Project 3: Career Insights with Redis

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Overview:

Create a platform using a document database 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.

**Design Update with Redis

For the Redis update of the application, I decided to choose the “Positions” being transformed to the Key-Value storage. But it's not about all the positions, it is about the “cached” positions, for example, the 10 positions displayed in the main page will be turned into key-value pairs, and the recently edited or added positions will be stored in the in-memory storage.

**Redis Data Structure

To implement the “cached positions”, I will use a redis list for the list of cached positions, it will use the key “cache:positions”. And through CRUD operations, I will make sure it works like a LRU(least-recently-used).
For the positions data structure itself. I will transform it into the following key-value schema:

“position:id:title” -> string
“position:id:job_category” ->string
“position:id:company” ->string
“position:id:salary” -> redis hashes with {base_salary: <number>, bonus: <number>, equity: <number>}

Nouns:

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

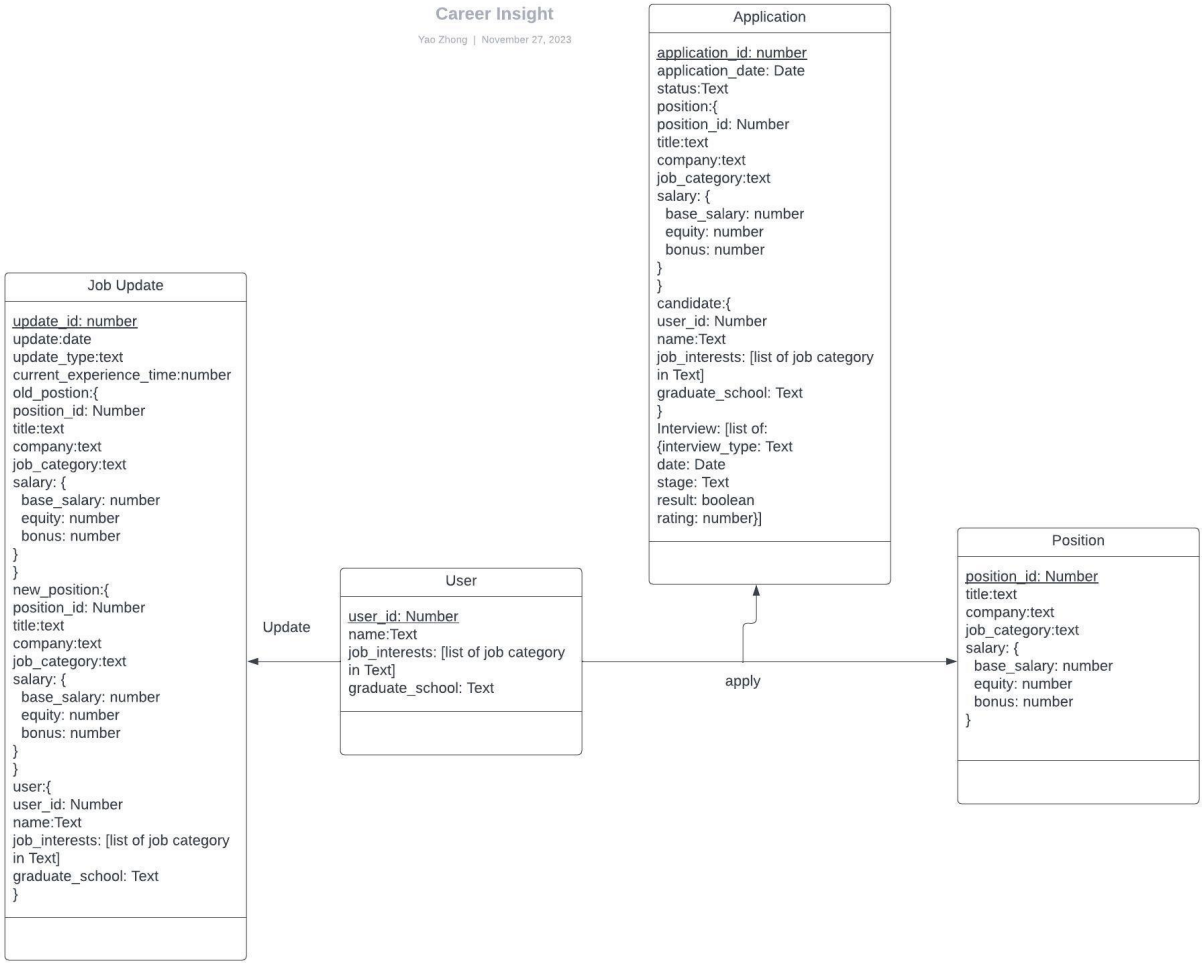
Verb:

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
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Application
application_id: number
application_date: Date
status:Text
position:{
position_id: Number
title:text
company:text
job_category:text
salary: {
base_salary: number
equity: number
bonus: number
}
}
candidate:{
user_id: Number
name:Text
job_interests: [list of job category in Text]
graduate_school: Text
}
Interview: [list of:
{interview_type: Text
date: Date
stage: Text
result: boolean
rating: number}]
Job Update
update_id: number
update:date
update_type:text
current_experience_time:number
old_postion:{
position_id: Number
title:text
company:text
job_category:text
salary: {
base_salary: number
equity: number
bonus: number
}
}
new_position:{
position_id: Number
title:text
company:text
job_category:text
salary: {
base_salary: number
equity: number
bonus: number
}
}
user:{
user_id: Number
name:Text
job_interests: [list of job category in Text]
graduate_school: Text
}
Update
User
user_id: Number
name:Text
job_interests: [list of job category in Text]
graduate_school: Text
apply
Position
position_id: Number
title:text
company:text
job_category:text
salary: {
base_salary: number
equity: number
bonus: number
}