

Assignment 1

PART A)

```
Insert(){
    fn=$1 name=$2 roll=$3 div=$4 mark1=$5 mark2=$6 mark3=$7 mark4=$8 mark5=$9

    total=`expr $mark1 + $mark2 + $mark3 + $mark4 + $mark5`
    avg=`expr $total / 5`
    echo "$roll $name $div $mark1 $mark2 $mark3 $mark4 $mark5 $avg" >> $fn
    echo "Inserted sucessfully"
}
```

```
Delete(){
    fn=$1
    roll=$2

    grep -v "$roll" $fn >> temp
    mv temp $fn
    echo "Deleted sucessfully!"
}
```

```
Modify(){
    roll=$2 fn=$1 name=$3 div=$4 mark1=$5 mark2=$6 mark3=$7 mark4=$8 mark5=$9

    total=`expr $mark1 + $mark2 + $mark3 + $mark4 + $mark5`
    avg=`expr $total / 5`
    grep -v "$roll" $fn >> temp
    mv temp $fn
    echo "$roll $name $div $mark1 $mark2 $mark3 $mark4 $mark5 $avg" >> $fn
    echo "Modified sucessfully"
}
```

```
search(){
    read -p "Enter roll no to be searched: " empno
    if grep "$empno" $fn
    then
        echo "Record found"
    else
        echo "Record not found"
    fi
}
```

```
result() {
```

```

echo "-----"
printf "Roll\tName\tDiv\tmark1\tmark2\tmark3\tmark4\tmark5\n"
echo "-----"
while read -ra line;
do
printf "%5d %5s %2d " ${line[0]} ${line[1]} ${line[2]}
for ((i=3; i < 8; i++))
do
if ((${line[i]} >= 40))
then
#echo -n "Passed "
printf "      Passed"
else
#echo -n "Failed "
printf "      Failed"
fi
done
echo ""
done < $1
echo ""
}

```

```

avgresult() {
echo ""
echo "-----"
echo "Name Roll No Div Average"
echo "-----"
while read -ra line; do
printf "%5d %5s %2d %7.2f\n" ${line[0]} ${line[1]} ${line[2]} ${line[8]}
done < $1
echo ""
}

```

```

read -p "Enter filename : " fn

```

```

roll=33220

```

```

while :

```

```

do

```

```

echo -e "$("<-----MENU-----> \n 1) Show result \n 2) Insert a record \n 3) Delete a record \n 4)
Modify a record \n 5) Search \n 6) Show Avg result \n 7) Exit\n"

```

```

read -p "Enter option: " option

```

```

case $option in

```

```

1) echo "Showing result passed or not"

```

```
result $fn;;
```

```
2) roll=`expr $roll + 1`;
```

```
read -p "Enter name: " name
```

```
read -p "Enter division: " div
```

```
read -p "Enter Marks 1: " mark1
```

```
read -p "Enter Marks 2: " mark2
```

```
read -p "Enter Marks 3: " mark3
```

```
read -p "Enter Marks 4: " mark4
```

```
read -p "Enter Marks 5: " mark5
```

```
Insert $fn $name $roll $div $mark1 $mark2 $mark3 $mark4 $mark5;;
```

```
3) read -p "Enter roll no to be deleted: " roll
```

```
Delete $fn $roll;;
```

```
4) read -p "Enter searched Rollno: " roll
```

```
read -p "Enter name : " name
```

```
read -p "Enter division : " div
```

```
read -p "Enter marks1: " mark1
```

```
read -p "Enter marks2: " mark2
```

```
read -p "Enter marks3: " mark3
```

```
read -p "Enter marks4: " mark4
```

```
read -p "Enter marks5: " mark5
```

```
Modify $fn $roll $name $div $mark1 $mark2 $mark3 $mark4 $mark5;;
```

```
5) search;;
```

```
6) echo "Show avg result"
```

```
avgresult $fn;;
```

```
7) exit;;
```

```
*)echo "Invalid choice";;
```

```
esac
```

```
done
```

