

INTERNATIONAL UNIVERSITY

School of Computer Science & Engineering

WEB APPLICATION DEVELOPMENT LABORATORY



Lab 06

Submitted by:

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Exercise 1: DATABASE & USER MODEL (15 points)

The screenshot shows a database management interface with a SQL query editor and a result grid. The query is as follows:

```
1 • SELECT * FROM student_management.users;
2 • INSERT INTO users (username, password, full_name, role) VALUES
3 ('admin', '$2a$10$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG', 'Admin User', 'admin'),
4 ('john', '$2a$10$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG', 'John Doe', 'user'),
5 ('jane', '$2a$10$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG', 'Jane Smith', 'user');
6
```

The result grid displays the following data:

id	username	password	full_name	role	is_active	created_at	last_login
1	admin	\$2a\$10\$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG	Admin User	admin	1	2025-11-22 15:36:30	
2	john	\$2a\$10\$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG	John Doe	user	1	2025-11-22 15:36:30	
3	jane	\$2a\$10\$9n.vIo8EwhZ1yZJXhNSQH0yd6DPMqKjLeCuNyXK5oUia7.MG.hRG	Jane Smith	user	1	2025-11-22 15:36:30	

The interface also shows the table structure for 'users' and the action output log.

Table: users

Columns:

- id: int AI PK
- username: varchar(50)
- password: varchar(255)
- full_name: varchar(100)
- role: enum('admin','user')
- is_active: tinyint(1)
- created_at: timestamp
- last_login: timestamp

Action Output

Time	Action	Response	Duration / Fetch Time
15:36:31	SELECT * FROM student_management.users LIMIT 0, 1000	3 row(s) returned	0.00045 sec / 0.000...
15:36:31	INSERT INTO users (username, password, full_name, role) VALUES ('admin', '\$2a\$10\$9n.vIo8EwhZ1yZ...	Error Code: 1062. Duplicate entry 'admin' for key 'use...	0.0035 sec
15:36:31	SELECT * FROM student_management.users LIMIT 0, 1000	3 row(s) returned	0.00048 sec / 0.000...
15:36:31	INSERT INTO users (username, password, full_name, role) VALUES ('admin', '\$2a\$10\$9n.vIo8EwhZ1yZ...	Error Code: 1062. Duplicate entry 'admin' for key 'use...	0.0010 sec

Query interrupted

Exercise 2: USER MODEL & DAO (15 points)

The screenshot shows an IDE with the following components:

- Output Window:** Displays the execution log of the application. It shows compilation and execution messages for 'student-management-mvc'. The log indicates successful authentication for a user with id=1, username=admin, and role=admin. It also shows a 'BUILD SUCCESS' message and the total execution time of 0.962 seconds.
- Project Explorer:** Shows the project structure with packages like 'dao', 'filter', 'model', and 'util'. The 'UserDAO.java' file is selected.
- Editor:** Displays the source code of 'UserDAO.java'. The code includes a test verification method that uses 'BCrypt.checkpw' to compare a plain password with a hashed password.

```
// Test verification
boolean matches = BCrypt.checkpw(plainPassword, hashedPassword);
System.out.println("\nVerification test: " + matches);
```

Exercise 3: LOGIN/LOGOUT CONTROLLERS (15 points)

The image displays two screenshots of a web application interface for a Student Management System. The browser's address bar shows the URL `localhost:8080/student-management-mvc/login`.

Top Screenshot (Login Page):

- The page features a central white login form on a purple gradient background.
- The form is titled "Login" with a user icon and "Student Management System" below it.
- It contains two input fields: "Username" (placeholder: "Enter your username") and "Password" (placeholder: "Enter your password"). A tooltip "Vui lòng điền vào trường này." (Please fill in this field) is visible next to the password field.
- There is a "Remember me" checkbox.
- A blue "Login" button is positioned below the inputs.
- A "Demo Credentials" section lists:
 - Admin: username: admin / password: password123
 - User: username: john / password: password123

Bottom Screenshot (Logout Confirmation Page):

- The URL in the address bar is `localhost:8080/student-management-mvc/login?message=You%20have%20been%20logged%20out%20successfully`.
- The login form is identical to the top screenshot, but a green message box at the top of the form states: "✓ You have been logged out successfully".
- The "Remember me" checkbox and "Login" button are also present.
- The "Demo Credentials" section remains the same.

Exercise 4: VIEWS & DASHBOARD (15 points)

