

src/StudentManager.java

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1 // Name: Rupankar Das
2 // PRN: 23070126111
3 // Batch: 2023-27 AIML B2
4
5 import java.util.ArrayList;
6 import java.util.Scanner;
7
8 public class StudentManager {
9     private ArrayList<Student> students;
10
11     // Constructor
12     public StudentManager() {
13         this.students = new ArrayList<>();
14     }
15
16     // Add Student
17     public void addStudent() {
18         Scanner sc = new Scanner(System.in);
19         System.out.print("Enter PRN: ");
20         String prn = sc.next();
21         System.out.print("Enter Name: ");
22         String name = sc.next();
23         System.out.print("Enter DOB (dd/mm/yyyy): ");
24         String dob = sc.next();
25         System.out.print("Enter Marks: ");
26         double marks = sc.nextDouble();
27
28         students.add(new Student(prn, name, dob, marks));
29         System.out.println("Student added successfully!");
30     }
31
32     // Display all students
33     public void displayStudents() {
34         if (students.isEmpty()) {
35             System.out.println("No students available.");
36             return;
37         }
38         for (Student student : students) {
39             student.displayStudent();
40         }
41     }
42
43     // Search by PRN
44     public void searchByPRN(String prn) {
45         for (Student student : students) {
46             if (student.getPrn().equals(prn)) {
47                 student.displayStudent();
48                 return;
49             }
50         }
51         System.out.println("Student with PRN " + prn + " not found.");
```

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52     }
53
54     // Search by Name
55     public void searchByName(String name) {
56         for (Student student : students) {
57             if (student.getName().equalsIgnoreCase(name)) {
58                 student.displayStudent();
59                 return;
60             }
61         }
62         System.out.println("Student with Name " + name + " not found.");
63     }
64
65     // Search by Position
66     public void searchByPosition(int index) {
67         if (index < 0 || index >= students.size()) {
68             System.out.println("Invalid position!");
69             return;
70         }
71         students.get(index).displayStudent();
72     }
73
74     // Update Student
75     public void updateStudent(String prn) {
76         for (Student student : students) {
77             if (student.getPrn().equals(prn)) {
78                 Scanner sc = new Scanner(System.in);
79                 System.out.print("Enter new Name: ");
80                 student.setName(sc.next());
81                 System.out.print("Enter new DOB: ");
82                 student.setDob(sc.next());
83                 System.out.print("Enter new Marks: ");
84                 student.setMarks(sc.nextDouble());
85                 System.out.println("Student details updated.");
86                 return;
87             }
88         }
89         System.out.println("Student with PRN " + prn + " not found.");
90     }
91
92     // Delete Student
93     public void deleteStudent(String prn) {
94         for (Student student : students) {
95             if (student.getPrn().equals(prn)) {
96                 students.remove(student);
97                 System.out.println("Student removed successfully.");
98                 return;
99             }
100         }
101         System.out.println("Student with PRN " + prn + " not found.");
102     }
103 }
104
105
```

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