

## COM2044 LAB 8 G2

**Question:** You are asked to implement a **dynamic course registration system** that allows a student to view, create, and enroll in university courses using an ArrayList.

### 1. Create a Course class:

- **Attributes:**
    - String courseName
    - String instructor
    - int maxSeats
    - int enrolledStudents
  - **Constructor:** Initializes all attributes.
  - **Methods:**
    - boolean hasAvailableSeat(): Returns true if seats are available.
    - void enroll(): Increases enrolled count if a seat is available.
    - void displayInfo(): Prints course name, instructor, and available seats.
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### 2. In the main method:

- Ask the user to enter **N number of courses** and input details for each course (name, instructor, maxSeats, initialEnrolled).
- Store them in an ArrayList<Course>.
- Then display:
  - All courses.
  - All courses that have available seats.
- Let the user **enter a course name to enroll in**.
  - If found and available → enroll the student and confirm.
  - If full → show a message.
  - If not found → show a message.

Input:

Course("Algorithms", "Dr. Smith", 3, 2)

Course("Databases", "Dr. Allen", 2, 2)

Course("Operating Systems", "Dr. Lee", 4, 1)

Course("Artificial Intelligence", "Dr. Green", 5, 5)

Course("Web Development", "Dr. Brown", 3, 1)

How many courses do you want to enter? 3

**Enter course 1 name:** Algorithms

**Instructor:** Dr. Smith

**Max seats:** 3

**Currently enrolled students:** 2

**Enter course 2 name:** Databases

**Instructor:** Dr. Allen

**Max seats:** 2

**Currently enrolled students:** 2

**Enter course 3 name:** Web Development

**Instructor:** Dr. Brown

**Max seats:** 3

**Currently enrolled students:** 1

**All courses:**

- Algorithms (Dr. Smith) | Seats: 2/3
- Databases (Dr. Allen) | Seats: 2/2
- Web Development (Dr. Brown) | Seats: 1/3

**Courses with available seats:**

- Algorithms
- Web Development

**Enter course name to enroll:** Web Development

**Enrollment successful!**