attribute to modify:-
1.Owner Name
2.Vehice company
3.Model
4.Vehicle number
3
Enter model you want to modify: xenon
Enter new model name: harrier
MODIFICATION SUCCESSFUL !!!

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 3
Enter the filename: vehicle
The content of the file is as follows :-
Owner      Company      Model      Number
mihir      audi         R8         9999
mihir      jaguar       XF         9999
mihir      tata        harrier    4782

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 6
Enter the filename: vehicle
Enter content to delete:-
```

```
Activities Terminal Aug 24 8:10 PM
mhir@pop-os: ~/TE/OS-lab

4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 6
Enter the filename: vehicle
Enter content to delete:-

tata
4:mihir      tata        harrier    4782
Enter the line number to delete:-
4

RECORD DELETION SUCCESSFUL!!!

RECORD DELETION SUCCESSFUL!!!

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 3
Enter the filename: vehicle
The content of the file is as follows :-
Owner      Company      Model      Number
mihir      audi         R8         9999
mihir      jaguar       XF         9999

***VEHICLE DATABASE***
1 -> Create a file
2 -> Write to the file
3 -> Display file
4 -> Search from the file
5 -> Modify record
6 -> Delete record
7 -> Delete File
8 -> Exit
Enter your choice: 7
Enter the filename to be deleted : vehicle
File deleted successfully
mhir@pop-os: ~/TE/OS-lab$
```