

```
1  import java.util.Scanner;
2
3  class Student {
4      int rollNo;
5      String name;
6      String mobile;
7      String city;
8
9      public void set() {
10         Scanner scanner = new Scanner(System.in);
11         System.out.print("Enter roll number: ");
12         this.rollNo = scanner.nextInt();
13
14         scanner.nextLine(); // Consume newline character left by
                               nextInt()
15
16         System.out.print("Enter name: ");
17         this.name = scanner.nextLine();
18         boolean flag = false;
19         do {
20             System.out.print("Enter mobile number (10 digits): ");
21             this.mobile = scanner.next();
22
23             if (this.mobile.length() == 10) {
24                 for (int i = 0; i < mobile.length(); i++) {
25                     if (mobile.charAt(i) >= '0' && mobile.charAt(i) <=
                        '9') {
26                         flag = true;
27                     } else {
28                         flag = false;
29                         System.out.println("Invalid mobile number.
                                    Please try again.");
30                         break;
31                     }
32                 }
33             } else {
34                 System.out.println("Invalid mobile number. Please try
                                    again.");
35             }
36         } while (flag == false);
37
38         scanner.nextLine(); // Consume newline character left by
                               nextLong()
39
40         System.out.print("Enter city: ");
41         this.city = scanner.nextLine();
42     }
43
44     public void display() {
45         System.out.println("Roll number: " + this.rollNo);
46         System.out.println("Name: " + this.name);
47         System.out.println("Mobile: " + this.mobile);
48         System.out.println("City: " + this.city);
49     }
50 }
```

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51     public int getRollNo() {
52         return this.rollNo;
53     }
54
55     public void setName(String name) {
56         this.name = name;
57     }
58 }
59
60 class Main {
61     public static void main(String[] args) {
62         Scanner scanner = new Scanner(System.in);
63
64         System.out.print("Enter number of students: ");
65         int numStudents = scanner.nextInt();
66
67         Student[] students = new Student[numStudents];
68
69         for (int i = 0; i < numStudents; i++) {
70             System.out.println("Enter details for student " + (i + 1) +
71                               " :");
72             students[i] = new Student();
73             students[i].set();
74             System.out.println();
75         }
76
77         int choice;
78         do {
79             System.out.println("Menu:");
80             System.out.println("1. Display all students");
81             System.out.println("2. Search student by roll number");
82             System.out.println("3. Modify student name by roll number");
83             System.out.println("4. Exit");
84             System.out.print("Enter your choice (1-4): ");
85             choice = scanner.nextInt();
86             System.out.println();
87
88             switch (choice) {
89                 case 1:
90                     for (int i = 0; i < numStudents; i++) {
91                         students[i].display();
92                         System.out.println();
93                     }
94                     break;
95                 case 2:
96                     System.out.print("Enter roll number to search: ");
97                     int rollNo = scanner.nextInt();
98                     boolean found = false;
99                     for (int i = 0; i < numStudents; i++) {
100                         if (students[i].getRollNo() == rollNo) {
101                             students[i].display();
102                             System.out.println();
103                             found = true;
104                             break;
105                         }
106                     }
107                 case 3:
108                     // TODO: Implement modify student name by roll number
109                 case 4:
110                     // TODO: Implement exit
111             }
112         } while (choice != 4);
113     }
114 }
```

```
105         }
106         if (!found) {
107             System.out.println("Student with roll number " +
108                                 rollNo + " not found.");
109         }
110         break;
111     case 3:
112         System.out.print("Enter roll number to modify: ");
113         rollNo = scanner.nextInt();
114         found = false;
115         for (int i = 0; i < numStudents; i++) {
116             if (students[i].getRollNo() == rollNo) {
117                 System.out.print("Enter new name: ");
118                 String newName = scanner.next();
119                 students[i].setName(newName);
120                 System.out.println("Name modified
121                                     successfully.");
122                 found = true;
123                 break;
124             }
125         }
126         if (!found) {
127             System.out.println("Student not found with roll
128                                 number " + rollNo);
129         }
130         break;
131     case 4:
132         System.out.println("Exiting program.");
133         System.exit(0);
134     default:
135         System.out.println("Invalid option selected. Please
136                             select again.");
137     }
138 } while (choice != 4);
139 }
```