

## Assignment No.08

**Aim:** 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

```
*** A8_Student Class***

import java.io.BufferedReader; //import java.io.* import
java.io.BufferedWriter;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileReader; import
java.io.FileWriter; import
java.io.IOException; import
java.io.InputStreamReader; import
java.io.PrintWriter;
import java.util.Scanner;

public class A8_Student {
    BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
        *****Add Records*****

    public void addRecords()throws IOException
    {

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

        int stud_id,roll_no;
        String name,s_class,address;
        float marks;    String s;
```

```

boolean addMore = false;

do
{
    System.out.println("\nEnter Student Id: ");
    stud_id = Integer.parseInt(br.readLine());

    System.out.println("Enter Roll No: ");
    roll_no = Integer.parseInt(br.readLine());

    System.out.println("Enter Name: ");
    name = br.readLine();

    System.out.println("Enter Class");
    s_class=br.readLine();

    System.out.println("Enter Address");
    address=br.readLine();

    System.out.println("Enter Marks ");
    marks=Float.parseFloat(br.readLine());
    pw.println(stud_id);
    pw.println(roll_no);    pw.println(name);
    pw.println(s_class);
    pw.println(address);
    pw.println(marks);

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

    if(s.equalsIgnoreCase("y"))
    {
        addMore = true;
        System.out.println();
    }else
addMore = false;
    } while(addMore);

    pw.close();
    showMenu();
}

```

\*\*\*\*\*Display\*\*\*\*\*

```
public void displayRecords()throws IOException
{
try
{
    BufferedReader file=new BufferedReader(new FileReader("studentRecords.txt"));
    String id;
    int i=1;

    while((id=file.readLine())!=null)
    {
        System.out.println("\n*****");
        System.out.println("Record :"+(i++));
        System.out.println(" Id : "+id);
        System.out.println(" Roll No : "+file.readLine());
        System.out.println(" Name : "+file.readLine());
        System.out.println(" Class : "+file.readLine());
        System.out.println(" Address : "+file.readLine());
        System.out.println(" Marks :"+file.readLine());
        System.out.println("\n");
    }
    file.close();
    showMenu();
}
catch (FileNotFoundException e)
{
    System.out.println(" File Not found Exception Occured...");
}
}
```

\*\*\*\*\*Search\*\*\*\*\*

```
public void searchRecords(int id)throws IOException
{
    BufferedReader file=new BufferedReader(new FileReader("studentRecords.txt"));
    String s;

    while((s=file.readLine())!=null)
    {
        if(Integer.parseInt(s)==id)
        {
```

```

System.out.println("*****");
System.out.println("Student Id : "+s);
System.out.println("Roll No : "+file.readLine());
System.out.println("Name : "+file.readLine());
System.out.println("Class : "+file.readLine());
System.out.println("Address : "+file.readLine());
System.out.println("Marks : "+file.readLine());

System.out.println("Record Found Successfylly.....\n");
showMenu();
    }
    else{        for(int
j=0;j<5;j++)
    {
file.readLine();
    }
    }
}
System.out.println("Record Not Found.....\n");
file.close();
showMenu();
}

```

### \*\*\*\*\*Modify\*\*\*\*\*

```

public void modifyRecords()throws IOException
{
File db = new File("studentRecords.txt");

File tempDB = new File("studentRecordstemp.txt");

BufferedReader file = new BufferedReader( new FileReader(db) );
BufferedWriter bw = new BufferedWriter( new FileWriter(tempDB) );

PrintWriter temp = new PrintWriter(bw);
String id;
int i=1;

System.out.println("Enter id of the record you want to edit?");    int
sid = Integer.parseInt(br.readLine());

while((id=file.readLine())!=null)

```

```

{
    if(Integer.parseInt(id)==sid)
    {
        temp.println(id);
        System.out.println("Enter roll No : ");
        int r=Integer.parseInt(br.readLine());
        temp.println(r);
        System.out.println("Enter Name : ");
        String n=br.readLine();
        temp.println(n);
        System.out.println("Enter Class");
        String c=br.readLine();
        temp.println(c);
        System.out.println("Enter Address");
        String a=br.readLine();
        temp.println(a);
        System.out.println("Enter Marks ");
        Float m=Float.parseFloat(br.readLine());
        temp.println(m);

        for(int j=0;j<5;j++)
        {
            file.readLine();
        }
    } else {
        temp.println(id);
        temp.println(file.readLine());
        temp.println(file.readLine());
        temp.println(file.readLine());
        temp.println(file.readLine());
        temp.println(file.readLine());
    }
}
temp.close();
file.close();

boolean x=db.delete();
if (db.exists())
{
    System.out.println("file Still exist");
} else {
    System.out.println("file deleted Successfully....");
}

```

```

boolean success = tempDB.renameTo(db);

System.out.println("File Rename      :"+success);

System.out.println("File updated successfully...\n");

showMenu();
}

*****Delete*****

public void deleteRecords()throws IOException

{
try
{
// Open the file

BufferedReader file1 = new BufferedReader(new FileReader("studentRecords.txt"));

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

String sId;

int flag=0;

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

int srchId = Integer.parseInt(br.readLine());

while((sId = file1.readLine()) != null)

{
if(Integer.parseInt(sId)==srchId) //delete this
{

flag=0;
System.out.println("Record found...Deleting record");

System.out.println("Student Id: "+ sId);

```

```

        System.out.println("Student RollNo: "+ Integer.parseInt(file1.readLine()));
        System.out.println("Student Name: "+ file1.readLine());
        System.out.println("Student Class: "+ file1.readLine());
        System.out.println("Student Address: "+ file1.readLine());
        System.out.println("Student Marks: "+ Float.parseFloat(file1.readLine()));
    }
    else
    {
        pw.println(sId);
pw.println(file1.readLine());
        pw.println(file1.readLine());
pw.println(file1.readLine());

        pw.println(file1.readLine());
pw.println(file1.readLine());

        flag=1;

    }

}file1.close();

pw.close();

File delName = new File("studentRecords.txt");

File oldName = new File("studentRecordstemp.txt");
File newName = new File("studentRecords.txt");
if(delName.delete())
{

    System.out.println("deleted successfully");
}else{

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

if (oldName.renameTo(newName)){

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

```

```

        }else
        {

            System.out.println("Error");
        }
        showMenu();

    }

    catch(FileNotFoundException e)

    {

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

    }

}

//*****Clear*****

```

```

public void clearRecords()throws IOException
{
    PrintWriter pw=new PrintWriter(new BufferedWriter(new FileWriter("studentRecords.txt")));
    pw.close();

    System.out.println("\n All Records Deleted Successfully\n");
    showMenu();

}

```

\*\*\*\*\*Menu\*\*\*\*\*

```

public void showMenu()throws IOException
{
    int choice;
    System.out.println("1.Add Records \n2.Display Records \n3.Search Records \n4.Modify Records
\n5.Delete Records \n6.Clear all Records \n7.Exit \nEnter Your Choice ");
    choice=Integer.parseInt(br.readLine());    switch(choice)
    {
        case 1:
            addRecords();
            break;
        case 2:
            displayRecords();
            break;
        case 3:

```



```

        System.out.println("Enter Student Id ");
int id=Integer.parseInt(br.readLine());
searchRecords(id);
        break;
case 4:
        modifyRecords();
        break;    case
5:
deleteRecords();
        break;    case
6:
clearRecords();
        break;
case 7:
        System.exit(0);
        break;
default:
        System.out.println("Wrong Choice....");
break;

```

\*\*\*\*\*main method\*\*\*\*\*

```

public static void main(String[] args) throws IOException
{
    A8_Student s=new A8_Student();
s.showMenu();
}
}

```

## Output:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22621.2428]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91853\Desktop\SE III\OOP\Programs\codes>javac ExceptionDemo.java

C:\Users\91853\Desktop\SE III\OOP\Programs\codes>java ExceptionDemo
Enter First Number:
1
Enter Second Number:
2
Result: 0
Enter Array size :
5
Enter Element0 :
1
Enter Element1 :
2
Enter Element2 :
3
Enter Element3 :
4
Enter Element4 :
5
Enter Element5 :
6
Array index out of bound exception occurred
out of try-catch block...

