

Key Milestone 1: Conceptual Schema

Group Members:

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1. Entity Descriptions:

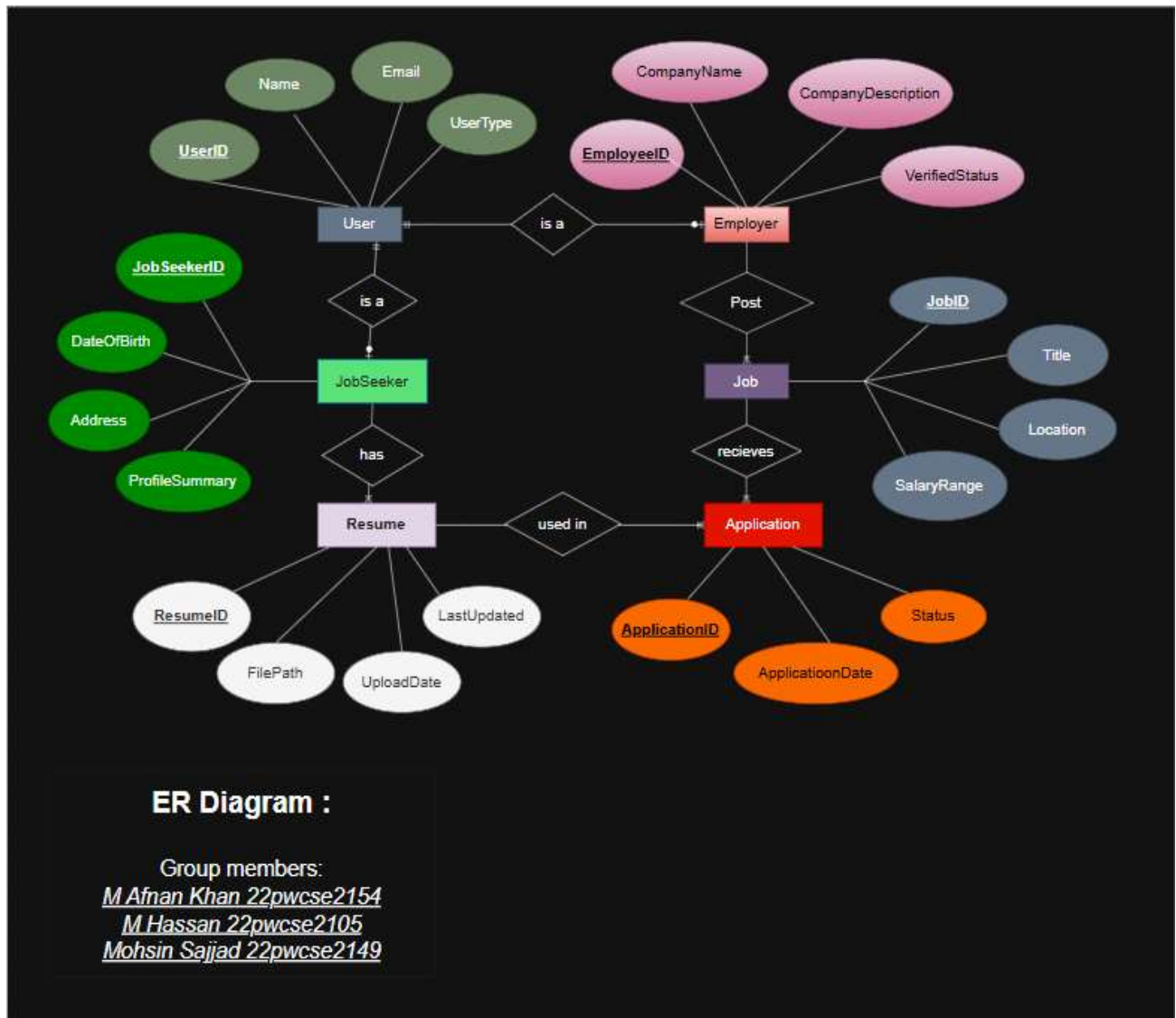
Below is a summary of the core entities, their primary keys, and main attributes:

Entity	Primary Key	Key Attributes	Description
User	UserID	Name, Email, Password, UserType	Stores common account data for both JobSeekers and Employers.
JobSeeker	SeekerID	UserID (FK), DateOfBirth, Address, ProfileSummary	Subtype of User; holds seeker-specific profile details.
Employer	EmployerID	UserID (FK), CompanyName, CompanyDescription, CompanyWebsite, VerifiedStatus	Subtype of User; holds employer-specific company details.
Resume	ResumeID	SeekerID (FK), FilePath, UploadDate, LastUpdated	Stores uploaded resumes for JobSeekers.
Job	JobID	EmployerID (FK), Title, Description, Requirements, Location, SalaryRange, PostedDate	Represents job listings posted by Employers.
Application	ApplicationID	JobID (FK), SeekerID (FK), ResumeID (FK), AppliedDate, Status	Captures a JobSeeker's application to a specific Job with one resume.

