

Database Proposal

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Github Repository

github.com/ywang408/cs-546-project

Users

The user collection will contain all users registered with the portal, along with mandatory required Information:

1. Mandatory required Information:
 - Email id
 - Phone
 - Name
 - Password
2. Optional features, these features must be fulfilled when users try to apply for jobs. It would be stored as a sub-document under **profile**.
 - ID photo
 - Gender
 - City
 - State
 - Working Experience
 - Education
 - Skills
 - Languages
 - Tags

Here's one example of sub-document **profile**:

```
"_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",  
"photo": "one url",  
"gender": "m",  
"city": "Hoboken",  
"state": "NJ",
```

```

"experience":[{"title":"Maintenance Engineer", "employment type": "full time",
"Company name":"Apple","start date": "08/05/2017", "end date": "08/05/2018"}]
"education":[
{"school":"xxx university", "field of study":"computer science",
"degree":"master of science",
"start date": "08/05/2010", "end date": "08/05/2014"}]
"skills":["Java", "JS"]
"languages":["english"]
"tags":["SDE", "DS"]

```

Table of sub-document **profile**:

Name	Type	Description
_id	String	A globally unique identifier to represent the user's profile
photo	String	A URL point to the use's ID photo stores on Google Cloud Platform or other storage platform
gender	String	m for male, f for female, others for non-binary
city	String	User's city of living
state	String	User's state of living
experience	Array	Working history followed by one company and corresponding description
education	Array	Education history followed by one school and corresponding description
skills	Array	Learned abilities of user.
languages	Array	Languages that the user can speak
tags	Array	Users' interested fields of jobs

3. We will initialize the following fields to be empty, and these fields will be added later.
 - jobs(Users' applied jobs' id and status, status consists of pending, rejected, approved)
 - favor(Users' interested jobs' id and they can save them in it for applying later)

A user can update their profile by logging in to the portal.

```

"_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
"email": "James@gmail.com",
"phone": "848-242-6666",
"firstName": "Liam",
"lastName": "James",
"password": "$2a$08$XdvNkfdNIL8F8xsuIUeSbNOFgKOM0iV5H0skfVn7.PWncShU.0",
"jobs": [{"job": "job1._id", "statues": "pending"}, {"job": "job2._id", "statues": "rejected"},
"profile": ["profile1", "profile2"],
"favor": ["job3._id", "job4._id", "job5._id"],

```

Name	Type	Description
<code>_id</code>	String	A globally unique identifier to represent the user
<code>email</code>	String	User's email address
<code>phone</code>	String	User's phone number
<code>firstName</code>	String	User's first name
<code>lastName</code>	String	User's last name
<code>password</code>	String	Encrypted password use for login verification
<code>jobs</code>	Array	The reference of jobs that user applied with three status: pending, rejected, approved
<code>profile</code>	Array	A list of User's detailed information
<code>favor</code>	Array	The reference of user's favorite job

Recruiters

The recruiters collection will contain information of the recruiter who have registered with the portal, both mandatory and optional.

1. Mandatory data:

- Email id
- Phone
- Name
- Password

2. optional features(these features will be saved into a sub-document `profile`, and must be fulfilled when recruiters try to post a job):

- ID photo(store on Google Cloud Platform or other storage platform)
- Gender
- State
- City
- company(An object including company name, position, and description)

One example of sub-document profile:

```
"_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
"photo": "one url",
"gender": "m",
"city": "Hoboken",
"state": "NJ",
"company": {"name": "xxx Inc", "position": "manager",
"description": "I have been working as a strategic recruiter at xxx Inc. for the past 5 years where I have successfully recruited talent for various company specific roles. At xxx Inc., we always welcome fresh talent, so if you believe you're one of them, give me a ping."}
```

Here's the table of `profile` field:

Name	Type	Description
<code>_id</code>	ObjectId	A globally unique identifier to represent the recruiter's profile.
<code>photo</code>	String	A URL point to the use's ID photo stores on Google Cloud Platform or other storage platform
<code>gender</code>	String	m for male, f for female, others for non-binary
<code>city</code>	String	City of the recruiter
<code>state</code>	String	State of the recruiter
<code>company</code>	Object	Company Information of the recruiter

