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/**

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Class: SE(II)          Batch: B
Roll No: 207B020
Experiment No: 08
Title: File Handling

*/

import java.io.*;
import java.util.*;


class Database
{
    static BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));



    public void addRecords() throws IOException
    {

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


    public void readRecords() throws IOException
    {
        try  {

            BufferedReader file = new BufferedReader(new
FileReader("sample.txt"));
            String name;
            int i=1;


            while((name = file.readLine()) != null)   {
                System.out.println(name);
                System.out.println("");
                }   file.close();
        }
        catch(FileNotFoundException e)
        {
            System.out.println("\nERROR : File not Found !!!");
        }
    }

    public void searchRecords() throws IOException
    {
        try  {
            BufferedReader file = new
BufferedReader(new   FileReader("sample.txt"));
            String name;
            int flag=0; //intizing value of 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();
                        while((name = file.readLine()) != null)   {
                String[] line = name.split(" ");

                if(searchname.equalsIgnoreCase(line[1])){
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                    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)
                System.out.println("Record not found"); //printing on console
            file.close();
            }
        catch(FileNotFoundException e)  {//Exception handling
            System.out.println("\nERROR : File not Found !!!");//printing on
console
            }
        }


    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
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                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 !!!");
            }
        }


    public void updateRecords() throws IOException
    {
        try  {
            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
                    }
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                }
            file1.close();
                pw.close();
                File delName =  new File("sample.txt");
                File oldName =  new File("new.txt");
                File newName =   new File("sample.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");

                }
        catch(FileNotFoundException e)  {
            System.out.println("\nERROR : File not Found !!!"); //printing on
console
            }
        }


    public void clear(String filename) throws IOException
    {
        PrintWriter pw = new PrintWriter(new BufferedWriter(new
FileWriter(filename)));
        pw.close(); //closing PrintWriter object
        System.out.println("\nAll Records cleared successfully !");
        //printing on console

    }

}


public class FileHandlingMain
{
    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
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        System.out.println("");

        //switch Case
        switch(choice)
        {
            case 1: f.addRecords();
                break;

            case 2: f.readRecords();
                break;

            case 3: f.clear("sample.txt");
                break;

            case 4: f.searchRecords();
                break;

            case 5: f.deleteRecords();
                break;

            case 6: f.updateRecords();
                break;

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

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

    }

}
```

```
/* Output

C:\ Java Porgrams>javac FileHandlingMain.java
C:\ Java Porgrams>java FileHandlingMain

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: ABC
Student Id: 1
Roll no: 1
Address: Pune
Class: 1
Marks : 10

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

ABC 1 1 Pune 1 10.0

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: 1
Record found
ABC 1 1 Pune 1 10.0
```

```
1. Add Records
2. Display Records
3. Clear All Records
4. Search Records
5. Delete Records
6. Update Records
7. Exit

Enter your choice : 5

Enter the name of the student you want to delete: 1
deleted 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


*/
```