OUTPUT PART A)

```
Activities Terminal Aug 27 00:36 gauravghati@gauravghati: ~/os
gauravghati@gauravghati:~/os$ ./33223_L10_Asgn1_PartA.sh
Enter filename : input.txt
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 1
Showing result passed or not
-----
Roll  Name  Div  mark1  mark2  mark3  mark4  mark5
-----
33221  gaurav  10   Failed  Passed  Passed  Passed  Passed
33222  rahul   12   Passed  Failed  Failed  Passed  Failed
33223  ravi    17   Passed  Passed  Passed  Failed  Passed
-----
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 2
Enter name: rajeev
Enter division: 11
Enter Marks 1: 43
Enter Marks 2: 47
Enter Marks 3: 43
Enter Marks 4: 23
Enter Marks 5: 12
Inserted successfully
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 1
Showing result passed or not
-----
Roll  Name  Div  mark1  mark2  mark3  mark4  mark5
-----
33221  gaurav  10   Failed  Passed  Passed  Passed  Passed
33222  rahul   12   Passed  Failed  Failed  Passed  Failed
33223  ravi    17   Passed  Passed  Passed  Failed  Passed
33221  rajeev  11   Passed  Passed  Passed  Failed  Failed
-----
```

```
Activities Terminal Aug 27 00:37 gauravghati@gauravghati: ~/os
33222  rahul   12   Passed  Failed  Failed  Passed  Failed
33223  ravi    17   Passed  Passed  Passed  Failed  Failed
33221  rajeev  11   Passed  Passed  Passed  Failed  Failed
-----
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 3
Enter roll no to be deleted: 33223
Deleted successfully!
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 1
Showing result passed or not
-----
Roll  Name  Div  mark1  mark2  mark3  mark4  mark5
-----
33221  gaurav  10   Failed  Passed  Passed  Passed  Passed
33222  rahul   12   Passed  Failed  Failed  Passed  Failed
33224  rajeev  11   Passed  Passed  Passed  Failed  Failed
-----
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 4
Enter searched Rollno: 33221
Enter name : gaurav
Enter division : 09
Enter marks1: 34
Enter marks2: 45
Enter marks3: 65
Enter marks4: 23
Enter marks5: 12
Modified successfully
<-----MENU----->
1) Show result
2) Insert a record
```

```

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gauravghati@gauravghati: ~/os$

5) Search
6) Show Avg result
7) Exit
Enter option: 1
Showing result passed or not
-----
Roll   Name   Div   mark1   mark2   mark3   mark4   mark5
-----
33222  rahul   12    Passed  Failed  Failed  Failed  Failed
33224  rajeev  11    Passed  Passed  Passed  Passed  Failed
33221  gaurav  9     Failed  Passed  Passed  Passed  Failed
-----
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 5
Enter roll no to be searched: 33222
33222 rahul 12 45 34 23 65 23 12
Record found
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 6
Show avg result
-----
Name   Roll No   Div   Average
-----
33222  rahul     12    12.00
33224  rajeev    11    37.00
33221  gaurav    9     35.00
-----
<-----MENU----->
1) Show result
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Show Avg result
7) Exit
Enter option: 7
gauravghati@gauravghati:~/os$

```

PART B)

```

ViewFile(){
    echo ""
    echo "-----"
    echo "EMP ID NAME      DEPARTMENT DESIGNATION SALARY DA
GROSS SALARY"
    echo "-----"
    cat $1
}

```

```

Insert(){
    fn=$1 empno=$2 name=$3 dept=$4 desig=$5 sal=$6 DA=$7 gross=$8
    echo "$empno $name $dept $desig $sal $DA $gross" >> $fn
    echo "Inserted sucessfully"
}

```

```

Delete(){
    fn=$1
    empno=$2

    grep -v "$empno" $fn >> temp
}

```

```

mv temp $fn
echo "Deleted sucessfully!"
}

```

```

Modify(){
empno=$1 fn=$2 name=$3 dept=$4 desig=$5 sal=$6 DA=$7 gross=$8

grep -v "$empno" $fn >> temp
mv temp $fn

```

```

echo "$empno $name    $dept $desig      $sal    $DA    $gross" >> $fn
echo "Modified sucessfully"
}

```

```

search(){
    empno=$1 fn=$2
    if grep "$empno" $fn
    then
        echo "Record found"
    else
        echo "Record not found"
    fi
}

```

```

read -p "Enter filename : " fn

```

```

empno=33200
while :
do
echo -e $"<--EMPLOYEE MENU--> \n 1) View file \n 2) Insert a record \n 3) Delete a record \n
4) Modify a record \n 5) Search \n 6) Exit\n"

```

```

read -p "Enter option: " option

```

```

case $option in

```

```

    1) ViewFile $fn;;

