



Faculty of Engineering & Technology
Electrical & Computer Engineering Department

LINUX LABORATORY
-ENCS313-

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Project #1 - ShellScript

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Abstract

In this project, we did operations like add a new contact of a person with their name (first name and last name), phone number, address and email. Listing all the contacts which are stored in the contact file. You can also edit any contact's name, mobile number, and address and also delete any account you want.

```

clear
echo
printf "\n\n\e[1;42m\t\tWelcome to Contact Management System \e[0m\n\n\n"
printf "\e[1;40m>>please enter the contact date file name : \e[0m"
read fileName

#check if the file is exist or ordinary file
while [ ! -e $fileName -o ! -f $fileName ]; do
    printf "\e[1;7;31mError : \n >>file not exist \nor\n >>not ordinary file\n\e[0m"
    printf "\e[1;40m\n>>please enter the contact date file name : \e[0m"
    read fileName
done

```

- Take the name of the file of the user
- Check if the file exist or ordinary file

```

Welcome to Contact Management System

>>please enter the contact date file name : nofile
Error :
>>file not exist
or
>>not ordinary file

>>please enter the contact date file name :

```

```

getFileDate() {
    #read date from file and store it in arrays to print it

    #get the first line from the file
    read -r firstline <${fileName}

    # reading each line
    while read line; do
        #delimiter to split each line
        IFS=','
        #put splited data into array
        read -a data <<<"$line"
        #used for debug
        #echo "1 : ${data[0]}"
        #echo "2 : ${data[1]}"
        #echo "Line No. $size : $line"

        #put each value to it own from data array into new arrays
        firstName[$size]=${data[0]}
        lastName[$size]=${data[1]}
        phoneNumber[$size]=${data[2]}
        email[$size]=${data[3]}

        #used for debug
        #printf "name : ${firstName[$size]} ${lastName[$size]} \n"
        #printf "phone : ${phoneNumber[$size]}\n"
        #printf "email : ${email[$size]}\n"

        size=$((size + 1))
    done < <(tail -n +2 <${fileName})
    #printf "\nsize of n : $size \n"
}

```

- Read date from the file and store it in arrays


```

while ;; do
    #declare arrays to store data into it
    size=0
    declare -a firstName
    declare -a lastName
    declare -a phoneNumber
    declare -a email
    firstline=""

    #call file data function to read the data from the file
    getFileDate

    clear
    ShowMenu

    read choice
    #check if the input choice is integer
    [[ $choice =~ ^[0-9]+$ ]] || {
        printf "\e[1;7;31minvalid Choice , Try again \nchoose in range
[0-5] only\e[0m"
        sleep 1.2
        continue
    }

