

Business Template

Recruitment Agency

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* Business Description

1.1 Business Background

Our company is a Recruitment Agency that offers a complete range of services to both candidates and employers. We specialize in managing job listings, candidate registrations, and tracking applications. Our system matches candidates with job listings based on specific criteria such as skills, experience, location, and preferences, ensuring the best fit between job seekers and employers.

In addition to our core services, we provide value-added services like resume writing, interview coaching, and skills development. These additional services are designed to help candidates improve their job prospects by enhancing their resumes, preparing for interviews, and acquiring new skills.

1.2 Problems, Current Situation

Currently, the recruitment process can be time-consuming, with job seekers struggling to match their skills and experience to the right opportunities. Employers face difficulty in filtering through large pools of applicants and often miss out on ideal candidates due to inefficient matching systems.

Our recruitment process can be enhanced by a more integrated database and an efficient data warehouse (DWH) system that can store, manage, and analyze data from both candidates and employers in real-time.

1.3 The Benefits of Implementing a Database. Project Vision

Implementing a dedicated database system will streamline the recruitment process, automate job matching, and enhance candidate experience by providing them with personalized job recommendations. It will also help employers by providing a fast and reliable way to find the best candidates based on key criteria.

Additionally, having a database to manage candidate profiles, job listings, and application status will allow our team to improve tracking, reporting, and decision-making processes. The implementation of a data warehouse (DWH) will allow for more robust analysis of recruitment trends, candidate success, and overall performance.

* Model Description

2.1 Definitions & Acronyms

* DWH – Data Warehouse
* ETL – Extract, Transform, Load
* Candidate – A job seeker who registers on the platform.
* Company – An entity posting job listings and hiring candidates.
* Recruiter – A person that operates within a specific company on a specific position.
* Job Listing – A job vacancy posted by an employer.
* Application – A record of a candidate applying for a job.
* Interview – A scheduled meeting between a candidate and an employer.
* Placement – A candidate hired for a specific job.
* Service – Additional services availed by candidates, such as resume writing or interview coaching.

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2.2 Logical Scheme

The database will be designed with the following key tables and their relationships:

* Candidate: Stores details of job seekers.
* Job Listing: Stores job postings from companies.
* Company: Stores details of hiring companies.
* Application: Tracks applications submitted by candidates.
* Interview: Tracks interviews scheduled between candidates and employers.
* Placement: Stores placement records for successful candidates.
* Service: Tracks additional services used by candidates (e.g., resume writing, interview coaching).
* Recruiter: Stores information about recruiters managing job postings and candidate applications.
* Payment: Tracks payments made by candidates for premium services.
* Job Alert: Stores job alert subscriptions for candidates.
* Resume: Stores uploaded resumes.

