CS480 – Course project

Summer 2020

Database: Computer Science Job Database

# **Description:**

Consider the design of the following database system for managing a computer science job database: A table of all companies with job openings. The company have unique names, can have variable job types, have a unique id number and can belong to more than one category (fortune 500, top 100 startup, etc.). The next table helps keeps track of the job openings and application requirements at these various companies. The applications table should consist of the location of the job, its estimated salary, job description, the position being offered and company id corresponding to the companies from the companies table. The last table exists to keep a track of the progress of applications which have been applied. This results table will have a field confirming about the interview progress, and also stores the id, application apply links, etc.

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

Deadline: July 18, 2020

# **List of entities:**

1. Applications

2. Results

3. Companies

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

# 1. Insert/delete/update/read **Applications** (all attributes except the company id). The company id should be generated by the system automatically using MySQL autoincrement.

# 2. Insert/delete/update/read **Companies** (all attributes except the id-number). The id-number should be generated by the system automatically using MySQL autoincrement.

# 3. Insert/delete/update/read **Results** (all attributes except the result id). The result id should be generated by the system automatically using MySQL autoincrement.

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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 company names in the database.

2. List all Application details for company with name Google.

3. Count the total results where the interview progress is "rejected"

**Non-trivial Queries:**

# 1. List all companies and their salary which offer salary greater than $100.

# 2. List all Application details for company with name Google.

# 3. List Application apply link for all companies.

# 4. List the company name, job type and job description of the companies which come under "FAANG" category

# 5. List the company name and their interview progress, grouped by category of the company, ordered in ascending by the company name