

## EXERCISE 14

### JDBC (MYSQL) and Java Servlet Programming

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CODE:

LOGIN SERVLET:

```
package com.auth;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class loginS extends HttpServlet{
    public void doGet (HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException
    {

        RequestDispatcher rd = req.getRequestDispatcher("/login.jsp");
        req.setAttribute("error", "");
        rd.forward(req, res);

    }

    public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException,
    IOException
    {

        int f=0;

        Connection con;
        PrintWriter out = res.getWriter();
        try {
            con =
            DriverManager.getConnection("jdbc:mysql://localhost:3306/authdb","root", "Haloarenes");
            PreparedStatement st = con.prepareStatement("select * from login where
            user_id=? ");

            st.setString(1, String.valueOf(req.getParameter("uword")));
            String pass= String.valueOf(req.getParameter("pword"));

            ResultSet rs=st.executeQuery();
            System.out.print(pass);
```

```

        while(rs.next ())
        {

            if ( pass.equals(rs.getString("password")))
            {
                out.println("<html><head><style>
body {background-color: powderblue;}\n"
                                + "h1 {color:
lavenderblush;text-align:center;}</style></head><body><h1>Validated. Correct Credentials"
                                + "</h1></body></html>");
                f++;
            }
            System.out.print(rs.getString("password"));

        }
    } catch (Exception e)
    { e.printStackTrace();
    }

    if(f==0)
    {RequestDispatcher rd = req.getRequestDispatcher("/login.jsp");
    req.setAttribute("error", "Invalid Login.Enter User Name and Password");
    rd.forward(req, res);
    }

}

}

```

## ACCOUNT CREATION SERVLET:

```
package com.auth;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class creation_servlet extends HttpServlet{
    public void doGet (HttpServletRequest req, HttpServletResponse res) throws IOException, ServletException
    {

        RequestDispatcher rd = req.getRequestDispatcher("/dataentry.jsp");
        req.setAttribute("error", "");
        rd.forward(req, res);

    }

    public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException,
    IOException
    {

        Connection con;
        PrintWriter out = res.getWriter();
        try {
            con =
            DriverManager.getConnection("jdbc:mysql://localhost:3306/authdb","root", "Haloarenes");
            PreparedStatement st = con.prepareStatement("insert into login values(?,?)");
            st.setString(1, String.valueOf(req.getParameter("uword")));
            st.setString(2, String.valueOf(req.getParameter("pword")));
            st.executeUpdate();
            con.close();
            out.println("<html><head><style> body {background-color:
            powderblue;}\\n"
                                + "h1 {color:
            lavenderblush;text-align:center;}</style></head><body><h1>Account has been created"
                                + "</h1></body></html>");

        } catch (Exception e)
        { e.printStackTrace();
    }
```

}

}

}

## JSP LOGIN PAGE

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Company Form</title>
<style>
*{
margin: 0;
padding: 0;
box-sizing: border-box;
font-family: 'Montserrat', sans-serif;
} html {
background-color: lavenderblush;
-moz-background-size: cover;
-o-background-size: cover;
background-size: cover; }
span{ color:red;}
.wrapper{
max-width: 500px;
width: 100%;
background: #fff;
margin: 20px auto;
box-shadow: 1px 1px 2px rgba(0,0,0,0.125); padding: 30px;
}
.wrapper .title{
font-size: 24px; font-weight: 700; margin-bottom: 25px; color: powderblue; text-transform: uppercase; text-align: center;
}
.wrapper .form{ width: 100%;
}
.wrapper .form .inputfield{ margin-bottom: 15px; display: flex; align-items: center;
```

```

}
.wrapper .form .inputfield label{ width: 200px;
color: #757575;
margin-right: 10px;
font-size: 14px; }
.wrapper .form .inputfield .input, .wrapper .form .inputfield .textarea{
width: 100%;
outline: none;
border: 1px solid #d5dbd9; font-size: 15px;
padding: 8px 10px; border-radius: 3px; transition: all 0.3s ease;
}
.wrapper .form .inputfield .textarea{ width: 100%;
height: 125px;
resize: none;
}
.wrapper .form .inputfield .custom_select{ position: relative;
width: 100%;
height: 37px;
}
.wrapper .form .inputfield .custom_select:before{ content: "";
position: absolute;

