PRACTICAL – 17

PROGRAM -1

AIM-

CODE-

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| // Class representing a student with roll number and name  class Student {  protected int roll\_no;  protected String name;  // Default constructor  public Student() {  roll\_no = 0;  name = null;  }  // Parameterized constructor  public Student(int rno, String n) {  roll\_no = rno;  name = n;  }  // Method to set student information  void getStudent(int rno, String n) {  roll\_no = rno;  name = n;  }  // Method to display student information  void showStudent() {  System.out.println("Roll No: " + roll\_no);  System.out.println("Name: " + name);  }  }  // Class representing marks of a student, inheriting from Student  class Marks extends Student {  int marks\_1, marks\_2;  // Default constructor  public Marks() {  super();  marks\_1 = marks\_2 = 0;  }  // Parameterized constructor  Marks(int rno, String n, int m1, int m2) {  super(rno, n);  marks\_1 = m1;  marks\_2 = m2;  }  // Method to set marks data  void getMarksData(int m1, int m2) {  marks\_1 = m1;  marks\_2 = m2;  }  // Method to display marks data  void showMarksData() {  System.out.println("Marks 1: " + marks\_1);  System.out.println("Marks 2: " + marks\_2);  }  }  // Interface for sports attributes  interface Sports {  float grace\_marks = 6.0f; // Constant grace marks  // Method to show grace marks  public void showGraceMarks();  }  // Class representing the result of the student, inheriting from Marks and implementing Sports  class Result extends Marks implements Sports {  float total\_score;  // Default constructor  public Result() {  super();  total\_score = 0;  }  // Parameterized constructor  public Result(int rno, String n, int m1, int m2) {  super(rno, n, m1, m2);  }  // Implementing method from Sports interface  public void showGraceMarks() {  System.out.println("\nGrace Marks: " + grace\_marks);  }  // Method to display the total score  void showResult() {  total\_score = marks\_1 + marks\_2 + grace\_marks;  System.out.println("\nTotal Score: " + total\_score);  }  }  // Main class to run the program  class Main {  public static void main(String[] args) {  // Create an instance of Result  Result r = new Result(1, "Raj", 10, 20);  // Show student details  r.showStudent();  // Show marks data  r.showMarksData();  // Show grace marks  r.showGraceMarks();  // Show the total result  r.showResult();  }  } |

OUTPUT-

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