```java
// Name: Rupankar Das
// PRN: 23070126111
// Batch: 2023-27 AIML B2

import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        StudentManager manager = new StudentManager();
        Scanner sc = new Scanner(System.in);

        while (true) {
            System.out.println("\n--- Student Management System ---");
            System.out.println("1. Add Student");
            System.out.println("2. Display Students");
            System.out.println("3. Search by PRN");
            System.out.println("4. Search by Name");
            System.out.println("5. Search by Position");
            System.out.println("6. Update Student");
            System.out.println("7. Delete Student");
            System.out.println("8. Exit");
            System.out.print("Enter your choice: ");

            int choice = sc.nextInt();
            switch (choice) {
                case 1:
                    manager.addStudent();
                    break;
                case 2:
                    manager.displayStudents();
                    break;
                case 3:
                    System.out.print("Enter PRN to search: ");
                    manager.searchByPRN(sc.next());
                    break;
                case 4:
                    System.out.print("Enter Name to search: ");
                    manager.searchByName(sc.next());
                    break;
                case 5:
                    System.out.print("Enter Position to search: ");
                    manager.searchByPosition(sc.nextInt());
                    break;
                case 6:
                    System.out.print("Enter PRN to update: ");
                    manager.updateStudent(sc.next());
                    break;
                case 7:
                    System.out.print("Enter PRN to delete: ");
                    manager.deleteStudent(sc.next());
                    break;
                case 8:
                    System.out.println("Exiting program...");
                    System.exit(0);
                    break;
                default:
                    System.out.println("Invalid choice! Try again.");
            }
        }
    }
}
```

```java
// Name: Rupankar Das
// PRN: 23070126111
// Batch: 2023-27 AIML B2

import java.util.Date;

public class Student {
    private String prn;
    private String name;
    private String dob;
    private double marks;

    // Constructor
    public Student(String prn, String name, String dob, double marks) {
        this.prn = prn;
        this.name = name;
        this.dob = dob;
        this.marks = marks;
    }

    // Getters and Setters
    public String getPrn() {
        return prn;
    }

    public void setPrn(String prn) {
        this.prn = prn;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getDob() {
        return dob;
    }

    public void setDob(String dob) {
        this.dob = dob;
    }

    public double getMarks() {
        return marks;
    }

    public void setMarks(double marks) {
        this.marks = marks;
    }

    // Display student details
    public void displayStudent() {
        System.out.println("PRN: " + prn + ", Name: " + name + ", DOB: " + dob + ", Marks: " + marks);
    }
}
```

src/StudentManager.java

```java
// Name: Rupankar Das
// PRN: 23070126111
// Batch: 2023-27 AIML B2

import java.util.ArrayList;
import java.util.Scanner;

public class StudentManager {
    private ArrayList<Student> students;

    // Constructor
    public StudentManager() {
        this.students = new ArrayList<>();
    }

    // Add Student
    public void addStudent() {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter PRN: ");
        String prn = sc.next();
        System.out.print("Enter Name: ");
        String name = sc.next();
        System.out.print("Enter DOB (dd/mm/yyyy): ");
        String dob = sc.next();
        System.out.print("Enter Marks: ");
        double marks = sc.nextDouble();

        students.add(new Student(prn, name, dob, marks));
        System.out.println("Student added successfully!");
    }

    // Display all students
    public void displayStudents() {
        if (students.isEmpty()) {
            System.out.println("No students available.");
            return;
        }
        for (Student student : students) {
            student.displayStudent();
        }
    }

    // Search by PRN
    public void searchByPRN(String prn) {
        for (Student student : students) {
            if (student.getPrn().equals(prn)) {
                student.displayStudent();
                return;
            }
        }
        System.out.println("Student with PRN " + prn + " not found.");
```

```
    }

    // Search by Name
    public void searchByName(String name) {
        for (Student student : students) {
            if (student.getName().equalsIgnoreCase(name)) {
                student.displayStudent();
                return;
            }
        }
        System.out.println("Student with Name " + name + " not found.");
    }

    // Search by Position
    public void searchByPosition(int index) {
        if (index < 0 || index >= students.size()) {
            System.out.println("Invalid position!");
            return;
        }
        students.get(index).displayStudent();
    }

    // Update Student
    public void updateStudent(String prn) {
        for (Student student : students) {
            if (student.getPrn().equals(prn)) {
                Scanner sc = new Scanner(System.in);
                System.out.print("Enter new Name: ");
                student.setName(sc.next());
                System.out.print("Enter new DOB: ");
                student.setDob(sc.next());
                System.out.print("Enter new Marks: ");
                student.setMarks(sc.nextDouble());
                System.out.println("Student details updated.");
                return;
            }
        }
        System.out.println("Student with PRN " + prn + " not found.");
    }

    // Delete Student
    public void deleteStudent(String prn) {
        for (Student student : students) {
            if (student.getPrn().equals(prn)) {
                students.remove(student);
                System.out.println("Student removed successfully.");
                return;
            }
        }
        System.out.println("Student with PRN " + prn + " not found.");
    }
}
```

```
106
107
108
109
110 // GITHUB : https://github.com/mvrck-dev/Java-
    Lab/tree/main/Assignments/Assignment%203
```

```
--- Student Management System ---
1. Add Student
2. Display Students
3. Search by PRN
4. Search by Name
5. Search by Position
6. Update Student
7. Delete Student
8. Exit
Enter your choice: 1
Enter PRN: 111
Enter Name: Rupankar
Enter DOB (dd/mm/yyyy): 12/12/2005
Enter Marks: 80
Student added successfully!

--- Student Management System ---
1. Add Student
2. Display Students
3. Search by PRN
4. Search by Name
5. Search by Position
6. Update Student
7. Delete Student
8. Exit
Enter your choice: 2
PRN: 111, Name: Rupankar, DOB: 12/12/2005, Marks: 80.0

--- Student Management System ---
1. Add Student
```

Performance

Show Results

00:00

CPU

Heap Memory

IDE project settings can be added to Git

View Files Always Add Don't Ask Again

Student > src > Main

7:18 LF UTF-8 4 spaces