top: 12px;
right: 10px;
border: 8px solid;
border-color: #d5dbd9 transparent transparent transparent; pointer-events: none;
}
.wrapper .form .inputfield .custom_select select{ -webkit-appearance: none;
-moz-appearance: none;
appearance: none;
outline: none;
width: 100%;
height: 100%;
border: 0px;
padding: 8px 10px; font-size: 15px;
border: 1px solid #d5dbd9; border-radius: 3px;
}
.wrapper .form .inputfield .input:focus,
.wrapper .form .inputfield .textarea:focus,
.wrapper .form .inputfield .custom_select select:focus{
border: 1px solid #fec107; }
.wrapper .form .inputfield p{ font-size: 14px;
color: #757575;
}
.wrapper .form .inputfield .check{
width: 15px; height: 15px; position: relative; display: block; cursor: pointer;
}
.wrapper .form .inputfield .check input[type="checkbox"]
{
position: absolute; top: 0;
left: 0;
opacity: 0;
}
.wrapper .form .inputfield .check .checkmark{ width: 15px;
height: 15px;
border: 1px solid #b0e0e6;
display: block;
position: relative; }

```

```

.wrapper .form .inputfield .check .checkmark:before{ content: "";
position: absolute;
top: 1px;
left: 2px;
width: 5px;
height: 2px;
border: 2px solid;
border-color: transparent transparent #fff #fff; transform: rotate(-45deg);
display: none; }
.wrapper .form .inputfield .check input[type="checkbox"]:checked ~ .checkmark{ background: powderblue;
}
.wrapper .form .inputfield .check input[type="checkbox"]:checked ~ .checkmark:before{ display: block;
}
.wrapper .form .inputfield .btn{ width: 100%;
padding: 8px 10px; font-size: 15px;
border: 0px; background: #b0e0e6 ; color: #fff;
cursor: pointer; border-radius: 3px; outline: none;
}
.wrapper .form .inputfield .btn:hover{ background: #b0e0e6 ;
}
.wrapper .form .inputfield:last-child{ margin-bottom: 0;
}

```

```
</style>
```

```
</head>
```

```
<body>
```

```
<form action="login" method="post">
```

```
<div class="wrapper">
```

```
<div class="title"> LOGIN </div>
```

```
<div class="form">
```

```
<div class="inputfield">
```

```
<label>User ID</label>
```

```
<% String error= (String)request.getAttribute("error");%>
```

```
<input type="text" class="input" size=65 name="uword"> <i><%=error %></i>
```

```
</div>
```

```
<div class="inputfield">
```

```
<label>Password</label>
```

```
<input type="password" class="input" size=65 name="pword" id="p" >
```

```
</div>
```

```
<div class="inputfield">
```

```
<input type="checkbox" id="c1" name="cc" onclick="myFunction()">
```

```
<label for="c1"> Show Password</label><br><br>
```

```
</div>
```

```
<div class="inputfield">
```

```
<input type="submit" value="SUBMIT" class="btn">
</div>
```

```
</div>
</div>
```

```
</form>
<script>
```

```
function myFunction() {
    var x = document.getElementById("p");
    if (x.type === "password") {
        x.type = "text";
    } else {
        x.type = "password";
    }
}
```