C:\Users\91853\Desktop\SE III\OOP\Programs\codes>
```

```
C:\Windows\System32\cmd.exe

C:\Users\91853\Desktop\SE III\OOP\Programs\codes>javac A8_Student.java

C:\Users\91853\Desktop\SE III\OOP\Programs\codes>java A8_Student
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
1

Enter Student Id:
5
Enter Roll No:
1
Enter Name:
Manali
Enter Class
SE
Enter Address
Manchar
Enter Marks
85

Records added successfully !

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

Enter Student Id:
7
Enter Roll No:
2
Enter Name:
Shweta
Enter Class
SE
Enter Address
Sambhajinagar
Enter Marks
84

84
```

```
C:\Windows\System32\cmd.exe

Records added successfully !

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

Enter Student Id:
8
Enter Roll No:
3
Enter Name:
pranjal
Enter Class
SE
Enter Address
Chakan
Enter Marks
86

Records added successfully !

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

Enter Student Id:
9
Enter Roll No:
4
Enter Name:
Manasi
Enter Class
SE
Enter Address
Nashik
Enter Marks
83

Records added successfully !

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

Enter Student Id:
10
Enter Roll No:

C:\Windows\System32\cmd.exe

Enter Student Id:
10
Enter Roll No:
5
Enter Name:
Kalyani
Enter Class
SE
Enter Address
Akole
Enter Marks
83

Records added successfully !

Do you want to add more records ? (y/n) : n
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
2

*****
Record :1
Id : 5
Roll No : 1
Name : Manali
Class : SE
Address : Manchar
Marks :85.0

*****
Record :2
Id : 7
Roll No : 2
Name : Shweta
Class : SE
Address : Sambhajanagar
```

```
C:\Windows\System32\cmd.exe

*****
Record :3
Id : 8
Roll No : 3
Name : pranjal
Class : SE
Address : Chakan
Marks :86.0

*****
Record :4
Id : 9
Roll No : 4
Name : Manasi
Class : SE
Address : Nashik
Marks :83.0

*****
Record :5
Id : 10
Roll No : 5
Name : Kalyani
Class : SE
Address : Akole
Marks :83.0

1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
3
Enter Student Id
10
*****
```

```
C:\Windows\System32\cmd.exe

Student Id : 10
Roll No : 5
Name : Kalyani
Class : SE
Address : Akole
Marks : 83.0
Record Found Successfylly.....

1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
4
Enter id of the record you want to edit?
7
Enter roll No :
13
Enter Name :
Samiksha
Enter Class
BE
Enter Address
Chiplun
Enter Marks
88
file Still exist
File Rename :false
File updated successfully...

1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
5
Enter the id of the student you want to delete: 7
Record found...Deleting record
Student Id: 7
```

```
C:\Windows\System32\cmd.exe
Record found...Deleting record
Student Id: 7
Student RollNo: 2
Student Name: Shweta
Student Class: SE
Student Address: Sambhajinagar
Student Marks: 84.0
Error
Error
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
5
Enter the id of the student you want to delete: 10
Record found...Deleting record
Student Id: 10
Student RollNo: 5
Student Name: Kalyani
Student Class: SE
Student Address: Akole
Student Marks: 83.0
Error
Error
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
6
All Records Deleted Successfully
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
```



```
C:\Windows\System32\cmd.exe
6.Clear all Records
7.Exit
Enter Your Choice
5
Enter the id of the student you want to delete: 10
Record found...Deleting record
Student Id: 10
Student RollNo: 5
Student Name: Kalyani
Student Class: SE
Student Address: Akole
Student Marks: 83.0
Error
Error
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
6
All Records Deleted Successfully
1.Add Records
2.Display Records
3.Search Records
4.Modify Records
5.Delete Records
6.Clear all Records
7.Exit
Enter Your Choice
7
C:\Users\91853\Desktop\SE III\OOP\Programs\codes>
6.Clear all Records
```

