**Lab 6**

**Name:** Trần Gia Khôi

**ID:** ITITIU21231

**Exercise 1: Database & User Model**

**Task 1.1: Create Users Table**

Table created with correct structure

A screenshot of a computer

AI-generated content may be incorrect.

All columns have been set with proper data types, such as id is int, username is varchar,…

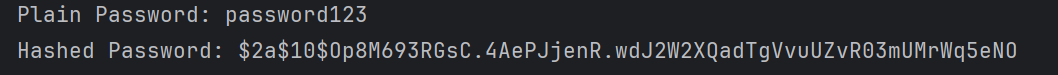
Primary key is id and constraint auto-increment have been set as well as we can see in the extra column.

**Task 1.2: Generate Hashed Passwords**

BCrypt library added



Hash generated successfully



Verification works

A screen shot of a computer

AI-generated content may be incorrect.

**Task 1.3: Insert Test Users**

At least 3 users inserted

A screenshot of a computer

AI-generated content may be incorrect.admin, john and jane have been added to the table “users”.

One admin is “admin” and two users are “john” and “jane”

A screenshot of a computer

AI-generated content may be incorrect.

As we can see all the password have been hashed successfully.

**Checkpoint #1:**

Table with test data:

A screenshot of a computer

AI-generated content may be incorrect.

**Exercise 2: User Model & DAO**

**Task 2.1: Create User Model**

User class:

All attributes declared correctly

A screen shot of a computer program

AI-generated content may be incorrect.

Constructor implemented

A computer screen with white text

AI-generated content may be incorrect.

Getters/ setters complete

A screen shot of a computer program

AI-generated content may be incorrect.

A screen shot of a computer program

AI-generated content may be incorrect.

A screen shot of a computer program

AI-generated content may be incorrect.

Utility methods implemented

A computer screen with text

AI-generated content may be incorrect.

**Task 2.2: Create UserDAO**

getConnection() works

A computer screen shot of a program code

AI-generated content may be incorrect.

authenticate() with BCrypt



A screen shot of a computer program

AI-generated content may be incorrect.

updateLastLogin() works

A screen shot of a computer code

AI-generated content may be incorrect.

getUserById() works

A computer screen shot of a program code

AI-generated content may be incorrect.

mapResultSetToUser() helper

A screen shot of a computer program

AI-generated content may be incorrect.

**Checkpoint #2:**

When I type “/student?action=new” in the URL

A screenshot of a computer

AI-generated content may be incorrect.

And hit enter, it will not direct me to the page where I have a list of students, but it will direct me to the login page to login first, which is authentication:

A screenshot of a computer

AI-generated content may be incorrect.

**Exercise 3: Login/Logout Controllers**

**Task 3.1: Create Login Controller**

doGet() displays login page, which will use login.jsp as a view to display to user

**A screen shot of a computer code

AI-generated content may be incorrect.**

doPost() validates input

A screen shot of a computer screen

AI-generated content may be incorrect.

Authenticates user correctly

A computer screen with white text

AI-generated content may be incorrect.

Creates session with user data

A screen shot of a computer program

AI-generated content may be incorrect.

Redirect based on role

A screen shot of a computer

AI-generated content may be incorrect.

Display error messages

A computer screen with text

AI-generated content may be incorrect.

**Task 3.2: Create Logout Controller**

Get session correctly

A screen shot of a computer program

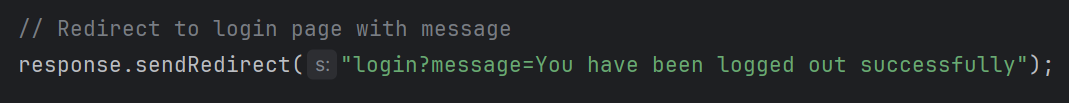
AI-generated content may be incorrect.

Invalidate session

A black screen with white text

AI-generated content may be incorrect.

Redirect to login and show success message



**Checkpoint #3:**

Login:

Typing the username and password then hit the “Login” button

A screenshot of a login form

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

Logout:

Hit the “Logout” button

A screenshot of a computer login

AI-generated content may be incorrect.

**Exercise 4: Views & Dashboard**

**Task 4.1: Create Login View**

Design

A screenshot of a computer

AI-generated content may be incorrect.

Form with username and password

A screenshot of a login box

AI-generated content may be incorrect.

Error messages display

A screenshot of a computer

AI-generated content may be incorrect.

Demo:

When type the right username and password then hit the Login button

A screenshot of a computer

AI-generated content may be incorrect.

It will show the Dashboard page:

A screenshot of a computer

AI-generated content may be incorrect.

**Task 4.2: Create Dashboard**

DashboardController Works

A screenshot of a computer

AI-generated content may be incorrect.

Navigation bar with user info

A computer screen shot of code

AI-generated content may be incorrect.



Statistics displayed

A computer screen shot of text

AI-generated content may be incorrect.

A white rectangular object with a blue text

AI-generated content may be incorrect.

Quick actions

A computer screen shot of a program

AI-generated content may be incorrect.

A green rectangle with white text

AI-generated content may be incorrect.

Design

A screenshot of a computer

AI-generated content may be incorrect.