```

- Check if the choice input is integer

- First choice :
- Add a new contact to the file
- Check if the phone number 9-10 length and only integers
- First name and phone number are required

```
#switch case statment
case ${choice} in
1)
clear
info="-"
newfirstname=""
newlastname=""
num=""
newemail=""
while [[ "$info" != "q" ]]; do

printf "
1)First Name\e[1;31m*\e[0m \n
2)Last Name\n
3)Phone Number\e[1;31m*\e[0m\n
4)Email\n
q)Exit\n
\e[1;31m*\e[0m required\n
Enter the info. number you want to add :
"

read info
#read input choice\
case ${info} in
1)

printf "Enter First Name: \n"
read newfirstname

;;

2)

printf " Enter Last Name: \n"
read newLastName
lastname=$newLastName

;;

3)

printf "How much phone you want to enter \n"
read count
for ((i = 0; i < count; i++)); do

while true; do

printf " enter the %d phone \n" ${i + 1})
read n
#check if the phone number is contain only
numbers with length of 9 or 10 numbers
if echo $n | grep "[0-9]\{9,10\}" >/dev/null;
then
if [ $i -eq ${count - 1} ]; then
num+=$n
break
else
num+=$n
num+=" ";
break
fi
else
printf " \e[1;31mInvalid number \n> should
enter correct number with 9 - 10 digits\e[0m \n"
continue
fi
done
done
;;

4)

while true; do
printf " enter the email \n"
read em
#check if the email address contain @ symbol
if echo $em | grep ".*@.*" >/dev/null; then
newemail=$em
break
else
printf "you should enter correct email\n"
continue
fi
done

done
;;

q)
#done adding
break
;;

*)
printf "\e[1;7;31minvalid Choice , Try again\nchoose in
range [1-4] \e[0m"
sleep 1.2
continue
;;

esac

done

#echo $num
#echo $newfirstname
#check if the user does not add first name of phone number
if [ "$newfirstname" == "" -o "$num" == "" ]; then
printf "\e[1;7;31mError :\n >>first name not exist \n\n
>>phone number not exist\n\e[0m"
else
#add new info. to file
printf "$s,$s,$s\n" $newfirstname $newLastName $num
$newemail >>$fileName
fi

printf "\t\tPress any key to back to menu..."
read go

;;
```

```
1)First Name*
2)Last Name
3)Phone Number*
4)Email
q)Exit
* required

Enter the info. number you want to add :
1
Enter First Name:
khllid
```

```
1)First Name*
2)Last Name
3)Phone Number*
4)Email
q)Exit
* required

Enter the info. number you want to add :
2
Enter Last Name:
dabe
```

```
1)First Name*
2)Last Name
3)Phone Number*
4)Email
q)Exit
* required

Enter the info. number you want to add :
```



```

* required

Enter the info. number you want to add :
4
enter the email
wrongEmail
you should enter correct email
enter the email
khlid@gail.com

1)First Name*
2)Last Name
3)Phone Number*
4)Email
q)Exit

* required

Enter the info. number you want to add :

```

```

Enter the info. number you want to add :
3
How much phone you want to enter
1
enter the 1 phone
05988eeee
nvalid number
> should enter correct number with 9 - 10 digits
enter the 1 phone
0598566730

1)First Name*
2)Last Name
3)Phone Number*
4)Email
q)Exit

* required

Enter the info. number you want to add :

```

- Second choice:
- List all contact
- In two ways:
- Sort by first name
- Sort by last name
- And show only needed fields

[illegible]

```
sort by
first name: 1
last name: 2
1
```

- 1)First Name
- 2)Last Name
- 3)Phone Number
- 4>Email
- 5)All fields

Enter the field. numbers separated by space or comma you want to show it:
5

#	First Name	Last Name	Phone Number	Email
1	Eyab	Chafre	0598566780	Eyab@birzeit.ps
2	Qutaiba	Elyan	0598377890	swat@birzeit.com
3	aziz	qaroush	0598766390	aziz@birzeit.edu
4	ahmad	samer	02353455	ahmad@gmail.com
5	saad	dane	0616298998	saad@yahoo.net
6	khader	mohammed	0598778460	khader@birzeit.edu
7	omar	tawafhs	05977840	omar@hotmail.com
8	ibrahim	asfour	05978420	ibrahim@gmail.com
9	mohammed	deek	059784520	deek@gmail.com
10	hassan	ahmad	059788450	hassan@birzeit.edu
11	ziad	zain	022826506	zaid@yahoo.com
12	khlid	dabe	0598566730	khlid@gail.com

Press any key to back to menu...█

```
sort by
first name: 1
last name: 2
2
```

- 1)First Name
- 2)Last Name
- 3)Phone Number
- 4>Email
- 5)All Felids

Enter the field. numbers separated by space or comma you want to show it:
2,4

```
ahmad hassan@birzeit.edu
asfour ibrahim@gmail.com
dabe khlid@gail.com
dane saad@yahoo.net
deek deek@gmail.com
Elyan swat@birzeit.com
Chafre Eyab@birzeit.ps
mohammed khader@birzeit.edu
qaroush aziz@birzeit.edu
samer ahmad@gmail.com
tawafhs omar@hotmail.com
zain zaid@yahoo.com
```

