Online Student Enrollment System using Servlets, JSP, DAO Layer, JavaBeans, and Sessions:

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🎯 Objective:

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Develop a web-based student enrollment system where students can view available courses, enroll in them, and view their enrollment history. Includes user authentication, session-based course cart, and enrollment confirmation page.

📌 Functional Requirements:

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Course Listing:

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.CourseServlet fetches all available courses from CourseDAO.getAllCourses().

.Displayed on courses.jsp.

Add to Enrollment Cart:

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.AddToCartServlet adds selected course to session (List<EnrollmentItem>).

.Cart info is stored in session and updated on each add/remove.

View Enrollment Cart:

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.EnrollmentCartServlet displays all enrolled courses using session-stored list.

.Option to remove an item or proceed to final enrollment.

.Enrollment Confirmation:

.EnrollServlet calculates total courses enrolled and displays enrollment summary on .enrollmentSummary.jsp.

.On confirmation, stores enrollment details in DB via EnrollmentDAO.saveEnrollment().

User Registration & Login:

RegisterServlet and LoginServlet using UserDAO for user management.

🧠 JavaBean Classes:

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.UserBean

.CourseBean

.EnrollmentItemBean

.EnrollmentRecordBean

🔌 DAO Layer Includes:

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.UserDAO for user authentication

.CourseDAO for fetching course data

.EnrollmentDAO for storing student enrollments

💻 Technology & Patterns:

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.JavaBeans for all data encapsulation.

.Session for enrollment cart management.

.RequestDispatcher for internal page transitions.

.sendRedirect post major actions (like final enrollment).

.POST for cart/checkout actions; GET for viewing available courses and enrollment .history.

Flow Chart Given Below:

