**===================================================================================**

**/\***

**\* Name: Mauli Pralhad Bondare**

**\* Roll no.: 68**

**\* Batch: D**

**\* Assignment No: 8**

**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.**

**\*/**

**===================================================================================**

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

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

**// ========================= FILE1 CLASS =========================//**

**class Database {**

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

**//creating bufferredReder class object**

**// ---------------------- addRecords method ---------------------- //**

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

**// Create or Modify a file for Database**

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

**//creating file with name sapmle.txt**

**String studentname, address,s;//declaration of studentname , address ,s**

**int studentid, rollno, Class;//declaration of studentid , rollno, Class**

**float marks;//declaration of marks**

**boolean addMore = false; //declaration of addmore**

**do {**

**System.out.print("\nEnter Student Name: "); //printing on console**

**studentname = br.readLine(); //taking input from user**

**System.out.print("Student Id: "); //printing on console**

**studentid = Integer.parseInt(br.readLine()); //taking input from user**

**System.out.print("Roll no: ");//printing on console**

**rollno = Integer.parseInt(br.readLine()); //taking input from user**

**System.out.print("Address: "); //printing on console**

**address = br.readLine(); //taking input from user**

**System.out.print("Class: ");//printing on console**

**Class = Integer.parseInt(br.readLine()); //taking input from user**

**System.out.print("Marks : "); //printing on console**

**marks = Float.parseFloat(br.readLine()); //taking input from user**

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

**//appending data into to file**

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

**s = br.readLine();//take input from user**

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

**addMore = true;//modify addmore**

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

**}**

**else**

**addMore = false; //modify addmore**

**}**

**while(addMore);**

**pw.close();**

**}**

**// ---------------------- addRecords method ---------------------- //**

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

**try {**

**// Open the file**

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

**String name; //declaration of string name**

**int i=1; //intizing value of i=1**

**// Read records from the file**

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

**System.out.println(name); //printing on console**

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

**} file.close();**

**}**

**catch(FileNotFoundException e){ //Exception handling**

**System.out.println("\nERROR : File not Found !!!"); //printing on console**

**}**

**}**

**// ---------------------- addRecords method ---------------------- //**

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

**try { // Open the file**

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

**String name;//declaration of string name**

**int flag=0; //intizing value of flag=0**

**Scanner sc=new Scanner(System.in); //creating obj of scanner class**

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

**//printing on console**

**String searchname=sc.next(); //taking input from user**

**// Read records from the file**

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

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

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

**System.out.println("Record found"); //printing on console**

**System.out.println(name); //printing record on console**

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

**flag=1; //modify value**

**break;**

**}**

**}**

**if(flag==0) //check condition**

**System.out.println("Record not found"); //printing on console**

**file.close(); //closing file**

**}**

**catch(FileNotFoundException e) {//Exception handling**

**System.out.println("\nERROR : File not Found !!!");//printing on console**

**}**

**}**

**// ---------------------- addRecords method ---------------------- //**

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

**try { // Open the file**

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

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

**String name; //declaration of string name**

**int flag=0; //intizing value of flag=0**

**Scanner sc=new Scanner(System.in); //creating obj of scanner class**

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

**String searchname=sc.next(); // Read records from the file**

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

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

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

**pw.println(name);**

**flag=0; //modify value**

**}**

**else{**

**System.out.println("Record found"); //printing on console**

**flag=1;//modify value**

**}**

**} file1.close();//closing file**

**pw.close();**

**File delName = new File("sample.txt");//creating obj of sample.txt**

**File oldName = new File("new.txt"); //creating obj of new.txt**

**File newName = new File("sample.txt"); //creating obj of sample.txt**

**if(delName.delete())**

**System.out.println("deleted successfully"); //printing on console**

**else**

**System.out.println("Error");//printing on console**

**if (oldName.renameTo(newName))**

**System.out.println("Renamed successfully"); //printing on console**

**else**

**System.out.println("Error"); //printing on console**

**}**

**catch(FileNotFoundException e) {//Exception handling**

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

