

**Submitted by:**

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## **Assignment No: - 2**

**AIM:** Creating Address Book using Shell Script

**OBJECTIVE:** To write a program to implement an address book with the options given below: a) create address book b) view address book c) Insert Record d) Delete record e) Modify a record f) Exit

### **THEORY:**

A computer program can run in the UNIX shell command line interpreter for file manipulation, program execution and printing text is called Shell Scripting. Mostly system administration tasks are performed using Shell scripting such as disk backups, evaluating system logs and also used as installation scripts for complex programming. It has a set of commands followed by the Shell that has some parameters instructing the shell to do certain operations. Individual commands follow a sequence and perform the operations and hence it is known as Shell Script. This is useful for the repetitive tasks in the system administration.

An Operating is made of some of the components, but the two main components are:

- 1) Kernel
- 2) Shell

A Kernel is an intermediate between operating system and hardware, so it makes the communication between the hardware and software possible. As we see the figure Kernel is the innermost part of an operating system and shell is the outermost part of an operating system.

A shell is accessible by the terminal which runs a command. A Shell is an intermediate between the operating system and terminal, so takes input from the terminal and run on an operating system that makes to take input from the user in the form of commands by using command prompt, which is having the symbol \$, processes it, and then an output display on a terminal.

### **Types of Shell:**

- **The C Shell**
- **The Bourne Shell**
- **The Korn Shell**
- **GNU Bourne-Again Shell**

### **Steps to CREATE shell script**

- 1) Create a shell script a file using a vi editor or any other editor. Give the file name with extension .sh
- 2) Start the script with #! /bin/sh
- 3) Write the required code and save file.
- 4) execute the script file by type bash file.sh

### **CODE:**

```
#!/usr/bin/bash

create_file(){
read -p "Enter the name of the file to be created: " filename
read -p "Specify the columns of the database to be created: " format
touch $filename
echo $format >> $filename
}

insert_record(){
read -p "Enter the filename to insert record: " filename
read -p "Enter the record to be inserted: " record
echo $record >> $filename
}

delete_record(){
read -p "Enter the filename to delete record: " filename
read -p "Enter the record to be deleted: " record
```

```
if grep -q $record $filename;
then
sed -i "/$record/d" $filename
echo "Record Successfully Deleted !"
else
echo "No such record exists !"
fi
}

display_file(){
read -p "Enter the filename: " filename
cat $filename
}

modify_record(){
read -p "Enter the filename: " filename
read -p "Enter the record to be modified: " record
if grep -q $record $filename;
then
read -p "Enter the entire modified record: " mod
sed -i "/${record}/c ${mod}" $filename
echo "Record Successfully Modified !"
else
echo "No such record exists !"
fi
}

while true
do
echo -e "\n1.Create Address Book\n2.View Address Book\n3.Insert
Record\n4.Delete Record\n5.Modify Record\n6.Exit"
read -p "Enter your choice: " choice
```

```
case $choice in
    1)
        echo "Creating file.."
        create_file
        ;;
    2)
        echo "Displaying contents of Address Book.."
        display_file
        ;;
    3)
        echo "Inserting Record.."
        insert_record
        ;;
    4)
        echo "Deleting Record.."
        delete_record
        ;;
    5)
        echo "Modifying Record.."
        modify_record
        ;;
    6)
        echo "You have chosen to exit !"
        exit
        ;;
esac

done
```

## OUTPUT:

```
ubuntu@ubuntu: ~/Os Assignments
ubuntu@ubuntu:~/Os Assignments$ ./database.sh

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 1
Creating file..
Enter the name of the file to be created: db
Specify the columns of the database to be created: Name Year Div Rollno.

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 3
Inserting Record..
Enter the filename to insert record: db
Enter the record to be inserted: Junaid SY D 224042
```

```
ubuntu@ubuntu: ~/Os Assignments
1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 3
Inserting Record..
Enter the filename to insert record: db
Enter the record to be inserted: Sahil SY D 224036

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 3
Inserting Record..
Enter the filename to insert record: db
Enter the record to be inserted: Sumit SY D 224041
```

```
ubuntu@ubuntu: ~/Os Assignments
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 2
Displaying contents of Address Book..
Enter the filename: db
Name Year Div Rollno.
Junaïd SY D 224042
Sahil SY D 224036
Sumit SY D 224041

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 4
Deleting Record..
Enter the filename to delete record: db
Enter the record to be deleted: Sahil
Record Successfully Deleted !
```

```
ubuntu@ubuntu: ~/Os Assignments
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 5
Modifying Record..
Enter the filename: db
Enter the record to be modified: Junaid
Enter the entire modified record: Jojo SY D 224042
Record Successfully Modified !

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 2
Displaying contents of Address Book..
Enter the filename: db
Name Year Div Rollno.
Jojo SY D 224042
Sumit SY D 224041
```

```
Record Successfully Modified !

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 2
Displaying contents of Address Book..
Enter the filename: db
Name Year Div Rollno.
Jojo SY D 224042
Sumit SY D 224041

1.Create Address Book
2.View Address Book
3.Insert Record
4.Delete Record
5.Modify Record
6.Exit
Enter your choice: 6
You have chosen to exit !
ubuntu@ubuntu:~/Os Assignments$
```

**CONCLUSION:** Hence an address book was implemented using shell scripting.

