**Assignment-7**

package dsa;

import java.util.\*;

public class Stud1 {

private int rollNo, s1, s2, s3;

private String grade, name;

private final Scanner sc = new Scanner(System.in);

public void getdata()

{

System.out.println("Enter roll no of student:");

rollNo = sc.nextInt();

sc.nextLine();

System.out.println("Enter Name of student:");

name = sc.nextLine();

System.out.println("Enter marks for Programming Language:");

s1 = sc.nextInt();

System.out.println("Enter marks for Data Structures and Algorithm:");

s2 = sc.nextInt();

System.out.println("Enter marks for Microprocessor:");

s3 = sc.nextInt();

int avg = (s1 + s2 + s3) / 3;

if (avg > 80)

{

grade = "First Class with Distinction";

}

else if (avg > 70)

{

grade = "First class";

}

else if (avg > 50)

{

grade = "Second class";

}

else if (avg > 40)

{

grade = "Pass";

}

else

{

grade = "Fail";

}

}

public void writeToFile()

{

try (FileWriter w = new FileWriter("student.txt", true))

{

w.write("Roll No: " + rollNo +"\n Name: " + name + "\n Programming Language Marks: " + s1 +

"\n Data Structures and Algorithm Marks: " + s2 + "\n Microprocessor Marks: " + s3 +

"\n Grade: " + grade + "\n");

{

System.out.println("Data Entered Successfully!!");

}

} catch (IOException e)

{

System.out.println("Exception "+e);

}

}

public void readFromFile() {

try (BufferedReader br = new BufferedReader(new FileReader("student.txt"))) {

String line;

while ((line = br.readLine()) != null) {

System.out.println(line);

}

} catch (IOException e)

{

System.out.println("Exception "+e);

}

}

public void search() {

try (BufferedReader br = new BufferedReader(new FileReader("student.txt")))

{

System.out.println("Enter roll no of student to search:");

int x = sc.nextInt();

String line;

boolean found = false;

while ((line = br.readLine()) != null)

{

if (line.contains("Roll No: " + x))

{

System.out.println("Student Found:");

System.out.println(line);

found = true;

break;

}

}

if (!found) {

System.out.println("Student with Roll No " + x + " not found.");

}

} catch (IOException e)

{

System.out.println("Exception "+e);

}

}

public static void main(String[] args) {

Stud1 s = new Stud1();

Scanner sc = new Scanner(System.in);

while (true) {

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

System.out.println("1: Get Student Data");

System.out.println("2: Write Student Data to File");

System.out.println("3: Read Student Data from File");

System.out.println("4: Search Student Data");

System.out.println("5: Exit");

System.out.println("Enter your choice:");

int choice = sc.nextInt();

switch (choice) {

case 1:

s.getdata();

break;

case 2:

s.writeToFile();

break;

case 3:

s.readFromFile();

break;

case 4:

s.search();

break;

case 5:

sc.close();

System.exit(0);

default:

System.out.println("Invalid choice.");

}

}

}

}

Output:-

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice:

1

Enter roll no of student:

74

Enter Name of student:

Sayali

Enter marks for Programming Language:

98

Enter marks for Data Structures and Algorithm:

97

Enter marks for Microprocessor:

96

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice:

2

Data Entered Successfully!!

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice:

3

Roll No: 74

Name:Sayali

Programming Language Marks: 98

Data Structures and Algorithm Marks: 97

Microprocessor Marks:96

Grade: First Class with Distinction

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice:

4

Enter roll no of student to search:

74

Student Found:

Roll No: 74

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice:

4

Enter roll no of student to search:

26

Student with Roll No 26 not found.

\*\*\*MENU\*\*\*

1: Get Student Data

2: Write Student Data to File

3: Read Student Data from File

4: Search Student Data

5: Exit

Enter your choice: