CS480 – Course project

Summer 2020

Database: Japan Job Board

Description:

Consider the design of the following database system for managing a job board of jobs in Japan. A user can browse the database without registering for an account, but if one does make an account, then after registration that person will have a unique username, a password, first name, last name, visa sponsorship, is an admin, and Japanese proficiency level. If a registered user is an admin, then they can only add, delete, view, and edit any jobs in the database. Otherwise a non-admin user can view and apply for a job. Companies can post, edit, and delete jobs provided that the job belongs to a company. The attributes of a company are a unique username, password, company name, company location, and a company bio. The job posted by either an admin or company consists of a unique job ID that increments automatically after each posting, a job title, job location, job salary, job language requirements, job description, wanted residence (japan only, or willing for overseas), and employment type (part time or full time). A company can only alter job posts from matching company names.

Project Part 2 – CRUD (Create, read, update, and delete)

Deadline: July 18, 2020

List of entities:

1. Person
2. Company
3. Job

Based on the Demo (Part 1), implement the following functionality using Java and SQL with necessary GUI interfaces.

1. Insert/delete/update/read a **Person (user) {all attributes} [user registration is insert, admin can delete or user can too, and both user and admin can update profile. Only the admin can read another user]**

2. Insert/delete/update/read a **company** {all attributes} [admin has full control, but a company can only view their own company as well as delete their own company and job posts]

3. Insert/delete/update/read a **Job** (all attributes except the job_id). The job_id should be generated by the system automatically using MySQL autoincrement.

Project Part 3 – Queries

Deadline: August 1, 2020

Based on the Demo, implement the following functionality using Java and SQL with necessary GUI interfaces.

Trivial Queries:

1. List all Persons (users)
2. List all Companies
3. List all Jobs

Non-trivial Queries:

1. List all the jobs where the occurrence ‘English’ exists in the job description and only in Tokyo

2. Count the number of JLPT N2 and JLPT N1 (language_proficiency) users and divide by all to show a percentage

3. Show jobs with the most users in one location and the lowest users, then return the difference

4. List average salary and show company with highest contribution of increasing the average salary

5. A Show the last person on a sorted alphabetical list and compare to a job that’s the first in a A to Z list, then return that company’s bio