```
</script>
```

```
</body>
</html>
```

## ACCOUNT CREATION JSP

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Company Form</title>
<style>
*{
margin: 0;
padding: 0;
box-sizing: border-box;
font-family: 'Montserrat', sans-serif;
} html {
background-color: lavenderblush;
-moz-background-size: cover;
-o-background-size: cover;
background-size: cover; }
span{ color:red;}
.wrapper{
max-width: 500px;
```

```

width: 100%;
background: #fff;
margin: 20px auto;
box-shadow: 1px 1px 2px rgba(0,0,0,0.125); padding: 30px;
}
.wrapper .title{
font-size: 24px; font-weight: 700; margin-bottom: 25px; color: powderblue; text-transform: uppercase; text-align: center;
}
.wrapper .form{ width: 100%;
}
.wrapper .form .inputfield{ margin-bottom: 15px; display: flex; align-items: center;
}
.wrapper .form .inputfield label{ width: 200px;
color: #757575;
margin-right: 10px;
font-size: 14px; }
.wrapper .form .inputfield .input, .wrapper .form .inputfield .textarea{
width: 100%;
outline: none;
border: 1px solid #d5dbd9; font-size: 15px;
padding: 8px 10px; border-radius: 3px; transition: all 0.3s ease;
}
.wrapper .form .inputfield .textarea{ width: 100%;
height: 125px;
resize: none;
}
.wrapper .form .inputfield .custom_select{ position: relative;
width: 100%;
height: 37px;
}
.wrapper .form .inputfield .custom_select:before{ content: "";
position: absolute;

top: 12px;
right: 10px;
border: 8px solid;
border-color: #d5dbd9 transparent transparent transparent; pointer-events: none;
}
.wrapper .form .inputfield .custom_select select{ -webkit-appearance: none;
-moz-appearance: none;
appearance: none;
outline: none;
width: 100%;
height: 100%;
border: 0px;
padding: 8px 10px; font-size: 15px;
border: 1px solid #d5dbd9; border-radius: 3px;
}
.wrapper .form .inputfield .input:focus,
.wrapper .form .inputfield .textarea:focus,
.wrapper .form .inputfield .custom_select select:focus{
border: 1px solid #fec107; }
.wrapper .form .inputfield p{ font-size: 14px;
color: #757575;
}
.wrapper .form .inputfield .check{
width: 15px; height: 15px; position: relative; display: block; cursor: pointer;
}

```



```

.wrapper .form .inputfield .check input[type="checkbox"]
{
position: absolute; top: 0;
left: 0;
opacity: 0;
}
.wrapper .form .inputfield .check .checkmark{ width: 15px;
height: 15px;
border: 1px solid #b0e0e6;
display: block;
position: relative; }
.wrapper .form .inputfield .check .checkmark:before{ content: "";
position: absolute;
top: 1px;
left: 2px;
width: 5px;
height: 2px;
border: 2px solid;
border-color: transparent transparent #fff #fff; transform: rotate(-45deg);
display: none; }
.wrapper .form .inputfield .check input[type="checkbox"]:checked ~ .checkmark{ background: powderblue;
}
.wrapper .form .inputfield .check input[type="checkbox"]:checked ~ .checkmark:before{ display: block;
}
.wrapper .form .inputfield .btn{ width: 100%;
padding: 8px 10px; font-size: 15px;
border: 0px; background: #b0e0e6 ; color: #fff;
cursor: pointer; border-radius: 3px; outline: none;
}
.wrapper .form .inputfield .btn:hover{ background: #b0e0e6 ;
}
.wrapper .form .inputfield:last-child{ margin-bottom: 0;
}

```

```
</style>
```

```
</head>
```

```
<body>
```

```
<form action="entry" method="post">
```

```
<div class="wrapper">
```

```
<div class="title"> ACCOUNT CREATION</div>
```

```
<div class="form">
```

```
<div class="inputfield">
```

```
<label>User ID</label>
```

```
<input type="text" class="input" size=65 name="uword">
```

```
</div>
```

```
<div class="inputfield">
```

```

<label>Password</label>
<input type="password" class="input" size=65 name="pword" id="p" >
</div>

```

```

<div class="inputfield">

```

```

<input type="checkbox" id="c1" name="cc" onclick="myFunction()">
<label for="c1"> Show Password</label><br><br>
</div>

```

```

<div class="inputfield">

```

```

<input type="submit" value="SUBMIT" class="btn">
</div>

```

```

</div>
</div>

```

```

</form>
<script>

```

```

function myFunction() {
    var x = document.getElementById("p");
    if (x.type === "password") {
        x.type = "text";
    } else {
        x.type = "password";
    }
}

```

```

</script>

```

```

</body>
</html>

```

## WEB XML

```

<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
id="WebApp_ID" version="4.0">
    <display-name>lab_14</display-name>
    <welcome-file-list>
        <welcome-file>index.html</welcome-file>
        <welcome-file>index.htm</welcome-file>
        <welcome-file>index.jsp</welcome-file>
        <welcome-file>default.html</welcome-file>
    
```

```
<welcome-file>default.htm</welcome-file>  
<welcome-file>default.jsp</welcome-file>  
</welcome-file-list>
```

```
<servlet>
```

```
<servlet-name>login</servlet-name>  
<servlet-class>com.auth.loginS</servlet-class>  
</servlet>
```

```
<servlet-mapping>  
<servlet-name>login</servlet-name>  
<url-pattern>/login</url-pattern>  
</servlet-mapping>
```

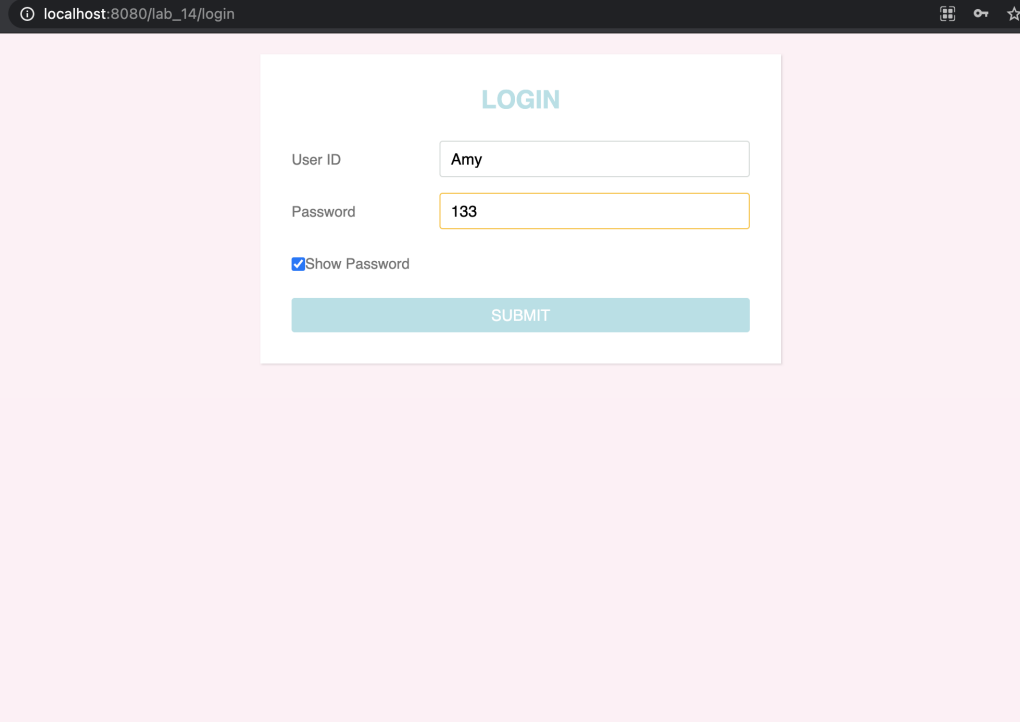
```
<servlet>
```

```
<servlet-name>entry</servlet-name>  
<servlet-class>com.auth.creation_servlet</servlet-class>  
</servlet>
```

```
<servlet-mapping>  
<servlet-name>entry</servlet-name>  
<url-pattern>/entry</url-pattern>  
</servlet-mapping>
```

```
</web-app>
```

LOGIN:



localhost:8080/lab\_14/login

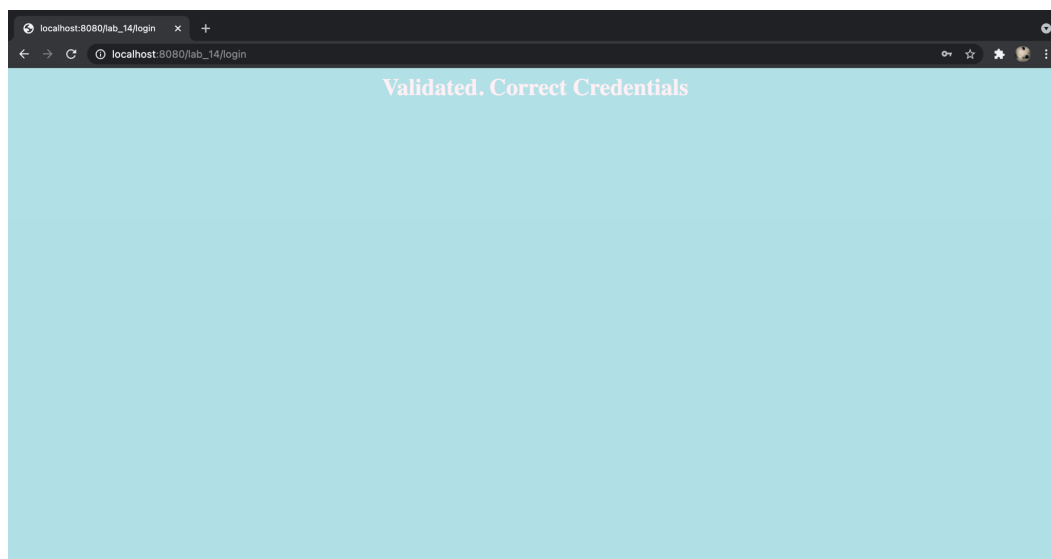
### LOGIN

User ID

Password

☒ Show Password

AFTER SUCCESSFUL LOGIN:



## TEST CASE 1 : WRONG PASSWORD OR USERNAME

The image displays two screenshots of a web browser window titled "Company Form" at the URL "localhost:8080/lab\_14/login".

**Top Screenshot (Success State):**

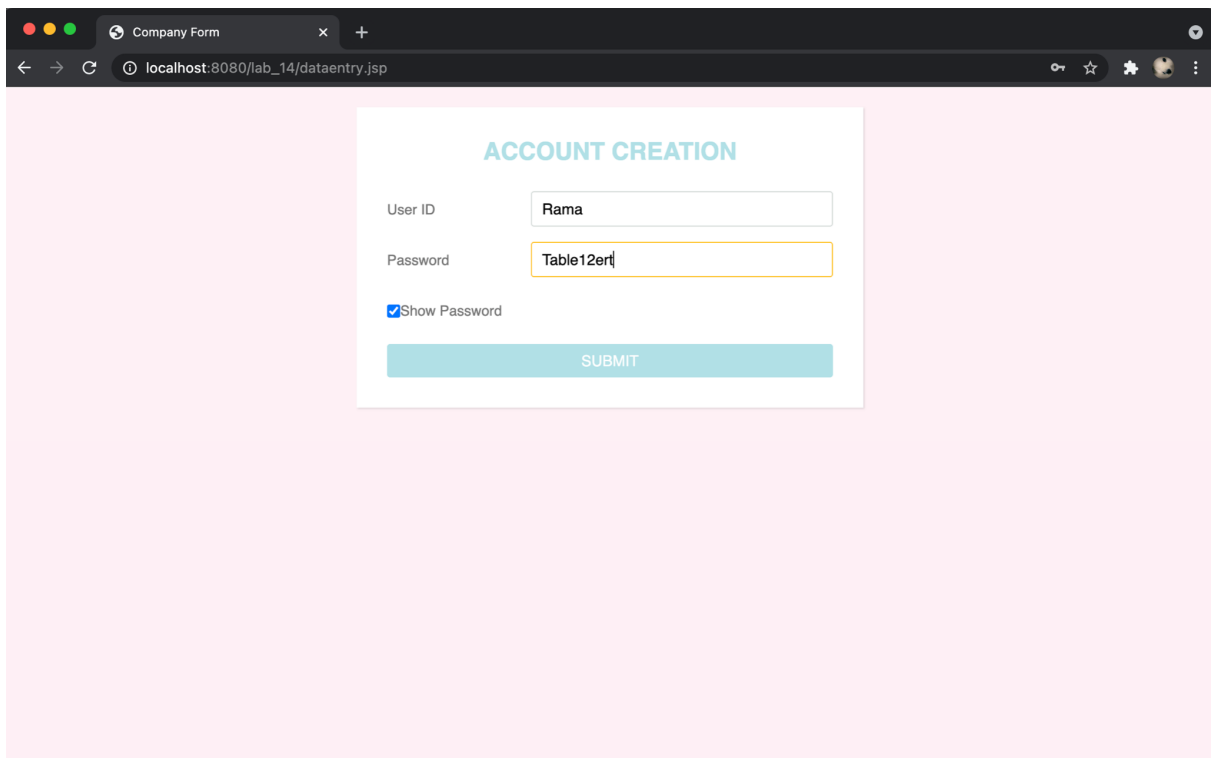
- LOGIN** (Title)
- User ID: 123
- Password: 123
- ☒ Show Password
- SUBMIT** (Button)

**Bottom Screenshot (Failure State):**

- LOGIN** (Title)
- User ID: [Empty Field] *Invalid Login.Enter User Name and Password*
- Password: [Empty Field]
- ☐ Show Password
- SUBMIT** (Button)

At the bottom of the browser window, a red error message is visible: `at java.util.concurrent.FutureTask.run(FutureTask.java:266)`.

## ACCOUNT CREATION



A screenshot of a web browser window. The address bar shows 'localhost:8080/lab\_14/dataentry.jsp'. The page has a light pink background. In the center is a white box titled 'ACCOUNT CREATION' in blue. Inside the box, there are two input fields: 'User ID' with the text 'Rama' and 'Password' with the text 'Table12ert'. Below the password field is a checkbox labeled 'Show Password' which is checked. At the bottom of the box is a blue button labeled 'SUBMIT'.

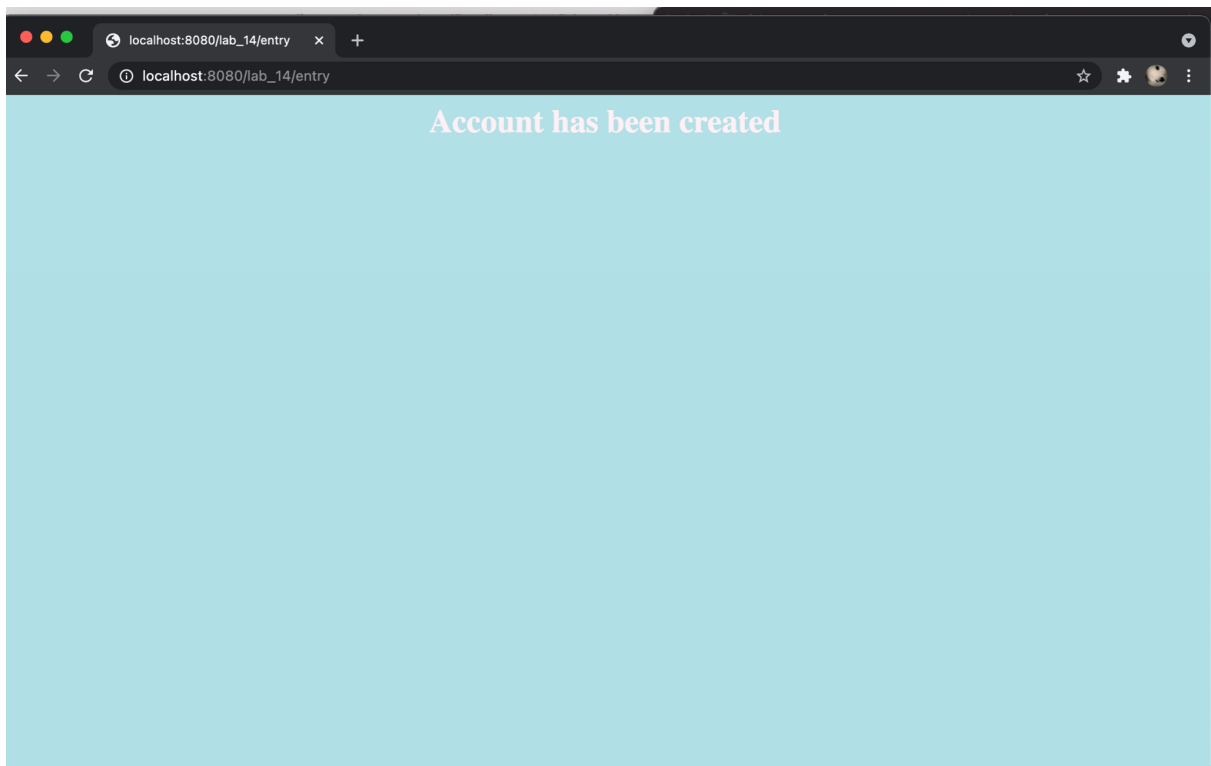
ACCOUNT CREATION

User ID Rama

Password Table12ert

☒ Show Password

SUBMIT



A screenshot of a web browser window. The address bar shows 'localhost:8080/lab\_14/entry'. The page has a solid light blue background. In the center, the text 'Account has been created' is displayed in a pink, serif font.

Account has been created