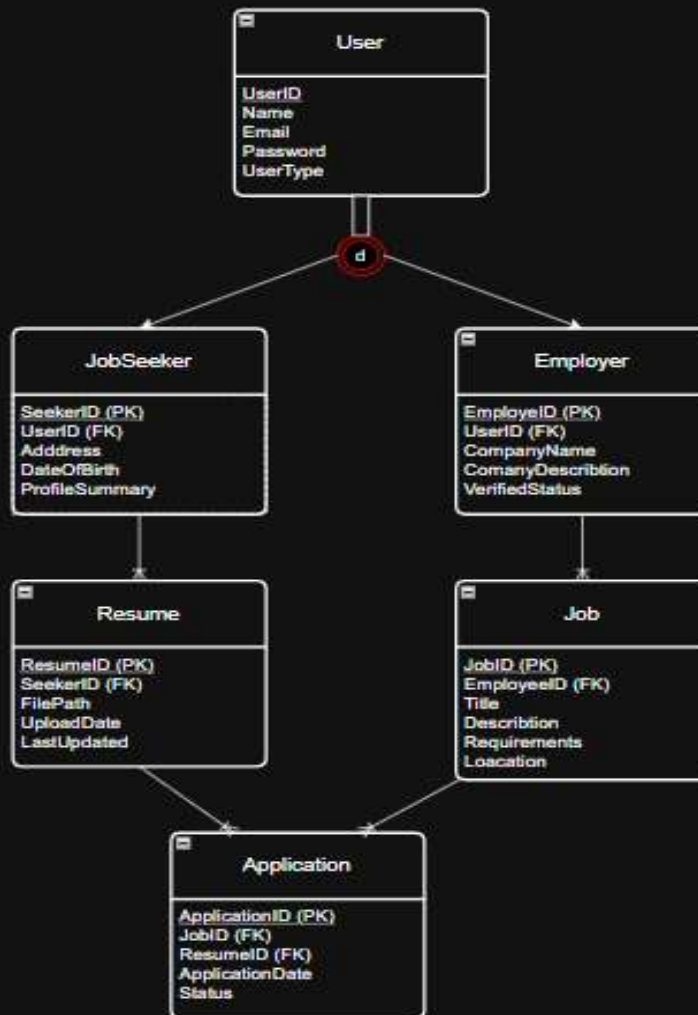
2. Detailed Business Rules:

- a. **User registration:** Every account must register as either a JobSeeker or an Employer; the UserType attribute enforces this.
- b. **Unique email:** The Email in **User** must be unique and validated before account activation.
- c. **Email verification:** Only Employers with *VerifiedStatus = TRUE* may post Job listings.
- d. **Job postings:** An Employer may post zero or more Jobs; each Job must reference exactly one Employer.
- e. **Resume upload:** A JobSeeker may upload multiple Resumes, but only one active Resume may be associated per Application.
- f. **Profile completeness:** JobSeekers must complete mandatory fields (*DateOfBirth, Address, Profile Summary*) before applying to any Job.
- g. **Application constraint:** A JobSeeker may apply to the same Job at most once; duplicate applications are disallowed.
- h. **Application status:** Each Application's Status must be one of: Pending, Reviewed, Interview, Offered, Rejected.
- i. **Posting requirements:** Each Job must include at minimum: Title, Description, Requirements, Location, and Posted Date.
- j. **Automatic timestamps:** Applied Date (*Application*) and Posted Date (*Job*) default to the current system date when the record is created.
- k. **Resume updates:** When a JobSeeker updates a Resume, the old version may be retained for audit but only the latest may be linked to new Applications.
- l. **Deletion rules:** Deleting a User cascades to delete associated JobSeeker/Employer sub-records; deleting an Employer prevents deletion if open Job listings exist.

3. Entity–Relationship Diagram (ERD):



4. Enhanced ER Diagram (EERD):



Enhance ER Diagram :

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REFERENCES:

1) google.com

2) chatgpt