Press any key to back to menu...█

```

3)

clear
f1= ''
f2= ''
f3= ''
f4= ''
printf "
    1)First Name\n
    2)Last Name\n
    3)Phone Number\n
    4)Email\n
    Enter the field number you want to search in it:
    "

#ask user to which field want to search in it
read f
if [ $f == "1" ]; then
    printf " enter the first name:\n"
    read f1
elif [ $f == "2" ]; then
    printf " enter the last name:\n"
    read f2
elif [ $f == "3" ]; then
    printf " enter the number:\n"
    read f3
elif [ $f == "4" ]; then
    printf " enter the email:\n"
    read f4
else
    echo "invalid field \n"
fi

#search for the field nedded
grep .*"$f1".*"$f2".*"$f3".*"$f4".* $fileName >temp || echo " It
not exist "
cat temp

printf "\t\tPress any key to back to menu..."
read go
;;

```

- Third choice:
- Search for a contact by a field

1)First Name

2)Last Name

3)Phone Number

4)Email

Enter the field number you want to search in it:

1

enter the first name:

Eyab

Eyab,Ghafre,0598566780,Eyab@birzeit.ps

Press any key to back to menu...

- 1) First name
- 2) Last name
- 3) Phone number
- 4) Email

```
)
clear
printf
"\n\n\e[32m\t\tf# \e[0m\e[1;42mFirst Name\e[0m \e[32m\ve[0m
\e[1;42mLast Name \e[0m \e[32m\ve[0m \e[1;42mPhone Number\e[0m \e[32m\ve[0m
\e[1;42m Email\e[0m \e[32m\ve[0m\n\e[0m"
printf
"\e[32m\t\tf# "
for ((i = 0; i < size; i++)); do
    printf "\e[32m\t\tf#\e[0m\e[1;97m%-2d\e[0m\e[32m\ve[1;31m%-10s\e[0m
\e[32m\ve[0m \e[1;31m%-9s \e[0m \e[32m\ve[0m \e[1;31m%-12s\e[0m
\e[32m\ve[0m \e[1;31m %-16s\e[0m\e[32m \e[0m\n\e[0m" "${i + 1}"
"${firstName[$i]}" "${lastName[$i]}" "${phoneNumber[$i]}" "${email[$i]}"
$printf
done
printf
"\e[32m\t\tf#"
printf "Enter # number you want to change it info: "
read l
while [ "$sch" != "q" ]; do
    printf "
1)First Name\n
2>Last Name\n
3)Phone Number\n
4>Email\n
q)Exit\n
enter info number you want to change it:
"
    #ask user to which field want to edit it
    read ch
    sed -id "$fileName >temp #remove first line
    tr ' ' '<temp>templ #split data into temp file
    tr -s ' ' '<templ>temp #replace each sequence of a repeated ' '
    o=$(echo $(sed -n ${l})p temp) | cut -d ' ' -f${(ch)} #get the
field to repalce it after get the new value
(echo $(sed -n ${l})p temp) | tr ' ' '\t'>temp3)
    new=""
    if [ $sch == 3 ]; then
        printf "How much phone u want to enter \n"
        read count
        for ((i = 0; i < count; i++)); do
            while true; do
                printf " enter the %d phone \n" ${i + 1}
                read n
                #check if the phone number is contain only numbers with
length of 9 or 10 numbers
if echo $n | grep "[0-9]\{9,10\}" >/dev/null; then
                    if [ $! -eq ${count - 1} ]; then
                        new+=$n
                        break
                    else
                        new+=$n
                        new+=" ";
                        break
                    fi
                else
                    printf " u should enter correct number with 9 digit
\n"
                    continue
                fi
            done
        done
elif [ $sch == 4 ]; then
        while true; do
            printf " enter the email \n"
            read new
            #check if the email address contain @ symbol
            if echo $new | grep ".@.*" >/dev/null; then
                break
            else
                printf "you should enter correct email\n"
                continue
            fi
        done
        #editing done
        elif [ $sch == "q" ]; then
            break
        else
            printf "please enter the new value for the field\n"
            read new
            fi
            sed -i "$sch s/${o}/${new}/g" temp3 #replace the
old value with the new value
            sed -i $(l + 1)d $fileName #delete the
line from the file
            sed -i "${l + 1}"i "$(paste -s -d ',' temp3)" $fileName #insert the
new value of the line into the file
            #cat $fileName
        done
        printf "\t\tPress any key to back to menu..."
        read go
    ;;
```

