

JAVA PROGRAMMING FOR STUDENT DATA :

```
import java.util.ArrayList;
import java.util.Scanner;
class Student
{
    private String name;
    private int id;
    private ArrayList<String> courses;
    public Student(String name, int id)
    {
        this.name = name;
        this.id = id;
        this.courses = new ArrayList<>();
    }
    public String getName() {
        return name;
    }
    public int getId() {
        return id;
    }
    public ArrayList<String> getCourses() {
        return courses;
    }
    public void enroll(String course) {
        courses.add(course);
    }
}
public class CollegeManagementSystem
{
    private static ArrayList<Student> students = new ArrayList<>();
    private static int nextStudentId = 1;
```

```
public static void main(String[] args) {  
    Scanner scanner = new Scanner(System.in);  
    while (true)  
    {  
        System.out.println("Welcome to College Management System");  
        System.out.println("1. Add Student");  
        System.out.println("2. Enroll Student in Course");  
        System.out.println("3. Display Student Information");  
        System.out.println("4. Exit");  
        System.out.print("Enter your choice: ");  
        int choice = scanner.nextInt();  
        scanner.nextLine(); // Consume newline  
        switch (choice) {  
            case 1:  
                addStudent(scanner);  
                break;  
            case 2:  
                enrollStudent(scanner);  
                break;  
            case 3:  
                displayStudentInfo(scanner);  
                break;  
            case 4:  
                System.out.println("Exiting College Management System. Goodbye!");  
                scanner.close();  
                return;  
            default:  
                System.out.println("Invalid choice. Please try again.");  
        }  
    }  
}
```

```

private static void addStudent(Scanner scanner)
{
    System.out.print("Enter student name: ");
    String name = scanner.nextLine();
    Student student = new Student(name, nextStudentId++);
    students.add(student);
    System.out.println("Student added successfully with ID: " + student.getId());
}

private static void enrollStudent(Scanner scanner)
{
    System.out.print("Enter student ID: ");
    int id = scanner.nextInt();
    scanner.nextLine();
    Student student = findStudentById(id);
    if (student == null)
    {
        System.out.println("Student with ID " + id + " not found.");
        return;
    }
    System.out.print("Enter course name to enroll in: ");
    String course = scanner.nextLine();
    student.enroll(course);
    System.out.println("Student " + student.getName() + " enrolled in course: " + course);
}

private static void displayStudentInfo(Scanner scanner)
{
    System.out.print("Enter student ID: ");
    int id = scanner.nextInt();
    scanner.nextLine(); // Consume newline
    Student student = findStudentById(id);
    if (student == null)

```

```
{
    System.out.println("Student with ID " + id + " not found.");
    return;
}

System.out.println("Student ID: " + student.getId());
System.out.println("Student Name: " + student.getName());
System.out.println("Enrolled Courses: " + student.getCourses());
}

private static Student findStudentById(int id)
{
    for (Student student : students) {
        if (student.getId() == id) {
            return student;
        }
    }
    return null;
}
}
```