ASSIGNMENT 7

**Name: Soham Makarand Limaye**

**Roll No: 222038**

**PRN: 22111058**

**Batch: B2**

**Aim:**Implement student database (Roll number, Name of student, Gr. Number, Class etc.) using text or binary files in Java.

**Objective**:

1. Understand File Operation using java.
2. Understand Text and Binary files in java.
3. Add a student record to the database, including the student's roll number, name, group number, and grade.
4. Store the student records in a binary file for persistent storage.

**Theory :**

There are multiple ways of writing and reading a text file. This is required while dealing with many applications. There are several ways to read a plain text file in Java e.g. you can use FileReader, BufferedReader, or Scanner to read a text file. Every utility provides something special e.g. BufferedReader provides buffering of data for fast reading, and Scanner provides parsing ability.

**Code :**

import java.io.\*;

class Student implements Serializable { int rollNo; String name; int GRNo; int studentClass;

public Student(int studentClass, String name, int GRNumber, int

rollNo) { this.rollNo = rollNo; this.name = name; this.GRNo = GRNo;

this.studentClass = studentClass;

}

}

public class Main { private static final String FILE\_NAME

= "students.bin"; public static void main(String[] args) {

Student s1 = new Student(1, "Atharva Gawas", 22110116, 26);

Student s2 = new Student(2, "Harshal Patil", 22110609, 48);

Student s3 = new Student(3, "Ratnakar Patil", 22110401, 50);

Student s4 = new Student(3, "Yugandhar Patil", 22110411, 37);

try {

FileOutputStream fos = new

FileOutputStream(FILE\_NAME); ObjectOutputStream oos = new ObjectOutputStream(fos); oos.writeObject(s1); oos.writeObject(s2); oos.writeObject(s3); oos.writeObject(s4); oos.close(); fos.close();

} catch (IOException e) {

e.printStackTrace();

}

try {

FileInputStream fis = new FileInputStream(FILE\_NAME); ObjectInputStream ois = new ObjectInputStream(fis);

Student s5 = (Student) ois.readObject();

System.out.println(s5.rollNo + " " + s5.name + " " + s5.GRNo +

" " + s5.studentClass);

Student s6 = (Student) ois.readObject();

System.out.println(s6.rollNo + " " + s6.name + " " + s6.GRNo +

" " + s6.studentClass);

Student s7 = (Student) ois.readObject();

System.out.println(s7.rollNo + " " + s7.name + " " + s7.GRNo +

" " + s7.studentClass);

Student s8 = (Student) ois.readObject();

System.out.println(s8.rollNo + " " + s8.name + " " + s8.GRNo + " " + s8.studentClass);

ois.close(); fis.close();

} catch (IOException e) {

e.printStackTrace();

} catch (ClassNotFoundException e) {

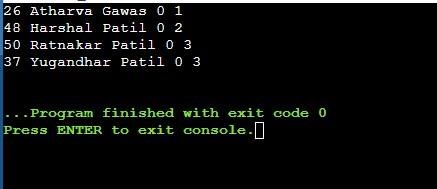
e.printStackTrace();

}

}

}

**Output :**



**Conclusion:**

In this program, we have successfully implemented a student database which includes Roll number, Name of student Gr. Number and Class using text or binary files in Java.