

SWE 645: Assignment 5

Important Note: Please implement one of the following two options.

Option 1: This option includes HW5 credit as well as the Extra credit.

Develop a deep learning working prototype using TensorFlow. You can check out the following sites for data and potential problems you would like to solve. Please get my buy in before you have made significant progress. Please install TensorFlow on the Anaconda distribution.

<https://www.kaggle.com/datasets>

<https://www.tensorflow.org/resources/models-datasets>

For Anaconda installation

<https://www.youtube.com/watch?v=SNdQqYpfCV4>

Submission:

For this you will need to submit a report with a brief description of the problem you are trying to solve, how did you solve the problem, data and methodology used, results and discussion. In addition, please submit the actual data used for the prototype and as well as the working Python Notebook.

Option 2: This is the typical HW5.

JPA/Hibernate and Amazon Relational Database Service (Amazon RDS)

This assignment is an extension of the application you developed in previous assignment where, you will implement persistence logic to store, retrieve and delete the survey data using JPA/Hibernate and Amazon Relational Database Service (Amazon RDS). The welcome homepage of the application will continue to have menu with links from the previous assignments: 1) Student Survey, which allows a prospective student to fill out a survey form, and 2) List All Surveys, which allows a user to view all surveys done to date. In addition, you will have "Search Surveys" link, which allows users to search records based on any combination of the last name, first name, city, or state. Also, the last column of all records rendered on the search result page should have a Delete hyperlink, which allows a user to delete the corresponding record not only from the database but also from the search result page. The following are more specific requirements of this application.

Requirements:

For this assignment, you will be implementing all database access logic using JPA/Hibernate technology. The application will consist of a student survey server, which will connect to a database to create and search student survey records. A web based client (i.e., student survey JSF page) will be used to supply the data for the queries. The modules should be as follows:

- The client should provide a simple menu to list all records, search records, and create a new record.
- You will continue to use the student survey user interface that you developed for the previous assignment to create new records.
- Develop a new facelet using JSF tags that allow users to search existing records using four fields: last name, first name, city, or state.
- When searching, the client should allow for any combination of the last name, first name, city, or state. In other words, I should be able to search on just one field, a set of fields, or all of these 4 fields.
- The last column of all records rendered on the search result page should have a Delete link, which allows a user to delete the corresponding record not only from the database but also from the search result page.
- Use Amazon RDS to provision and use a MySQL database for this homework. Refer to an additional document titled “SWE645-HW5-AppendixA-Using Amazon RDS to create MySQL Database” available on the class blackboard Course Content/Homeworks folder.

Packaging and Naming Conventions:

The war file could use the following naming conventions:

<your username>_hw5.war, for example vdubey_hw5.war

Submission:

Submit all source and configuration files, and binary, files necessary to run the application and the installation and execution instructions. Please put all of the files in a zip file.

In addition, please add a hyperlink of this homework on your homepage that you developed in first assignment.

NOTE: A late assignment carries a 10% late penalty for each week it is late. Assignments are NOT accepted after being 2 weeks late.

Make sure your name is on every programming artifact so we know who it belongs to in case we print it. For every source file, please include comments at the top of the program describing what the program does. This only needs to be 1 or 2 sentences. Be sure to test access and functionality to your file before the due date.

Grading:

The following areas will be used in the basic grading of these projects:

- Does system meet the functional requirements: 85 points
- Does the assignment run without errors: 13 points
- Comments: 2 points

Instant Point Deductions:

I reserve the right to deduct points instantly for the following reasons:

- The source, or binary, files are not included in the package.
- The readme file is not included in the package.
- The program doesn't run due to errors in the code.
- I spend more than 5 minutes trying to debug the assignment.
- I can't figure out how to use the assignment, and instructions are left out.