#	First Name	Last Name	Phone Number	Email
1	Eyab	Ghafre	0598566780	Eyab@birzeit.ps
2	Qutaiba	Elyan	0598377890	swat@birzeit.com
3	aziz	qaroush	0598766390	aziz@birzeit.edu
4	ahmad	samer	02353455	ahmad@gmail.com
5	saad	belal	0616298998	saad@yahoo.net
6	khader	mohammed	0598778460	khader@birzeit.edu
7	omar	tawafhs	05977840	omar@hotmail.com
8	ibrahim	asfour	05978420	ibrahim@gmail.com
9	mohammed	deek	059784520	deek@gmail.com
10	hassan	ahmad	059788450	hassan@birzeit.edu
11	ziad	zain	022809842	ziad@yahoo.com
12	hassan	ahmad	059788450	hassan@birzeit.edu
13	khild	dabe	059866270	khild@gmail.com

Enter # number you want to change it info: 2

1)First Name

2)Last Name

3)Phone Number

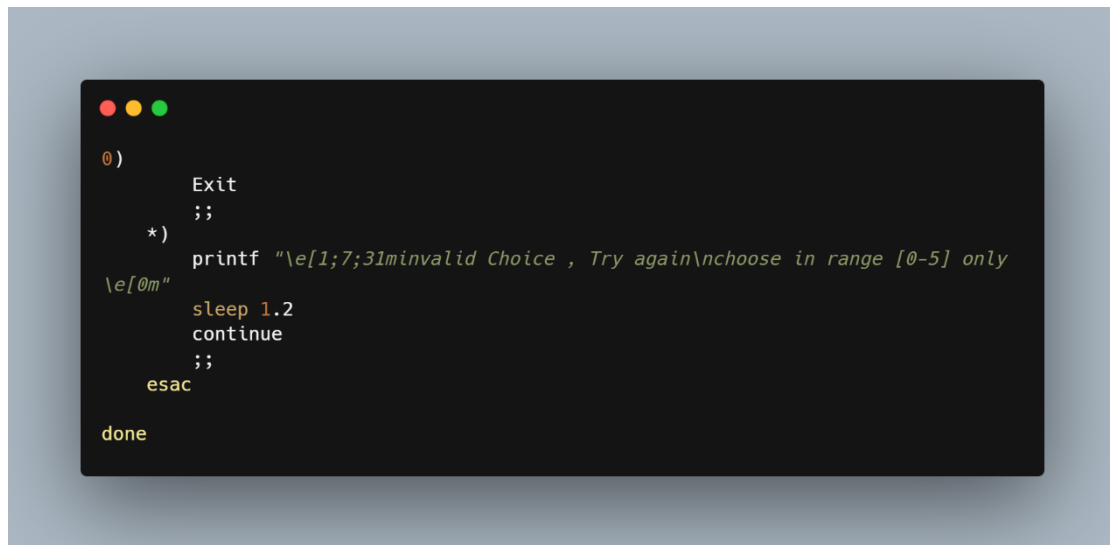
4)Email

q)Exit

enter info number you want to change it:

4

enter the email
swat@swat.ps

A terminal window with a dark background and light-colored text. The code is a shell script snippet that handles invalid choices in a loop. It uses a case statement to check for invalid input and prints an error message with a sleep delay before continuing the loop. The code is as follows:

```
0)
    Exit
    ;;
*)
    printf "\e[1;7;31minvalid Choice , Try again\nchoose in range [0-5] only
    \e[0m"
    sleep 1.2
    continue
    ;;
esac

done
```

- Exit

Done By :

Engel
TODAY

and

Outdoors
TODAY