**Student Name: Diptesh Ravindra Varule Roll No.:23277**

**Assignment No 8**

**File Handling**

**Problem Statement :**

Implement a program for maintaining a student records database using File Handling.

Student has Student\_id,name,Roll\_no, Class, marks and address. Display the data for five students.

i) Create Database

ii)Display Database

iii) Clear Records

iv)Modify record

v)Search Record

**Source Code:**

**package ass8;**

**import java.io.\*;**

**import java.util.\*;**

**public class Records {**

**static BufferedReader reader = new BufferedReader(new InputStreamReader(System.in));**

**public void addNewRecord() throws IOException{**

**PrintWriter writer = new PrintWriter(new BufferedWriter(new FileWriter("record.txt",true)));**

**String studentname, address;**

**int studentid, rollno, Class;**

**float marks;**

**String s;**

**boolean addMore = false;**

**do {**

**System.out.print("\nEnter Student Name: ");**

**studentname = reader.readLine();**

**System.out.print("Student Id: ");**

**studentid = Integer.parseInt(reader.readLine());**

**System.out.print("Roll no: ");**

**rollno = Integer.parseInt(reader.readLine());**

**System.out.print("Address: ");**

**address = reader.readLine();**

**System.out.print("Class: ");**

**Class = Integer.parseInt(reader.readLine());**

**System.out.print("Marks : ");**

**marks = Float.parseFloat(reader.readLine());**

**writer.println(studentname+" "+studentid+" "+rollno+" "+address+" "+Class+" "+marks);**

**System.out.print("\nRecords added successfully !\n\nDo you want to add more records ? (y/n) : ");**

**s = reader.readLine();**

**if(s.equalsIgnoreCase("y"))**

**{ addMore = true;**

**System.out.println();**

**}**

**else**

**{ addMore = false;**

**}**

**}while(addMore);**

**writer.close();**

**DisplayMenu();**

**}**

**//method to read the data in records**

**public void readRecords() throws IOException {**

**try {**

**BufferedReader file = new BufferedReader(new FileReader("record.txt"));**

**String line;**

**while((line = file.readLine()) != null)**

**{ System.out.println(line);**

**System.out.println("");**

**}**

**file.close();**

**DisplayMenu();**

**}**

**catch(FileNotFoundException e)**

**{ System.out.println("\nERROR : File not Found !!!");**

**}**

**}**

**//method to delete the data in records**

**public void deleteRecords() throws IOException {**

**try {**

**BufferedReader file1 = new BufferedReader(new FileReader("record.txt"));**

**PrintWriter writer = new PrintWriter(new BufferedWriter(new FileWriter("record1.txt",true)));**

**String line;**

**int flag=0;**

**Scanner sc=new Scanner(System.in);**

**System.out.print("Enter the name of the student you want to delete: ");**

**String searchname=sc.next();**

**// Read records from the file**

**while((line = file1.readLine()) != null)**

**{ String[] lines = line.split(" ");**

**//System.out.println(line[0]);**

**if(!searchname.equalsIgnoreCase(lines[0]))**

**{ writer.println(line);**

**flag=0;**

**}**

**else**

**{ System.out.println("Record found");**

**flag=1;**

**}**

**}**

**file1.close();**

**writer.close();**

**File delFileName = new File("record.txt");**

**File oldFileName = new File("record1.txt");**

**File newFileName = new File("record.txt");**

**if(delFileName.delete())**

**System.out.println("deleted successfully");**

**else**

**System.out.println("Error");**

**if (oldFileName.renameTo(newFileName))**

**System.out.println("Renamed successfully");**

**else**

**System.out.println("Error");**

**DisplayMenu();**

**}**

**catch(FileNotFoundException e)**

**{ System.out.println("\nERROR : File not Found !!!");**

**}**

**}**

**//method to search the data in records**

**public void searchRecords() throws IOException {**

**try {**

**// Open the file**

**BufferedReader file = new BufferedReader(new FileReader("record.txt"));**

**String name;**

**int flag=0;**

**Scanner sc=new Scanner(System.in);**

**System.out.print("Enter an id of the student you want to search: ");**

**String searchname=sc.next();**

**// Read records from the file**

**while((name = file.readLine()) != null)**

**{ String[] line = name.split(" ");**

**//System.out.println(line[0]);**

**if(searchname.equalsIgnoreCase(line[1]))**

**{ System.out.println("Record found");**

**System.out.println(name);**

**System.out.println("");**

**flag=1;**

**break;**

**}**

**}**

**if(flag==0) System.out.println("Record not found");**

**file.close();**

**DisplayMenu();**

**}**

**catch(FileNotFoundException e)**

**{ System.out.println("\nERROR : File not Found !!!");**

**}**

**}**

**//method to update the data in records**

**public void updateRecords() throws IOException {**

**try { // Open the file**

**BufferedReader file1 = new BufferedReader(new FileReader("record.txt"));**

**PrintWriter pw = new PrintWriter(new BufferedWriter(new FileWriter("record1.txt",true)));**

**String name;**

**int flag=0;**

**Scanner sc=new Scanner(System.in);**

**System.out.print("Enter the name of the student you want to update: ");**

**String searchname=sc.next();**

**// Read records from the file**

**while((name = file1.readLine()) != null)**

**{ String[] line = name.split(" ");**

**//System.out.println(line[0]);**

**if(!searchname.equalsIgnoreCase(line[0]))**

**{ pw.println(name);**

**flag=0;**

**}**

**else {**

**System.out.println("Record found");**

**System.out.println("Enter updated marks:");**

**String up\_mark=sc.next();**

**pw.println(line[0]+" "+line[1]+" "+line[2]+" "+line[3]+" "+line[4]+" "+up\_mark);**

**flag=1;**

**}**

**}**

**file1.close();**

**pw.close();**

**File delName = new File("record.txt");**

**File oldName = new File("record1.txt");**

**File newName = new File("record.txt");**

**if(delName.delete()) System.out.println("record updated successfully");**

**else System.out.println("Error");**

**if (oldName.renameTo(newName)) System.out.println("Renamed successfully");**

**else System.out.println("Error");**

**DisplayMenu();**

**}**

**catch(FileNotFoundException e)**

**{ System.out.println("\nERROR : File not Found !!!");**

**}**

**}**

**//method to data the data in records**

**public void clear(String filename) throws IOException {**

**// Create a blank file**

**PrintWriter pw = new PrintWriter(new BufferedWriter(new FileWriter(filename)));**

**pw.close();**

**System.out.println("\nAll Records cleared successfully !");**

**for(int i=0;i<999999999;i++);**

**// Wait for some time DisplayMenu();**

**}**

**//method to display the Main Menu**

**public void DisplayMenu() throws IOException {**

**System.out.println("");**

**System.out.print("\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*\n1. Add Records\n2. Display Records\n3. Clear All Records\n4. Search Records\n5. Delete Records\n6. Update Records \n7. Exit\n\nEnter your choice : ");**

**int choice = Integer.parseInt(reader.readLine());**

**System.out.println("");**

**switch(choice) {**

**case 1: addNewRecord();**

**break;**

**case 2: readRecords();**

**break;**

**case 3: clear("record.txt");**

**break;**

**case 4: searchRecords();**

**break;**

**case 5: deleteRecords();**

**break;**

**case 6: updateRecords();**

**break;**

**case 7: System.exit(0);**

**break;**

**default: System.out.println("\nInvalid Choice !");**

**break;**

**}**

**}**

**public static void main(String args[]) throws IOException {**

**Records operate = new Records();**

**operate.DisplayMenu();**

**}**

**Output :**

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 1

Enter Student Name: Diptesh

Student Id: 23277

Roll no: 77

Address: A

Class: 10

Marks : 89

Records added successfully !

Do you want to add more records ? (y/n) : y

Enter Student Name: abhijeet

Student Id: 23319

Roll no: 33

Address: B

Class: 11

Marks : 90

Records added successfully !

Do you want to add more records ? (y/n) : y

Enter Student Name: shubham

Student Id: 23264

Roll no: 64

Address: C

Class: 10

Marks : 96

Records added successfully !

Do you want to add more records ? (y/n) : y

Enter Student Name: Rushikesh

Student Id: 23211

Roll no: 11

Address: D

Class: 10

Marks : 98

Records added successfully !

Do you want to add more records ? (y/n) : n

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 2

Diptesh 23277 77 A 10 89.0

abhijeet 23319 33 B 11 90.0

shubham 23264 64 C 10 96.0

Rushikesh 23211 11 D 10 98.0

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 4

Enter an id of the student you want to search: 23277

Record found

Diptesh 23277 77 A 10 89.0

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 5

Enter the name of the student you want to delete: shubham

Record found

deleted successfully

Renamed successfully

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 2

Diptesh 23277 77 A 10 89.0

abhijeet 23319 33 B 11 90.0

Rushikesh 23211 11 D 10 98.0

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 6

Enter the name of the student you want to update: Rushikesh

Record found

Enter updated marks:

99

record updated successfully

Renamed successfully

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 2

Diptesh 23277 77 A 10 89.0

abhijeet 23319 33 B 11 90.0

Rushikesh 23211 11 D 10 99

\*\*\*\*\*\*\*\*\*\*Main Menu\*\*\*\*\*\*\*\*\*

1. Add Records

2. Display Records

3. Clear All Records

4. Search Records

5. Delete Records

6. Update Records

7. Exit

Enter your choice : 7