

INTERNATIONAL UNIVERSITY

School of Computer Science & Engineering

WEB APPLICATION DEVELOPMENT LABORATORY



Lab 06

Submitted by:

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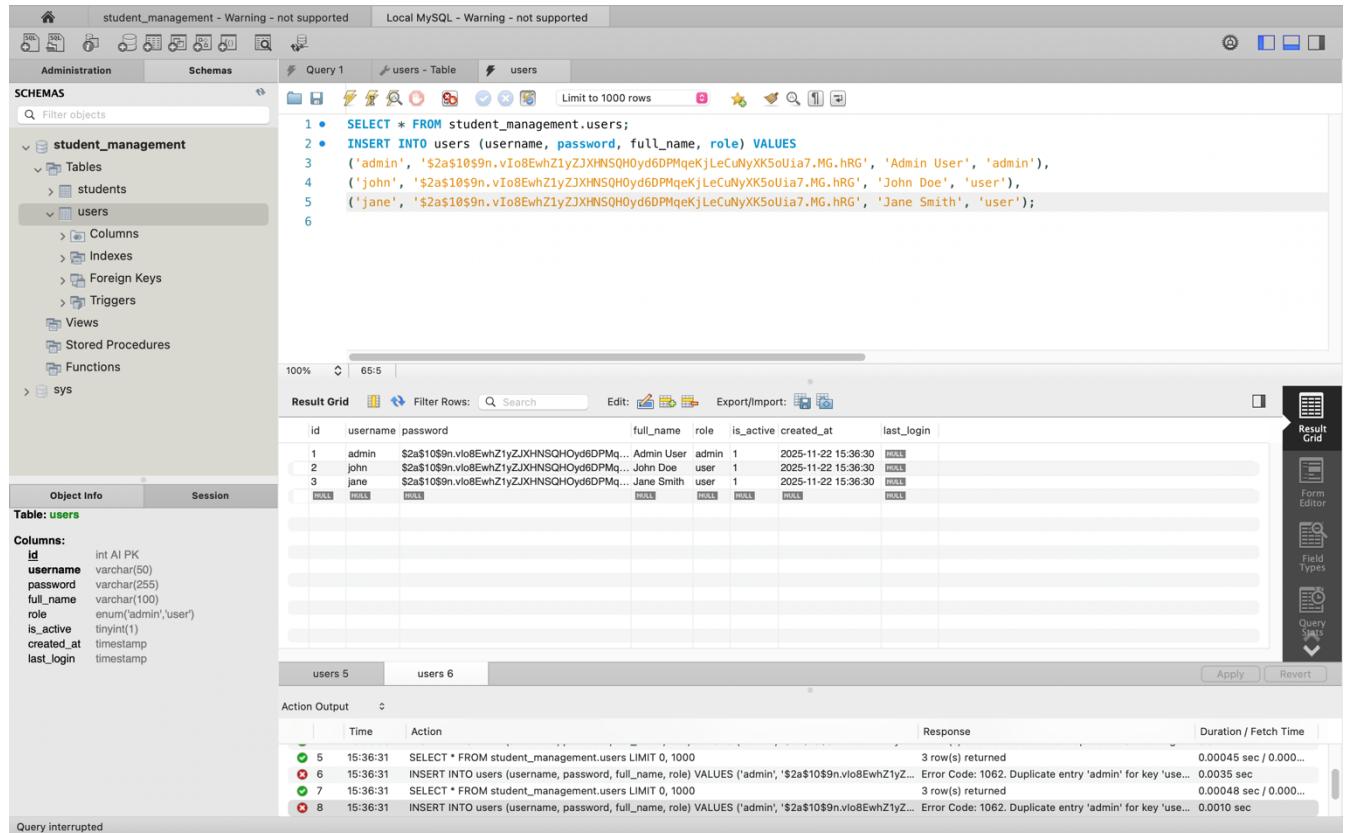
Date submits: 22/11/2025

Date performs: 22/11/2025

Lab section: Lab 6

Course instructor: Msc. N. T. Nghĩa

Exercise 1: DATABASE & USER MODEL (15 points)



The screenshot shows the MySQL Workbench interface with the following details:

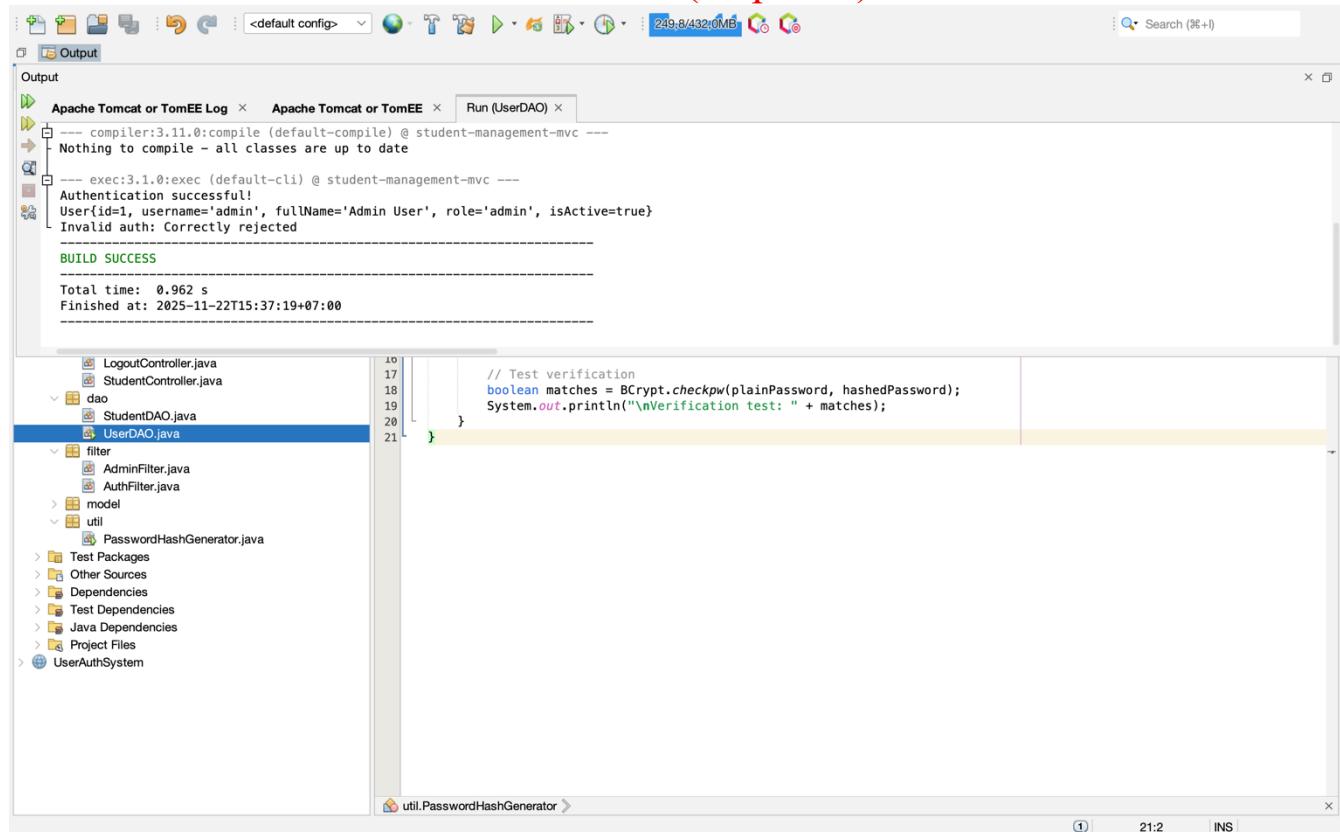
- Left Panel (Administration):** Shows the **SCHEMAS** list with **student_management** selected. Inside **student_management**, the **Tables** list shows **students** and **users**. The **users** table is currently selected.
- Central Panel (Query Editor):** Displays the following SQL code:

```
1 •  SELECT * FROM student_management.users;
2 •  INSERT INTO users (username, password, full_name, role) VALUES
3 ('admin', '$2a$10$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG', 'Admin User', 'admin'),
4 ('john', '$2a$10$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG', 'John Doe', 'user'),
5 ('jane', '$2a$10$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG', 'Jane Smith', 'user');
6
```
- Result Grid:** Shows the data for the **users** table with 3 rows:

	id	username	password	full_name	role	is_active	created_at	last_login
1	1	admin	\$2a\$10\$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG	Admin User	admin	1	2025-11-22 15:36:30	NULL
2	2	john	\$2a\$10\$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG	John Doe	user	1	2025-11-22 15:36:30	NULL
3	3	jane	\$2a\$10\$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG	Jane Smith	user	1	2025-11-22 15:36:30	NULL
- Action Output:** Shows the history of the last four actions:

	Time	Action	Response	Duration / Fetch Time
5	15:36:31	SELECT * FROM student_management.users LIMIT 0, 1000	3 row(s) returned	0.00045 sec / 0.000...
6	15:36:31	INSERT INTO users (username, password, full_name, role) VALUES ('admin', '\$2a\$10\$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG', 'Admin User', 'admin')	Error Code: 1062. Duplicate entry 'admin' for key 'username'	0.0035 sec
7	15:36:31	SELECT * FROM student_management.users LIMIT 0, 1000	3 row(s) returned	0.00048 sec / 0.000...
8	15:36:31	INSERT INTO users (username, password, full_name, role) VALUES ('admin', '\$2a\$10\$9n.vI08EwhZ1yZJXHNSQH0yd6DPMqeKjLeCuNyXK5oUia7.MG.hRG', 'Admin User', 'admin')	Error Code: 1062. Duplicate entry 'admin' for key 'username'	0.0010 sec

Exercise 2: USER MODEL & DAO (15 points)

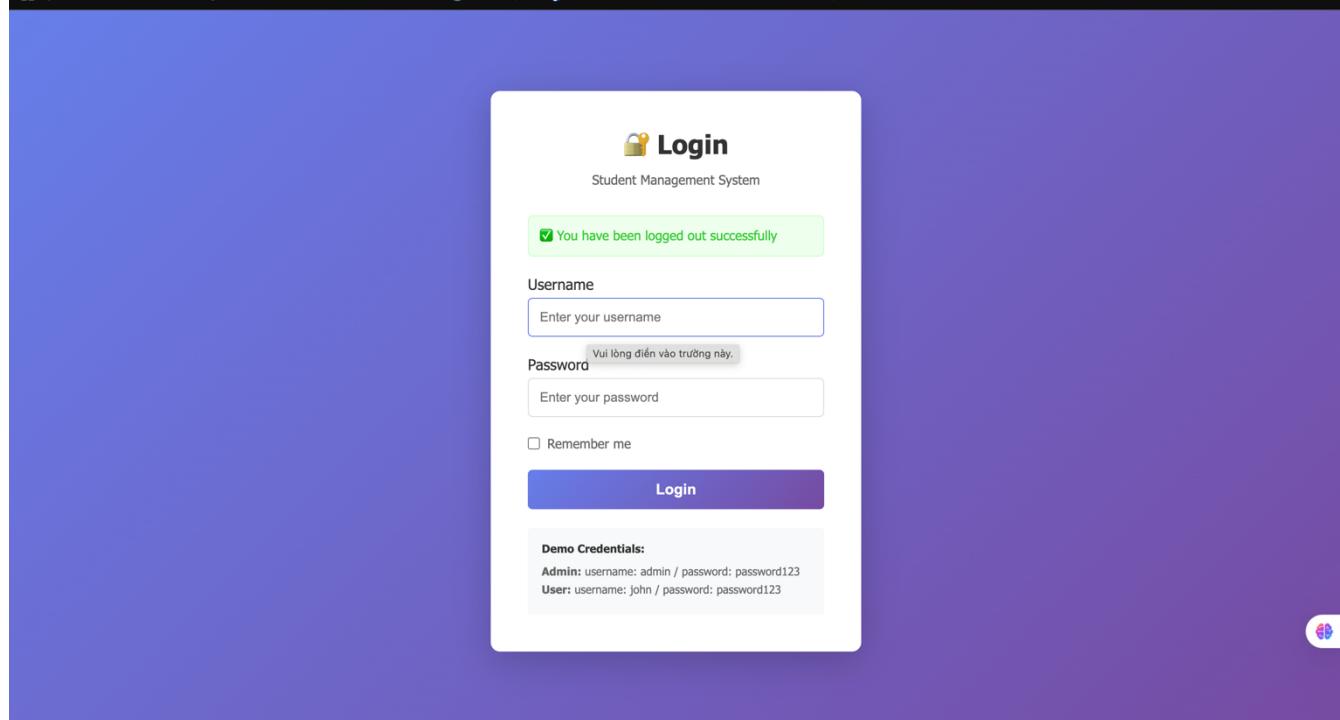
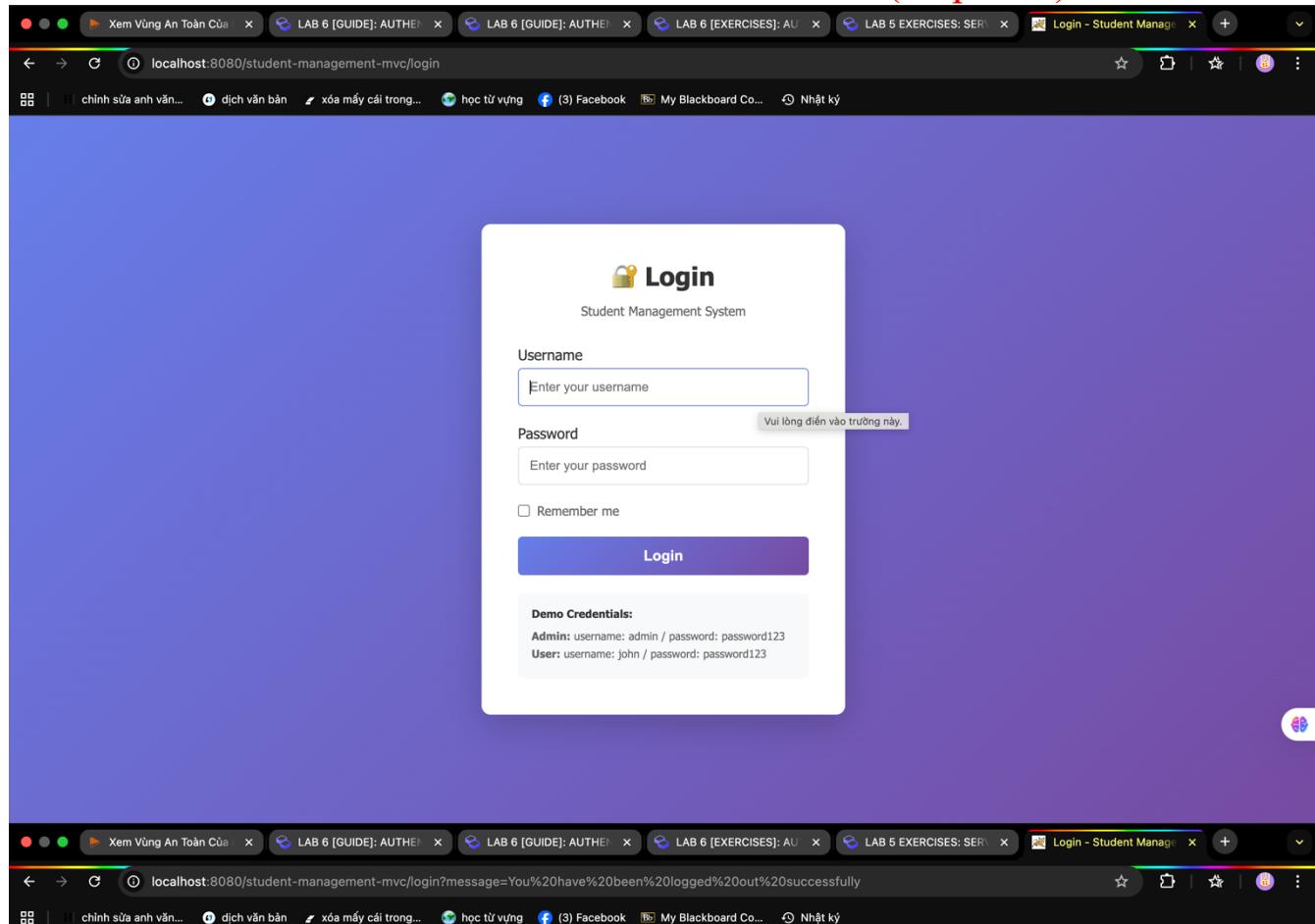


The screenshot shows an IDE interface with the following details:

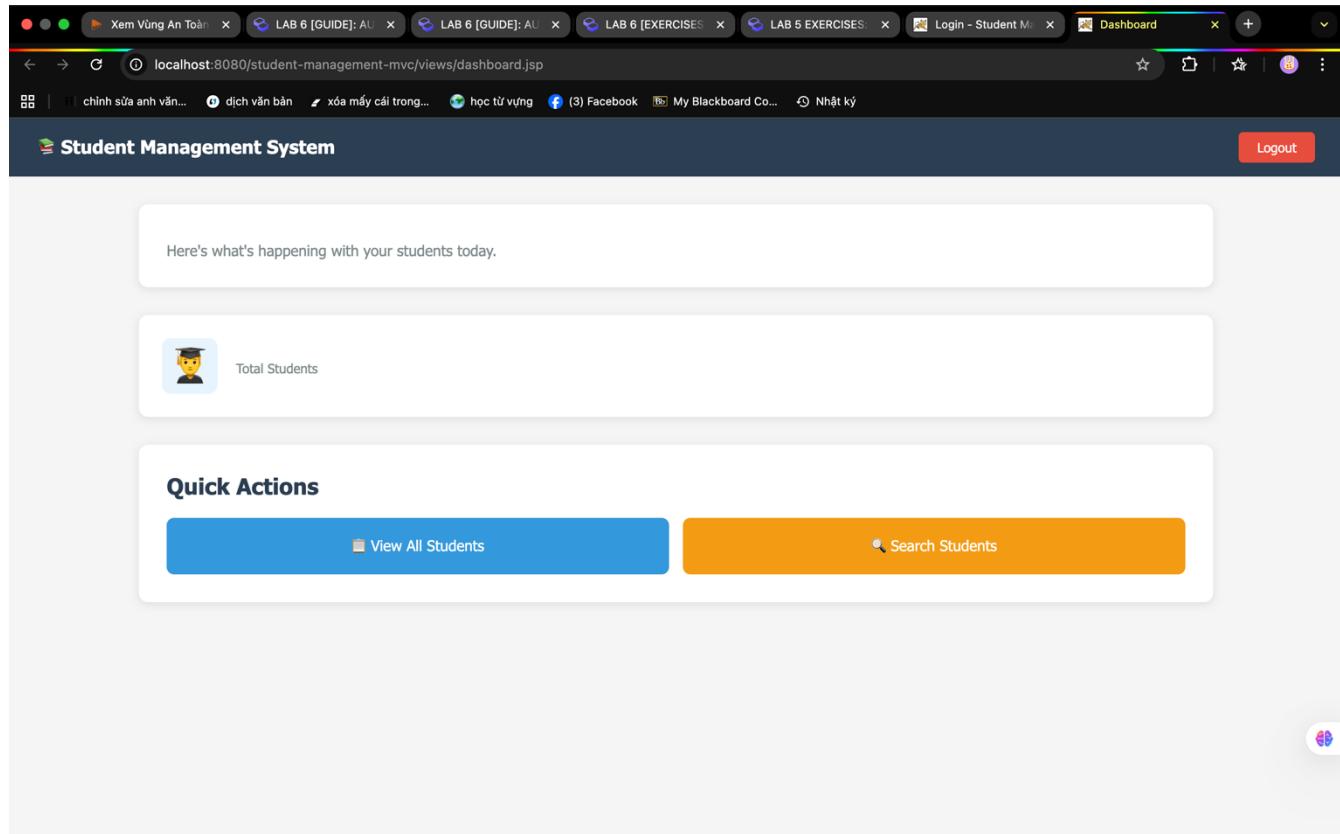
- Output Tab:** Displays the build log for "Run (UserDAO)".
 - Compiler output: "Nothing to compile - all classes are up to date".
 - Execution output: "Authentication successful!" followed by a user object: "User{id=1, username='admin', fullName='Admin User', role='admin', isActive=true} Invalid auth: Correctly rejected".
 - Build success message: "BUILD SUCCESS".
 - Execution time: "Total time: 0.962 s".
 - Execution date and time: "Finished at: 2025-11-22T15:37:19+07:00".
- Code Editor:** Shows the "UserDAO.java" file in the "util" package.

```
// Test verification
boolean matches = BCrypt.checkpw(plainPassword, hashedPassword);
System.out.println("\nVerification test: " + matches);
```
- Project Explorer:** Shows the project structure with packages like "filter", "model", and "util", and files like "LogoutController.java", "StudentController.java", "StudentDAO.java", and "PasswordHashGenerator.java".

Exercise 3: LOGIN/LOGOUT CONTROLLERS (15 points)



Exercise 4: VIEWS & DASHBOARD (15 points)



The screenshot shows a web browser window with the URL `localhost:8080/student-management-mvc/views/dashboard.jsp`. The page title is "Student Management System". The dashboard has a dark blue header with a "Logout" button. Below the header, a message box says "Here's what's happening with your students today." A "Total Students" section shows a graduation cap icon and the text "Total Students". A "Quick Actions" section contains two buttons: "View All Students" (blue background) and "Search Students" (orange background). The browser's address bar and various tabs are visible at the top.