

```

#!/bin/bash

FILE="student_data.txt"

create_book() {
    if [ -f "$FILE" ]; then
        echo "Student record file already exists!"
    else
        echo "ID,Name,Phone,Email" > "$FILE"
        echo "Student record file created."
    fi
}

view_book() {
    if [ -s "$FILE" ]; then
        echo -e "\n===== Student Records ====="
        cat "$FILE"
    else
        echo "No records found."
    fi
}

insert_record() {
    echo -n "Enter ID: "
    read id
    echo -n "Enter Name: "
    read name
    echo -n "Enter Phone: "
    read phone
    echo -n "Enter Email: "
    read email

    # Optional: check if ID already exists
    if grep -q "^$id," "$FILE"; then
        echo "ID already exists! Please try again."
        return
    fi

    echo "$id,$name,$phone,$email" >> "$FILE"
    echo "Record added with ID $id"
}

delete_record() {
    echo -n "Enter ID to delete: "
    read id
    if grep -q "^$id," "$FILE"; then
        grep -v "^$id," "$FILE" > temp && mv temp "$FILE"
        echo "Record with ID $id deleted."
    fi
}

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else
    echo "No record found with ID $id."
fi
}

modify_record() {
    echo -n "Enter ID to modify: "
    read id
    if ! grep -q "^$id," "$FILE"; then
        echo "No record found with ID $id."
        return
    fi

    echo -n "Enter new Name: "
    read name
    echo -n "Enter new Phone: "
    read phone
    echo -n "Enter new Email: "
    read email

    grep -v "^$id," "$FILE" > temp && mv temp "$FILE"
    echo "$id,$name,$phone,$email" >> "$FILE"
    sort -n "$FILE" -o "$FILE"
    echo "Record with ID $id modified."
}

while true; do
    echo -e "\n===== Menu ====="
    echo "1) Create Address Book"
    echo "2) View Records"
    echo "3) Insert Record"
    echo "4) Delete Record"
    echo "5) Modify Record"
    echo "0) Exit"
    echo -n "Choose option [0-5]: "
    read choice

    case $choice in
        1) create_book ;;
        2) view_book ;;
        3) insert_record ;;
        4) delete_record ;;
        5) modify_record ;;
        0) echo "Goodbye!"; exit 0 ;;
        *) echo "Invalid choice, try again." ;;
    esac
done

```

-----OUTPUT-----

```
pict@mplab-12:~/Desktop/33164$ ./assign1b2.sh
```

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 1

Student record file created.

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 1

Student record file already exists!

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 3

Enter ID: 1

Enter Name: Amar

Enter Phone: 9876543210

Enter Email: amar@gmail.com

Record added with ID 1

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

1,Amar,9876543210,amar@gmail.com

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 3

Enter ID: 2

Enter Name: shubham

Enter Phone: 8765432109

Enter Email: shubham@gmail.com

Record added with ID 2

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record

5) Modify Record

0) Exit

Choose option [0-5]: 5

Enter ID to modify: 1

Enter new Name: amarendra

Enter new Phone:

Enter new Email:

Record with ID 1 modified.

===== Menu =====

1) Create Address Book

2) View Records

3) Insert Record

4) Delete Record

5) Modify Record

0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

1,amarendra,,

2,shubham,8765432109,shubham@gmail.com

===== Menu =====

1) Create Address Book

2) View Records

3) Insert Record

4) Delete Record

5) Modify Record

0) Exit

Choose option [0-5]: 5

Enter ID to modify: 1

Enter new Name: amarendra

Enter new Phone: 9876543210

Enter new Email: amr@gmail.com

Record with ID 1 modified.

===== Menu =====

1) Create Address Book

2) View Records

3) Insert Record

4) Delete Record

5) Modify Record

0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

1,amarendra,9876543210,amr@gmail.com
2,shubham,8765432109,shubham@gmail.com

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 4

Enter ID to delete: 2

Record with ID 2 deleted.

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

1,amarendra,9876543210,amr@gmail.com

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 3

Enter ID: 3

Enter Name: aaditya

Enter Phone: 8673746373

Enter Email: aditya@gmail.com

Record added with ID 3

===== Menu =====

- 1) Create Address Book
- 2) View Records
- 3) Insert Record
- 4) Delete Record
- 5) Modify Record
- 0) Exit

Choose option [0-5]: 2

===== Student Records =====

ID,Name,Phone,Email

1,amarendra,9876543210,amr@gmail.com

3,aaditya,8673746373,aditya@gmail.com

===== Menu =====

1) Create Address Book

2) View Records

3) Insert Record

4) Delete Record

5) Modify Record

0) Exit

Choose option [0-5]: 0

Goodbye!

pict@mplab-12:~/Desktop/33164\$