```

```

    2) empno=`expr $empno + 1`

```

```

        while true

```

```

        do

```

```

            read -p "Enter employee name : " name

```

```

            if [ -z "$name" ]

```

```

            then

```

```

        echo 'Inputs cannot be blank please try again!'
    elif [[ "$name" =~ ^[a-zA-Z]+$ ]]
    then
        break
    else
        echo "Only Alphabets!"
    fi
done

read -p "Department: " dept

while true
do
    read -p "Enter designation : " desig
    if [ -z "$desig" ]
    then
        echo 'Inputs cannot be blank please try again!'
    elif [[ "$desig" =~ ^[a-zA-Z]+$ ]]
    then
        break
    else
        echo "Only Alphabets!"
    fi
done

while true
do
    read -p "Enter salary : " sal
    if [ -z "$sal" ]
    then
        echo 'Inputs cannot be blank please try again!'
    elif [[ "$sal" =~ ^[0-9]+$ ]]
    then
        break
    else
        echo "Only numbers!"
    fi
done

da=`echo "$sal * 0.2" | bc`
hra=`echo "$sal * 0.5" | bc`
gross=`echo "$sal + $da + $hra" | bc`
Insert $fn $empno $name $dept $desig $sal $DA $gross;;

```

```
3) read -p "Enter employee no to be deleted: " empno
   Delete $fn $empno;;
```

```
4) read -p "Enter searched Rollno: " empno
```

```
while true
do
read -p "Enter employee name : " name
if [ -z "$name" ]
then
    echo 'Blanks not allowed!'
elif [[ "$name" =~ ^[a-zA-Z]+$ ]]
then
    break
else
    echo "Only alphabets"
fi
done
```

```
read -p "Department: " dept
```

```
while true
do
read -p "Enter designation : " desig
if [ -z "$desig" ]
then
    echo 'Blanks not allowed!'
elif [[ "$desig" =~ ^[a-zA-Z]+$ ]]
then
    break
else
    echo "Only alphabets"
fi
done
```

```
while true
do
read -p "Enter salary : " sal
if [ -z "$sal" ]
then
    echo 'Blank not allowed!'
elif [[ "$sal" =~ ^[0-9]+$ ]]
then
    break
```



```

else
    echo "Only numbers!"
fi
done

da=`echo "$sal * 0.2" | bc`
hra=`echo "$sal * 0.5" | bc`
gross=`echo "$sal + $da + $hra" | bc`
Modify $empno $fn $name $dept $desig $sal $da $gross;;

5) read -p "Enter emp no to be searched: " empno
   search $empno $fn;;

6) exit;;

*)echo "Invalid choice";;

esac
done

```

OUTPUT PART B)

```

gauravghati@gauravghati:~/os/33223_L10_Assign1$ ./33223_L10_Assgn1_PartB.sh
Enter filename : input.txt
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit
Enter option: 2
Enter employee name : gaurav
Department: IT
Enter designation : manager
Enter salary : 30000
Inserted successfully
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit
Enter option: 2
Enter employee name : rahul
Department: COMP
Enter designation : employee
Enter salary : 60000
Inserted successfully
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit
Enter option: 1
-----
EMP ID  NAME      DEPARTMENT  DESIGNATION  SALARY  DA      GROSS SALARY
-----
33201  gaurav    IT          manager      30000   51000.0  102000.0
33202  rahul     COMP        employee      60000   51000.0  102000.0
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit
Enter option: 3
Enter employee no to be deleted: 33201
Deleted successfully!

```

```
Activities Terminal
Aug 27 00:46
gauravghati@gauravghati: ~/os/33223_L10_Assign1

5) Search
6) Exit

Enter option: 3
Enter employee no to be deleted: 33201
Deleted successfully!
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit

Enter option: 1

-----
EMP ID NAME DEPARTMENT DESIGNATION SALARY DA GROSS SALARY
-----
33202 rahul COMP employee 60000 51000.0 102000.0
-----
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit

Enter option: 4
Enter searched Rollno: 33202
Enter employee name : RahulR
Department: COMP
Enter designation : manager
Enter salary : 50000
Modified successfully
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit

Enter option: 1

-----
EMP ID NAME DEPARTMENT DESIGNATION SALARY DA GROSS SALARY
-----
33202 RahulR COMP manager 50000 10000.0 85000.0
-----
<--EMPLOYEE MENU-->
1) View file
2) Insert a record
3) Delete a record
4) Modify a record
5) Search
6) Exit
```