Tech On-boarding Project - TA Tracker

Objective - To build an application which provides assistance to the TA team to track the applicants and their journey.

Tech Stack

1. Node/Python
2. MongoDB
3. Git - Version Control
4. GCP - Deployment

Expectation - After completing this course you are expected to have the hands-on knowledge on following procedures

1. Authentication
2. CRUD Operations
3. FIle Upload
4. State Management
5. Background Jobs
6. Socket Implementation

Project Specifications

Users

The system will have two types of users

1. **TA Team Executive** - User will have the following responsibilities.
    a. Onboard candidate profiles
    b. Onboard Interviewers
    c. Add/update Candidate's availability
    d. View interview schedule for any candidate
    e. View candidates journey
2. **Interviewer** - User will have the following responsibilities.
    a. Add/update own availability
    b. Provide ratings for a candidate.
    c. Accept/Reject candidates profile for further processing.

Entities

User

User Model should have following fields

Field	Type	Description
_id	ObjectId	default id field for mongo
name	string	Name of the user
phone	number	Phone of the user
active	boolean	Whether user is active in our system or not
created_at	Date	Time at which user was created
updated_at	Date	Last time at which user was updated
type	Enum	ta_exec/interviewer

API operations on User Model

1. Create [Restriction - Only ta_exec can perform]
2. Login
3. Logout
4. Delete [Restriction - Only ta_exec can perform]

Candidate

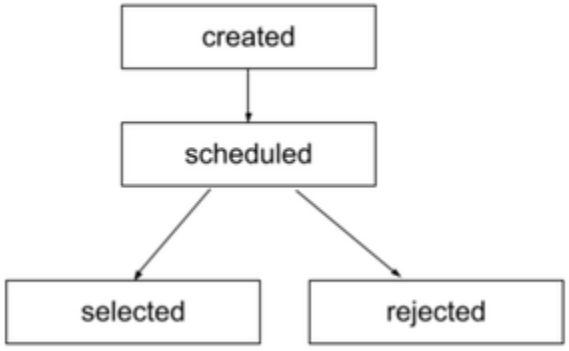
Field	Type	Description
_id	ObjectId	default id field for mongo
name	string	Name of the candidate

phone	number	phone number of the user
status	enum	created scheduled selected rejected
resume_link	string	link of the resume/CV
created_at	date	time when created
updated_at	date	time last updated
availablility_slots	array	array of available slots. it should have start and end time for all the slots
interview	ObjectId	reference to interview model

API operations on Candidate Model [Restriction - Only ta_exec can perform]

1. Create
2. Update Availability Slots
3. View Candidate's Info with interview details

State Management of Candidate Status



Interviewer Slot

Field	Type	Description
_id	ObjectId	default id field for mongo
interviewer_id	ObjectId	id of the interviewer. reference to user model
availablility_slots	array	array of available slots. it should have start and end time for all the slots

API Operations on Interviewer Slot model [Restriction - Only interviewer can perform]

1. Create Interviewer Slot
2. Update Interviewer Slot
3. Delete Interviewer Slot

Interview

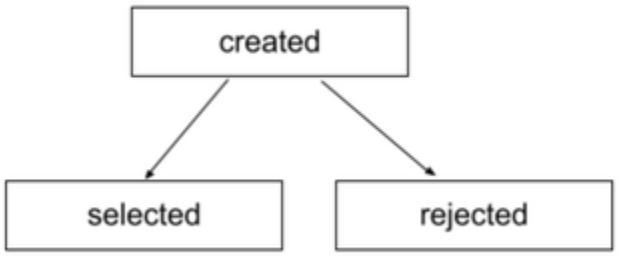
Field	Type	Description
_id	ObjectId	default id field for mongo
candidate_id	ObjectId	id of candidate. reference to candidate model
interviewer_id	ObjectId	id of the interviewer. reference to user model.

interview_slot	Object	`{ start: timestamp, end: timestamp }`
rating	enum	1/2/3/4/5
feedback	string	feedback on interview by the interviewer
status	enum	created/selected/rejected

API Operations on Interview Model [Restriction - Only interviewer can perform]

1. Add Rating, feedback and update status of an Interview

State Management for Interview Status



Interview Scheduler

There will be an hourly job running which will schedule interviews for the eligible candidates. The definition of eligible candidate is described as below.

1. Their profile should be in created state.
2. They should not already have any interview scheduled.

The job will check the candidates available slots and cross check them with all the interviewer's available slots.

1. If it finds a match it will create the interview and skip further processing for that candidate move on to process the next candidate.
2. If there is no match found it will trigger a socket message to the TA Team executive and move on to process the next candidate.

Please note that length of the interview will be 1hr.

Product Flow

1. Developer will create one user [Lets say TA1] as ta_exec.
2. New user (TA1) will login into the system.
3. TA1 will on-board interviewers.
4. On-boarded Interviewers will login.
5. On-boarded Interviewers will update their availability.
6. TA1 will on-board new candidates. He/she can either provide the candidate's availability at the time of creation or can update it later on.
7. Interview Scheduler [hourly job] will schedule the interview. Candidate status will move to scheduled. Interview will be in created state.
8. Interviewer will be able to provide rating, feedback and status against any candidate for which he was assigned the interview.
9. Based on the feedback, rating and status provided by the interviewer, candidate status will either move to rejected or selected. Interview status will also move to either rejected or selected.
10. TA1 will be able to view info for any candidate with interview details and their feedback.