3. We will also initialize the `jobs` field to be empty, and its value will be added later by users' operations.

Here's one example of `jobs`:

```
"jobs": [{ "job_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",  
  "applicant_id": ["7b7997a2-c0d2-4f8c-b27a-65412b5b6310",  
    "7b7543b2-c0d2-4f8c-b27a-6a1d4b5b6310"] },  
  { "job_id": "7b78942a2-c0d2-4f8c-b27a-6a1d4b5b6310",  
    "applicant_id": ["7b7997a2-c0d2-4f8c-b27a-654125786412",  
      "7b7543b2-c0d2-4f8c-b27a-6a1d541234510"] },  
  ]
```

Here's the table of `jobs` field:

Name	Type	Description
<code>job_id</code>	String	Id of the Job posted by the recruiter
<code>applicant_id</code>	Array	Ids of the applicants who applied for this job

Here's an example of whole recruiter data:

```
"_id": "7b7997a2-c0d2-4f8c-b27a-6h87fhsk4j87",  
"password": "$2a$08$XdvNkfdNIL8F8xsuIUeSbN0FgKOM0iV5H0skfVn7.PWncShU.0",  
"firstName": "Adam",  
"lastName": "Stone",  
"email": "astone@abc.com",  
"phone": "747-299-7453",  
"profile": {  
  "_id": "7b7997a2-c0d2-4f8c-b27a-6h87fhsk4h98",  
  "photo": "image url", "gender": "m",  
  "company": { "position": "Strategic Recruiter", "company": "ABC Inc.",  
    "city": "Hoboken", "state": "NJ",  
    "about": "Brief description of the recruiter" },  
}
```

```
"jobs": [
  {"job_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
   "applicant_id": ["7b7997a2-c0d2-4f8c-b27a-65412b5b6310",
                    "7b7543b2-c0d2-4f8c-b27a-6a1d4b5b6310"]},
  {"job_id": "7b78942a2-c0d2-4f8c-b27a-6a1d4b5b6310", "applicant_id":
   ["7b7997a2-c0d2-4f8c-b27a-654125786412",
    "7b7543b2-c0d2-4f8c-b27a-6a1d541234510"]},
]
```

Name	Type	Description
__id	String	A globally unique identifier to represent the user.
password	String	Encrypted password use for login verification
firstName	String	First name of the recruiter
lastName	String	Last name of the recruiter
email	String	Email of the recruiter
phone	String	Last name of the recruiter
profile	Object	Recruiter's detailed information
jobs	Array	A list of jobs that the recruiter has posted

JOBS

1. The jobs collection will contain all the Jobs info provided by recruiter. This collection will only store the active Jobs.

- title
- type of job
- employer company
- contact email/website
- location
- Poster
- Post date
- Expiry date
- job details (Object about company, role details, skills, benefits)

2. Job details will be a sub-document, here's one example of **details**:

```
"details": {
  "summary": "This is a abc company",
  "description": "This a devops role your responsibilities will be abc",
  "required": ["Java", "Mongodb"],
  "benefits": "you will get travelling allowance, insurance etc."
},
```

Table for **details**:

Name	Type	Description
summary	String	This the description about the company
description	String	Job responsibilities
required	Array	["Java", "Mongodb"]
benefits	String	Benifits of the Job

3. Optional features:

- pay range
- company profile pic

Recruiters can update the jobs

```
"_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
"title":"Software development summer 2022 internship"
"type": "internship",
"company": "Stevens",
"poster": "get it from recruiter id from recruiter collection",
"contact": "stevens.edu",
"city": "Hoboken",
"state": "NJ",
"postDate": "today's date in MM/DD/YYYY",
"expiryDate": "MM/DD/YYYY"
"details": {
  "summary": "This is a abc company",
  "description": "This a devops role your responsibilities will be abc",
  "required": ["Java", "Mongodb"],
  "benefits": "you will get travelling allowance, insurance etc."
},
"pay range": " 50 - 100 $ PER HOUR"
"companyPic": "image/pdf url"
```

Name	Type	Description
_id	String	A globally unique identifier to represent the job.
title	String	Title of the job
type	string	Internship/Full time/ part time/ Coop
company	String	Name of the employer company
poster	String	Name from recruiters collection using recruiter id
contact	String	website/email id
city	String	Name of the work city
state	String	Name of the work state
postDate	Date(Object)	current date of the post
expiryDate	Date(Object)	Date in MM/DD/YYYY format
details	Object	includes summary, responsibilities, benefits
pay range	String	"\$20/25 per hour"

Name	Type	Description
companyPic	String	“an url to display pictures”

This the **details** sub document all the fields in this object are optional