Student Name: Garv Khurana **UID: 21BCS6615**
Branch: AIML **Section/Group: 21AML-9, A**
Semester: 3rd
Subject Name: Programming in Java **Subject Code: 21CSH-244**

1. **Experiment Title/Problem Statement:** WAP in java which implements interface Student which has two methods Display_Grade and attendance for PG_student and UG_students(PG and UG are different classes).

2. Algorithm:

- Create interface and declare the needed methods.
- Create classes ug and pg which implements the interface.
- Create a class to run the whole program.
- Display the output.

3. Code:

StudentGradeAttendance.java > run

```java
import java.util.Scanner;

interface student{
    void Display_Grade();
    void Attendance();
}

class pg implements student{
    private String n,g; private int m1,m2,m3,att,total;
    Scanner s= new Scanner(System.in);
    public void get(){
        System.out.print(s: "Enter name of PG student: "); n=s.next();
        System.out.print(s: "Enter Marks of student in Subject 1: "); m1=s.nextInt();
        System.out.print(s: "Enter Marks of student in Subject 2: "); m2=s.nextInt();
        System.out.print(s: "Enter Marks of student in Subject 3: "); m3=s.nextInt();
        System.out.print(s: "Enter Attendence of student: "); att=s.nextInt();}
    public void Display_Grade(){total=m1+m2+m3;
        if(total>150){g="C"; if(total>200){g="B"; if(total>250){g="A";}}}
        else{g="D";}
        System.out.println("Grade of "+n+": "+g); Attendance();}
    public void Attendance(){System.out.println("Attendence of "+n+": "+att);}
}

class ug implements student{
    private String n,g; private int m1,m2,m3,att,total;
    Scanner s= new Scanner(System.in);
    public void get(){
        System.out.print(s: "Enter name of UG student: "); n=s.next();
        System.out.print(s: "Enter Marks of student in Subject 1: "); m1=s.nextInt();
        System.out.print(s: "Enter Marks of student in Subject 2: "); m2=s.nextInt();
        System.out.print(s: "Enter Marks of student in Subject 3: "); m3=s.nextInt();
        System.out.print(s: "Enter Attendence of student: "); att=s.nextInt();}
    public void Display_Grade(){total=m1+m2+m3;
        if(total>150){g="C"; if(total>200){g="B"; if(total>250){g="A";}}}
        else{g="D";}
        System.out.println("Grade of "+n+": "+g); Attendance();}
    public void Attendance(){System.out.println("Attendence of "+n+": "+att);}
```

```
37      public void Attendance(){System.out.println("Attendence of "+n+": "+att);}
38  }
39
40  class run{
41      static int a=0, b=0;
        Run | Debug
42      public static void main(String ss[]){
43          pg o1= new pg();
44          ug o2= new ug();
45          o1.get();
46          o1.Display_Grade();
47          o2.get();
48          o2.Display_Grade();
49      }
50  }
```

4. Output:

```
Enter name of PG student: a
Enter Marks of student in Subject 1: 50
Enter Marks of student in Subject 2: 50
Enter Marks of student in Subject 3: 50
Enter Attendence of student: 100
Grade of a: D
Attendence of a: 100
Enter name of UG student: b
Enter Marks of student in Subject 1: 100
Enter Marks of student in Subject 2: 100
Enter Marks of student in Subject 3: 100
Enter Attendence of student: 50
Grade of b: A
Attendence of b: 50
```

5.Learning Outcomes:

- Implementation of interface in java.
- Using classes to implement the interface.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			