Project 1: Career Insights

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Overview:

Create an SQL-based platform designed to provide job seekers with valuable insights into company hiring stats, application processes, and salary ranges. This platform will empower users to share their own experiences and gain a deeper understanding of the job market to make informed career decisions.

Nouns:

Job seeker(user)
Company
Position
Salary
Interview
Job status
Promotion
Lay off
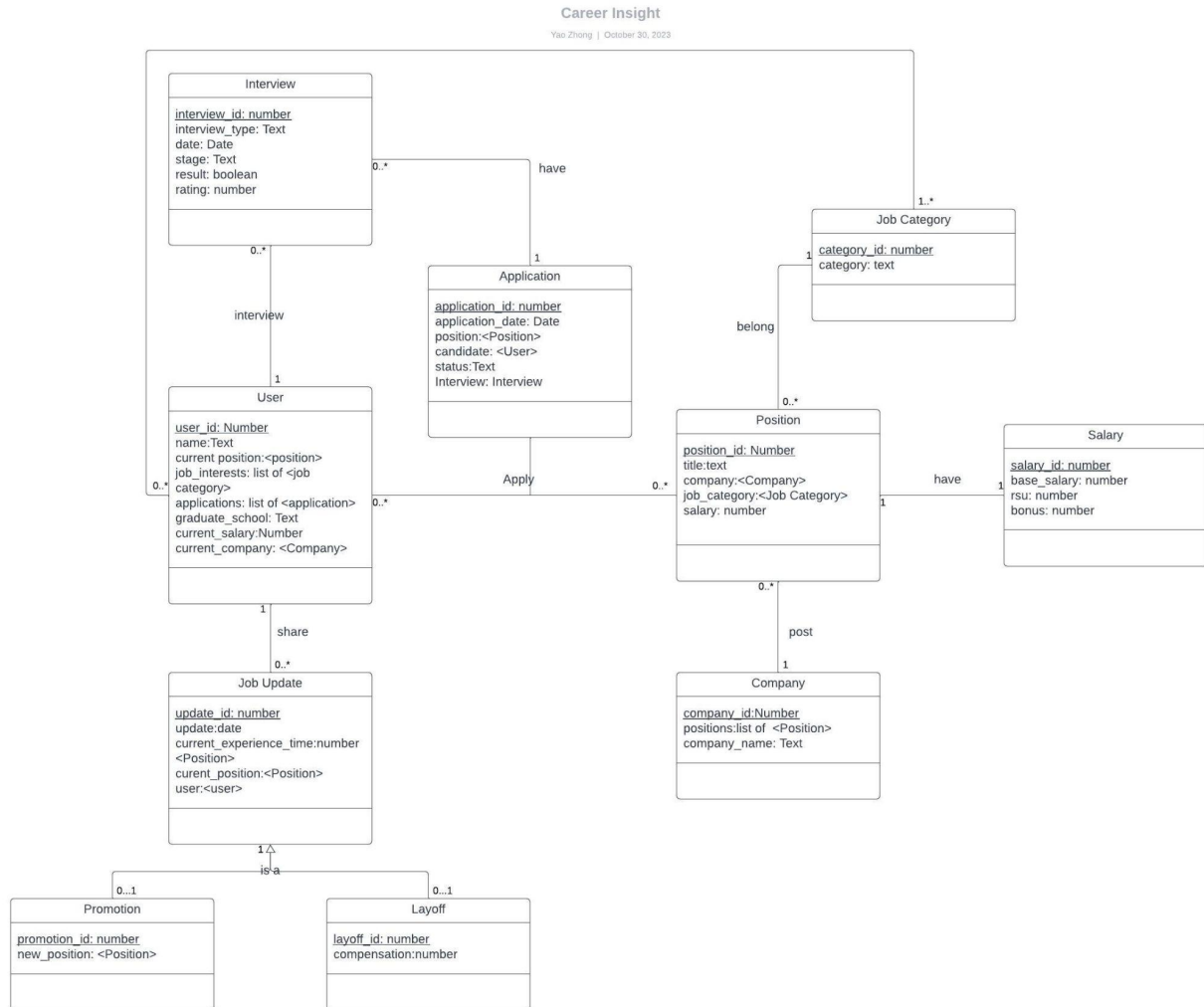application
Job category

Verb:

Apply
post
Create
Share
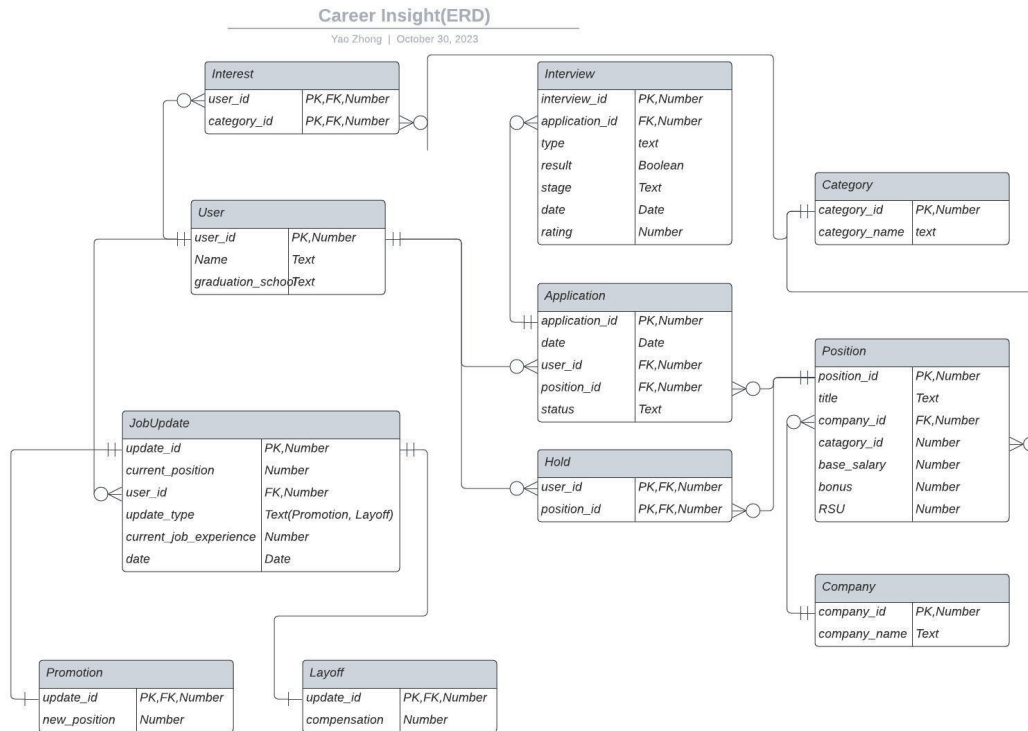Update

Rules:

1. Each user can apply to many positions in multiple companies
2. Companies can post multiple positions, but each position should only belong to one company
3. A application can only belong to one user and contain only one position
4. An interview should belong to only one application, a application can have multiple interviews
5. A update of job status should belong to one user

6. A position can belong one and only one job category

UML

Career Insight
Yao Zhong | October 30, 2023

Interview

interview_id: number
interview_type: Text
date: Date
stage: Text
result: boolean
rating: number

0..*   have

Job Category

category_id: number
category: text

1..*

Application

application_id: number
application_date: Date
position:<Position>
candidate: <User>
status:Text
Interview: Interview

1

interview

belong

0..*

User

user_id: Number
name:Text
current position:<position>
job_interests: list of <job category>
applications: list of <application>
graduate_school: Text
current_salary:Number
current_company: <Company>

0..*   Apply   0..*

1

Position

position_id: Number
title:text
company:<Company>
job_category:<Job Category>
salary: number

have   1

Salary

salary_id: number
base_salary: number
rsu: number
bonus: number

share

0..*

0..*   post   1

Job Update

update_id: number
update:date
current_experience_time:number <Position>
current_position:<Position>
user:<user>

Company

company_id:Number
positions:list of <Position>
company_name: Text

1

is a

0...1   Promotion   0...1   Layoff

Promotion

promotion_id: number
new_position: <Position>

Layoff

layoff_id: number
compensation:number

ERD

Schemas

User(<u>user_id</u>,name,current_position,graduate_school);
F: user_id -> name,current_position,graduate_school
it is in BCNF

Company (<u>company_id</u>,company_name);
F:company_id->company_name
It is in BCNF

Category (<u>category_id</u>,category_name);
F: category_id -> category_name
It is in BCNF

Position(<u>position_id</u> ,title ,company_id ,catagory_id ,base_salary ,bonus ,RSU);
F:position_id -> title ,company_id ,catagory_id ,base_salary ,bonus ,RSU
It is in BCNF

Hold (<u>user_id</u>,<u>position_id</u>);

There are non-trivial functional dependencies
It is in BCNF

Application (application_id ,date,user_id ,position_id ,status);
F: application_id -> date,user_id ,position_id ,status
It is in BCNF

Interview (interview_id ,application_id ,type ,result, stage,date, rating);
F:interview_id -> application_id ,type ,result, stage,date, rating
It is in BCNF

Promotion (update_id ,new_position);
F: update_id -> new_position
It is in BCNF

Layoff (update_id , compensation);
F: update_id ->compensation
It is in BCNF

Update (update_id ,current_position ,user_id ,update_type,current_job_experience ,date);
F: update_id -> current_position ,user_id ,update_type,current_job_experience ,date
It is in BCNF

Interests (user_id ,category_id);
There is no non-trivial functional dependency
It is in BCNF