

CST 243-3 Rapid Application Development

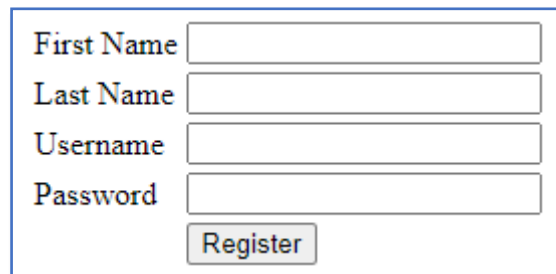
Lesson 03: Web Technologies for Rapid Development

Activity 05: Developing Web Applications using Java Servlets

Pre-requirements: You should have a basic understanding of creating a Java Servlet using Netbeans IDE.

Instructions:

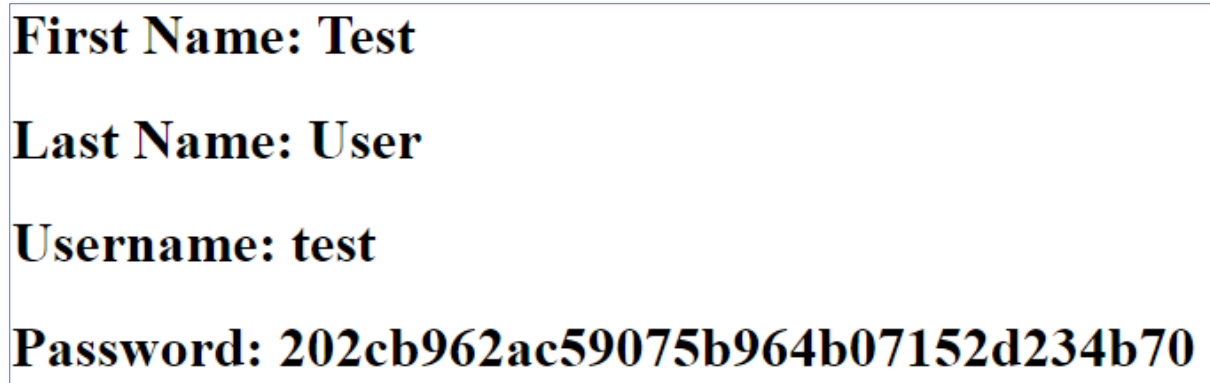
1. Start by creating a web project called "MyFirstServlet".
2. Add a Servlet page named "Register" in an appropriate package.
3. Design an HTML page as shown in Figure 01, which will allow users to input information for user registration in a small web application.



The figure shows a simple HTML registration form. It consists of four text input fields stacked vertically, each with a label to its left: "First Name", "Last Name", "Username", and "Password". Below the "Password" field is a "Register" button. The entire form is enclosed in a thin blue border.

Figure 1: HTML page

4. After designing the HTML page, modify both the HTML and the Servlet page to display the user inputs in a specific format.
5. Ensure that the password is not displayed as plain text. Implement appropriate techniques to make it unreadable to humans.
6. The output generated by your Servlet should resemble Figure 02.



The figure shows the output of the servlet. It displays the user input in a specific format, with each field and its value on a new line. The labels are in bold, and the values are in a regular font. The password is displayed as a long alphanumeric string, indicating it has been hashed or encrypted.

First Name: Test

Last Name: User

Username: test

Password: 202cb962ac59075b964b07152d234b70

Figure 2: Servlet Output

7. Create the necessary database structure as follows.
CREATE TABLE user (
id int(11) NOT NULL AUTO_INCREMENT,

```
    firstname varchar(50) NOT NULL,  
    lastname varchar(50) NOT NULL,  
    username varchar(50) NOT NULL,  
    password text NOT NULL,  
    PRIMARY KEY (id)  
);
```

8. Save the user inputs to the database.
9. If the information is successfully saved to the database, display a message saying "Successfully Saved" to the user.
10. If any errors occur during this process, inform the user with an "Error Occurred" message.