P3 - Logical ERD Model

Here is a brief description of the changes made from the previous ERD to the new ERD:

1. Application Details: The new ERD simplifies the "Application" entity by focusing on essential attributes like "Application_ID," "Application_Status," and "Application_Date."
2. Referral Structure: The new ERD maintains a single referral per applicant, as indicated by the structure of the "Referral" entity..
3. Interview Process: The new ERD suggests a single interview per applicant by its design.
4. Cardinality Adjustments: Cardinality has been reviewed and adjusted in the new ERD to better represent relationships.
5. Entity Renaming and Attribute Changes: Entities and attributes have been renamed for clarity and consistency.
6. Structural Adjustments: The overall structure has been simplified for better readability, grouping related entities logically.

ERD Update Summary

- Entities and Relationships:

New Entities:We added entities like InterviewPanelAssignment, InterviewSchedule, HiringDecision, and Communication to handle specific processes. This helps reduce redundancy and makes the design clearer.

- Primary and Foreign Keys: Each entity now has a primary key to ensure uniqueness, and foreign keys are used to define relationships between entities, maintaining referential integrity.

- Elimination of Many-to-Many Relationships:

We have introduced associative entities like RecruiterJob and InterviewPanelAssignment. This makes the relationships easier to manage and ensures that they are clearly defined with foreign keys.

- Clear Role Definitions:

Entities such as InterviewPanelAssignment now specify roles within the interview process. Helps us understand it better.

- Data Redundancy Reduction:

We have minimised data redundancy by adding new entities and refining existing ones. For example, we separated ‘InterviewSchedule’ from ‘Interview’, the system can now handle more precise scheduling without repeating data unnecessarily.

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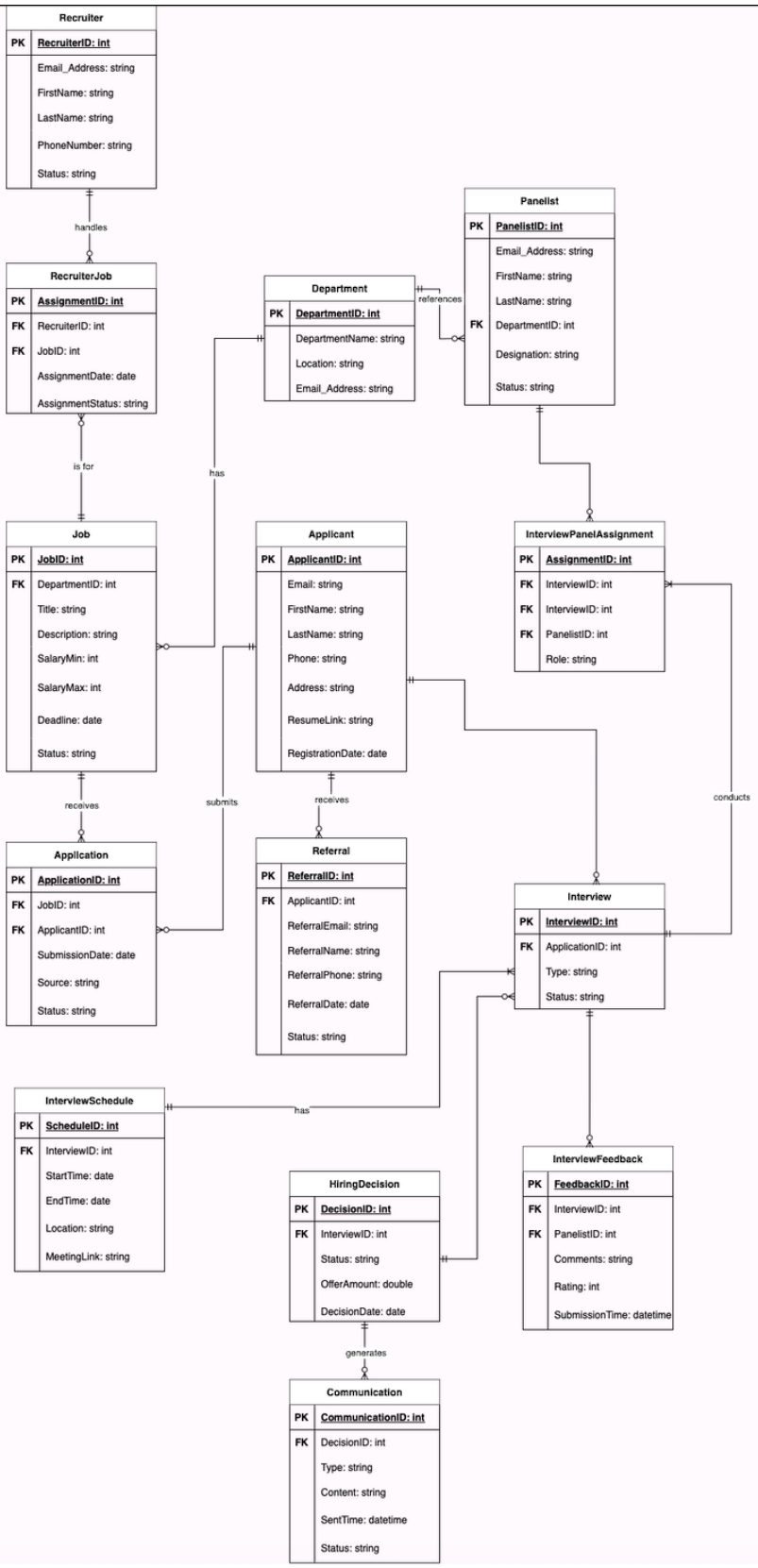
- Logical Data Model Features:

Atomic Attributes: All attributes are simple and indivisible, which makes the data structure easier to work with.

- No Composite Attributes:Each attribute represents a single data point, making it simpler to manage the data.
- Third Normal Form Compliance: The design ensures there are no partial or transitive dependencies, so that non-key attributes depend only on primary keys, which helps maintain data consistency.

UPDATED LOGICAL ERD MODEL:


Recruiter
PK RecruiterID: int
Email_Address: string
FirstName: string
LastName: string
PhoneNumber: string
Status: string
handles
RecruiterJob
PK AssignmentID: int
FK RecruiterID: int
FK JobID: int
AssignmentDate: date
AssignmentStatus: string
is for
Department
PK DepartmentID: int
DepartmentName: string
Location: string
Email_Address: string
references
Panelist
PK PanelistID: int
Email_Address: string
FirstName: string
LastName: string
FK DepartmentID: int
Designation: string
Status: string
has
Job
PK JobID: int
FK DepartmentID: int
Title: string
Description: string
SalaryMin: int
SalaryMax: int
Deadline: date
Status: string
receives
Applicant
PK ApplicantID: int
Email: string
FirstName: string
LastName: string
Phone: string
Address: string
ResumeLink: string
RegistrationDate: date
receives
InterviewPanelAssignment
PK AssignmentID: int
FK InterviewID: int
FK InterviewID: int
FK PanelistID: int
Role: string
conducts
Application
PK ApplicationID: int
FK JobID: int
FK ApplicantID: int
SubmissionDate: date
Source: string
Status: string
submits
Referral
PK ReferralID: int
FK ApplicantID: int
ReferralEmail: string
ReferralName: string
ReferralPhone: string
ReferralDate: date
Status: string
Interview
PK InterviewID: int
FK ApplicationID: int
Type: string
Status: string
InterviewSchedule
PK ScheduleID: int
FK InterviewID: int
StartTime: date
EndTime: date
Location: string
MeetingLink: string
has
HiringDecision
PK DecisionID: int
FK InterviewID: int
Status: string
OfferAmount: double
DecisionDate: date
InterviewFeedback
PK FeedbackID: int
FK InterviewID: int
FK PanelistID: int
Comments: string
Rating: int
SubmissionTime: datetime
generates
Communication
PK CommunicationID: int
FK DecisionID: int
Type: string
Content: string
SentTime: datetime
Status: string