

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

class Course {
    private String courseId;
    private String courseName;

    public Course(String courseId, String courseName) {
        this.courseId = courseId;
        this.courseName = courseName;
    }

    public String getCourseId() {
        return courseId;
    }

    public String getCourseName() {
        return courseName;
    }

    @Override
    public String toString() {
        return "Course ID: " + courseId + ", Course Name: " + courseName;
    }
}

class Student {
    private String studentId;
    private String name;
    private ArrayList<Course> registeredCourses;

    public Student(String studentId, String name) {
        this.studentId = studentId;
        this.name = name;
        this.registeredCourses = new ArrayList<>();
    }

    public String getStudentId() {
        return studentId;
    }
}
```

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```
}

public String getName() {
    return name;
}

public void registerCourse(Course course) {
    registeredCourses.add(course);
    System.out.println("Successfully registered for " + course.getCourseName());
}

public void viewRegisteredCourses() {
    if (registeredCourses.isEmpty()) {
        System.out.println("No registered courses.");
    } else {
        System.out.println("Registered Courses:");
        for (Course course : registeredCourses) {
            System.out.println(course);
        }
    }
}
}

public class CourseRegistrationSystem {
    private static ArrayList<Course> courseCatalog = new ArrayList<>();
    private static ArrayList<Student> students = new ArrayList<>();

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        initializeCourses();

        System.out.print("Enter student ID: ");
        String studentId = scanner.nextLine();

        System.out.print("Enter student name: ");
        String studentName = scanner.nextLine();

        Student student = new Student(studentId, studentName);
        students.add(student);
    }
}
```

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```
students.add(student);

boolean exit = false;

while (!exit) {
    System.out.println("\n1. Register for a course");
    System.out.println("2. View registered courses");
    System.out.println("3. View available courses");
    System.out.println("4. Exit");
    System.out.print("Choose an option: ");

    int choice = scanner.nextInt();

    switch (choice) {
        case 1:
            registerCourse(student);
            break;
        case 2:
            student.viewRegisteredCourses();
            break;
        case 3:
            viewAvailableCourses();
            break;
        case 4:
            exit = true;
            break;
        default:
            System.out.println("Invalid choice.");
    }
}
scanner.close();
}

private static void initializeCourses() {
    courseCatalog.add(new Course("CSE101", "Introduction to Computer Science"));
    courseCatalog.add(new Course("MATH201", "Calculus I"));
    courseCatalog.add(new Course("PHY101", "Physics I"));
    courseCatalog.add(new Course("ENG301", "English Literature"));
}

// private static void registerCourse(Student student) {
```

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```
    }
    scanner.close();
}

private static void initializeCourses() {
    courseCatalog.add(new Course("CSE101", "Introduction to Computer Science"));
    courseCatalog.add(new Course("MATH201", "Calculus I"));
    courseCatalog.add(new Course("PHY101", "Physics I"));
    courseCatalog.add(new Course("ENG301", "English Literature"));
}

private static void registerCourse(Student student) {
    Scanner scanner = new Scanner(System.in);
    viewAvailableCourses();

    System.out.print("Enter course ID to register: ");
    String courseId = scanner.nextLine();

    Course selectedCourse = null;
    for (Course course : courseCatalog) {
        if (course.getCourseId().equalsIgnoreCase(courseId)) {
            selectedCourse = course;
            break;
        }
    }

    if (selectedCourse != null) {
        student.registerCourse(selectedCourse);
    } else {
        System.out.println("Course not found.");
    }
}

private static void viewAvailableCourses() {
    System.out.println("Available Courses:");
    for (Course course : courseCatalog) {
        System.out.println(course);
    }
}
}
```

E:\T1\COGNORISEPROGRAM>javac CourseRegistrationSystem.java

E:\T1\COGNORISEPROGRAM>java CourseRegistrationSystem

Enter student ID: 101

Enter student name: Om

1. Register for a course
2. View registered courses
3. View available courses
4. Exit

Choose an option: 1

Available Courses:

Course ID: CSE101, Course Name: Introduction to Computer Science

Course ID: MATH201, Course Name: Calculus I

Course ID: PHY101, Course Name: Physics I

Course ID: ENG301, Course Name: English Literature

Enter course ID to register: CSE101

Successfully registered for Introduction to Computer Science

1. Register for a course
2. View registered courses
3. View available courses
4. Exit

Choose an option: 2

Registered Courses:

Course ID: CSE101, Course Name: Introduction to Computer Science

1. Register for a course
2. View registered courses
3. View available courses
4. Exit

Choose an option: