CSIS 311 Server Site Scripting

Assignment 3

INSTRUCTIONS

In this assignment, students are required to create a program will allow an authorized user, enter mentor information into a form. and the data be sent to a database for storage when a button is clicked.

You will use two layout managers in your program:

- the grid bag layout manager for designing your GUI layout to take in mentor information, as well as for the login authentication;
- the card layout manager which will be used to first show the log in panel and then, upon user authentication, will show the panel for taking in mentor information.

1) To begin, create a sketch of the user interfaces, using MS Word, or other appropriate software. For table 1, your sketch should show the (X,Y) location of each component in the following table along with the width of the component. Do a similar sketch for table 2. **(10pts)**

Table 1

Label for mentor	Component to accept Input
first name	Appropriate component
last name	Appropriate component
email	Appropriate component
telephone	Appropriate component
Address	Text Area
Highest Degree	Dropdown list
Graduation Year	Dropdown list (2012-2022)
Mentoring Interests	☐ Computer Science ☐ Cybersecurity ☐ Computer Information Technology ☐ Computer Information Systems
NA	Save button - Will cause entries to be stored in database table
NA	Reset button - Will cause entries to be cleared

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Table 2

Label for mentor	Component to accept Input
Username	Appropriate component
Password	Appropriate component

2) Create a database named Mentors System, designed to hold a table, Mentors. The Mentors table will hold the following fields. **(10 pts)**

first name
last name
email
telephone
Address
Highest Degree
Graduation Year
Interested in Mentoring these majors

3) Create Java Class defined as: MentorGui. Implement all necessary interfaces. **(5pts)**

4) Use a constructor in your class definition. Add all necessary methods, exceptions, etc. The frame title should read "**Mentor Profile GUI created by your full name**" **(5pts)**

5) User should be able to enter a user name and password, and after authentication, have access to the user interface for entering mentor data to create the mentor profile. With respect to table 2, create a panel for authentication components

Regarding authentication information which is to be compared against user input, you may store these in appropriate variables (username, password) within your program and the authentication information will be used to validate login credentials entered by a user. **(10pts)**

6) **(30pts)**Create a container to hold the components in the table from step a. Your design should reflect the sketch you created for that step. Apply the grid bag layout manager (lesson 14).

For the label, *Mentoring Interests* in step 1, write code to add a tooltip that says, **"Select majors that you are interested in mentoring**".

You may use this sample code as guide, nameOfComponent.setToolTipText("Text to be displayed when the mouse is hoover over the label")

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7) **(30 pts)**Write code such that,
   a) When program is first executed, the authentication panel is displayed. Upon successful authentication, the panel for entering mentor information is displayed. The card layout manager is to be used, here.

   b) When the save button is clicked, mentor information entered into the fields contained in step a, are saved to a database table.

   c) When the reset button is clicked, mentor information is cleared from component fields.

Deliverables

   1. Your Java code, named as nameOfYourClass.java
   2. A document (in MS Word or PDF) which includes screenshots demonstrating your program is functioning as required. The screenshot should indicate your name in the frame.

      Include your sketches from part 1.

      Screenshot should show data written to database.

      Combine the above files together in a .zip file and then upload them.

   3. Your README.txt document. The name of this document should be that exact spacing, spelling, and capitalization: "README.txt".

      In the README.txt document, you will include an explanation of how to run your program, how to interpret the output, and how to determine if your program is working or not.

      In the README.txt file, you must have the following lines, but replace "yes" with "no" as necessary:

      Java 11: yes
      Java 12: yes
      NetBeans Version x: yes/no as appropriate

      Additionally, you should have a description of the files that you are including in the .zip file along with instructions on how to run your program and information about the purpose of your program.

      Submit deliverables to the appropriate assignment drop box on D2L.

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Resources

1) Lessons 9-14, Sams Teach yourself Java in 21 days.

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