**}**

**}**

**// ---------------------- addRecords method ---------------------- //**

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

**try {**

**// Open the file**

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

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

**String name;//declaration of string name**

**int flag=0; //intizing flag to 0**

**Scanner sc=new Scanner(System.in); //creating obje of scanner class**

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

**String searchname=sc.next(); // Read records from the file**

**while((name = file1.readLine()) != null) { //check condition**

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

**if(!searchname.equalsIgnoreCase(line[0])){ //check condition**

**pw.println(name);**

**flag=0; //modify value of flag**

**}**

**else**

**{**

**System.out.println("Record found"); //printing on console**

**System.out.print("Enter updated marks: "); //printing on console**

**String up\_mark=sc.next(); //taking input from user**

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

**flag=1; //modify value of flag**

**}**

**}**

**file1.close(); //closing file**

**pw.close();**

**File delName = new File("sample.txt");//creating obj of sample.txt**

**File oldName = new File("new.txt"); //creating obj of new.txt**

**File newName = new File("sample.txt"); //creating obj of sample.txt**

**if(delName.delete()) //check condition**

**System.out.println("record updated successfully"); //printing on console**

**else**

**System.out.println("Error"); //printing on console**

**if (oldName.renameTo(newName)) //check condition**

**System.out.println("Renamed successfully"); //printing on console**

**else**

**System.out.println("Error"); //printing on console**

**}**

**catch(FileNotFoundException e) { //Exception handling**

**System.out.println("\nERROR : File not Found !!!"); //printing on console**

**}**

**}**

**// ---------------------- addRecords method ---------------------- //**

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

**// Create a blank file**

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

**pw.close(); //closing PrintWriter object**

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

**//printing on console**

**}**

**}**

**// ========================= MAIN CLASS =========================//**

**public class Maulidemoprg8**

**{**

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

**Database f = new Database(); //creating obj of Database class**

**Scanner sc =new Scanner(System.in);//creating object of scanner class**

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

**while(true) {**

**//menu driven**

**System.out.print("1. 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 = sc.nextInt();//taking input from user**

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

**//switch Case**

**switch(choice) {**

**case 1:**

**f.addRecords(); //calling addRecords method**

**System.out.println("\n====================================================\n");**

**break;**

**case 2:**

**f.readRecords(); //calling readRecords method**

**System.out.println("\n====================================================\n");**

**break;**

**case 3:**

**f.clear("sample.txt"); //calling clear method**

**System.out.println("\n====================================================\n");**

**break;**

**case 4:**

**f.searchRecords(); //calling searchRecords method**

**System.out.println("\n====================================================\n");**

**break;**

**case 5:**

**f.deleteRecords();//calling deleteRecords method**

**System.out.println("\n====================================================\n");**

**break;**

**case 6:**

**f.updateRecords(); //calling updateRecords method**

**System.out.println("\n====================================================\n");**

**break;**

**case 7:**

**System.out.println("\n====================================================\n");**

**System.exit(0);//stop execution of program**

**break;**

**default:**

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

**System.out.println("\n====================================================\n");**

**break;**

**}**

**}**

**}**

**}**

**OUTPUT:**

**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: mauli**

**Student Id: 1010**

**Roll no: 68**

**Address: ap-jalna**

**Class: 1**

**Marks : 90**

**Records added successfully !**

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

**Enter Student Name: karan**

**Student Id: 2020**

**Roll no: 67**

**Address: ap-jalna**

**Class: 2**

**Marks : 90**

**Records added successfully !**

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

**====================================================**

**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**

**mauli 1010 68 ap-jalna 1 90.0**

**karan 2020 67 ap-jalna 2 90.0**

**====================================================**

**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: 2020**

**Record found**

**karan 2020 67 ap-jalna 2 90.0**

**====================================================**

**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: mauli**

**Record found**

**Enter updated marks: 95**

**record updated successfully**

**Renamed successfully**

**====================================================**

**1. Add Records**

**2. Display Records**

**3. Clear All Records**

**4. Search Records**

**5. Delete Records**

**6. Update Records**

**7. Exit**

**Enter your choice : 3**

**All Records cleared successfully !**

**====================================================**

**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: 1010**

**deleted successfully**

**Renamed successfully**

**====================================================**

**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**

**====================================================**