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);
```

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}
} 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: