Part B

import java.io.\*;  
  
class Student implements Serializable {  
 private static final long serialVersionUID = 1L;  
 int studentID;  
 String name;  
 double grade;  
  
 Student(int studentID, String name, double grade) {  
 this.studentID = studentID;  
 this.name = name;  
 this.grade = grade;  
 }  
  
 void display() {  
 System.out.println("Student ID: " + studentID);  
 System.out.println("Name: " + name);  
 System.out.println("Grade: " + grade);  
 }  
}  
  
public class StudentSerialization {  
 public static void main(String[] args) {  
 String filename = "student.ser";  
  
 // Serialization  
 try {  
 Student s1 = new Student(101, "Alice", 89.5);  
 FileOutputStream fos = new FileOutputStream(filename);  
 ObjectOutputStream oos = new ObjectOutputStream(fos);  
 oos.writeObject(s1);  
 oos.close();  
 fos.close();  
 System.out.println("Student object has been serialized.");  
 } catch (IOException ioe) {  
 ioe.printStackTrace();  
 }  
  
 // Deserialization  
 try {  
 FileInputStream fis = new FileInputStream(filename);  
 ObjectInputStream ois = new ObjectInputStream(fis);  
 Student s2 = (Student) ois.readObject();  
 ois.close();  
 fis.close();  
 System.out.println("Student object has been deserialized.");  
 s2.display();  
 } catch (IOException | ClassNotFoundException e) {  
 e.printStackTrace();  
 }  
 }  
}