2.3 Objects

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Field | Field Description | Data Type |
|  |  |  |  |
| Candidate | candidate id | Unique Identifier for Candidate (PK) | INT |
|  | name | Candidate’s Name | VARCHAR |
|  | email | Candidate’s Email Address (Unique) | VARCHAR |
|  | phone | Candidate’s Phone Number (Unique) | VARCHAR |
|  | experience | Candidate’s Phone Number (Unique) | VARCHAR |
|  | location | Candidate’s Phone Number (Unique) | VARCHAR |
|  | resume | Path to Candidate’s Resume File | VARCHAR |
|  |  |  |  |
| Skill | skill id | Unique Identifier for Skill (PK) | INT |
|  | skill name | Name of the skill | VARCHAR |
|  | skill level | Proficiency level (e.g., Beginner, Inter- | ENUM |
|  |  | mediate, Expert) |  |
|  |  |  |  |
| Skill&Candidate | skill id | identifier for Skill(FK) | INT |
|  | candidate id | identifier for a candidate | INT |
|  | skill level | Proficiency level (e.g., Beginner, Inter- | ENUM |
|  |  | mediate, Expert) |  |
|  |  |  |  |
| Preference&Candidate | preference id | identifier for preference(FK) | INT |
|  | candidate id | identifier for a candidate(FK) | INT |
|  | preference level | The level of satisfaction (e.g., highly | ENUM |
|  |  | satisfied,satisfied, standard ) |  |
|  |  |  |  |
| Preference | preference id | Unique Identifier for Preference (PK) | INT |
|  | desired salary | Expected Salary | DECIMAL |
|  | preferred location | Preferred Job Location | VARCHAR |
|  | job type | Type of Job (ENUM: ’Part-Time’, | ENUM |
|  |  | ’Full-Time’, ’Remote’) |  |
|  | industry | Preferred Industry | VARCHAR |
|  |  |  |  |
| Skill&Listing | skill id | Unique Identifier for Skill (FK) | INT |
|  | job listing | Unique Identifier Job Listing(FK) | INT |
|  |  |  |  |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Field | Field Description | | | Data Type |
|  |  |  | | |  |
| Job Listing | job id | Unique Identifier for Job Listing (PK) | | | INT |
|  | title | Job Title |  |  | VARCHAR |
|  | description | Job Description | |  | TEXT |
|  | recruiter id | Recruiter ID posting the job (FK) | | | INT |
|  | company id | Company ID posting the job (FK) | | | INT |
|  | location | Job Location | |  | VARCHAR |
|  | experience | Years of experience | | | INT |
|  | posted date | Date the Job was Posted | | | DATE |
|  | status | Job Status (ENUM: ’Open’, ’Closed’, | | | ENUM |
|  |  | ’Filled’) |  |  |  |
|  |  |  | | |  |
| Application | application id | Unique Identifier for Application (PK) | | | INT |
|  | candidate id | Candidate applying for the job (FK) | | | INT |
|  | job id | Job applied for (FK) | | | INT |
|  | status | Application Status (ENUM: ’Applied’, | | | ENUM |
|  |  | ’Under Review’, ’Rejected’, ’Hired’) | | |  |
|  | applied date | Date the Application was submitted | | | DATE |
|  |  |  | | |  |
| Interview | interview id | Unique Identifier for Interview (PK) | | | INT |
|  | candidate id | Candidate being interviewed (FK) | | | INT |
|  | job id | Job associated with interview (FK) | | | INT |
|  | interview date | Date and Time of Interview | | | DATETIME |
|  | status | Interview Status (ENUM: ’Scheduled’, | | | ENUM |
|  |  | ’Completed’, ’Canceled’) | | |  |
|  | feedback | Feedback from the Interviewer | | | TEXT |
|  |  |  | | |  |
| Placement | placement id | Unique Identifier for Placement (PK) | | | INT |
|  | candidate id | Candidate placed in the job (FK) | | | INT |
|  | job id | Job in which candidate was placed (FK) | | | INT |
|  | company id | Company that hired the candidate | | | INT |
|  |  | (FK) |  |  |  |
|  | placement date | Date of Placement | | | DATE |
|  | salary | Salary for the job placement | | | DECIMAL |
|  |  |  | | |  |
| Service | service id | Unique Identifier for Service (PK) | | | INT |
|  | candidate id | Candidate availing the service (FK) | | | INT |
|  | service type | Type of Service (ENUM: ’Resume Writ- | | | ENUM |
|  |  | ing’, ’Interview Coaching’, ’Skills De- | | |  |
|  |  | velopment’) | |  |  |
|  | status | Service | Status | (ENUM: ’Pending’, | ENUM |
|  |  | ’Completed’) | |  |  |
|  |  |  | | |  |
| Recruiter | recruiter id | Unique Identifier for Recruiter (PK) | | | INT |
|  | name | Recruiter’s Name | |  | VARCHAR |
|  | email | Recruiter’s Email Address (Unique) | | | VARCHAR |
|  | phone | Recruiter’s Phone Number (Unique) | | | VARCHAR |
|  | company id | Company associated with the recruiter | | | INT |
|  |  | (FK) |  |  |  |
|  |  |  | | |  |
| Payment | payment id | Unique Identifier for Payment (PK) | | | INT |
|  | candidate id | Candidate making the payment (FK) | | | INT |
|  | amount | Amount Paid for the service | | | DECIMAL |
|  | payment date | Date the payment was made | | | DATE |
|  | status | Payment | Status | (ENUM: ’Pending’, | ENUM |
|  |  | ’Completed’) | |  |  |
|  |  |  | | |  |
| Job Alert | alert id | Unique Identifier for Job Alert (PK) | | | INT |
|  | candidate id | Candidate subscribed to the job alert | | | INT |
|  |  | (FK) |  |  |  |
|  | job category | Job Category for Alert | | | VARCHAR |

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|  |  |  |  |
| --- | --- | --- | --- |
| Name | Field | Field Description | Data Type |
|  |  |  |  |
|  | frequency | Alert Frequency (ENUM: ’Daily’, | ENUM |
|  |  | ’Weekly’) |  |
|  | status | Alert Status (ENUM: ’Active’, ’Inac- | ENUM |
|  |  | tive’) |  |
|  |  |  |  |
| Company | company id | Unique Identifier for company (PK) | INT |
|  | name | Name of the company | VARCHAR |
|  | industry | The industry the company is in | VARCHAR |
|  | location | The location of the company | VARCHAR |
|  | contact email | email of the company | VARCHAR |
|  | contact phone | the phone of the company | VARCHAR |
|  |  |  |  |

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2.4 Relationships

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Entity A | Entity B | Type |  | Description | |
|  |  |  | |  |  |
| Candidate | Job Listing | Many-to-Many(via Appli- | | A candidate can apply to multiple jobs and | |
|  |  | cation and via Interview) | | multiple candidates can apply for a job posi- | |
|  |  |  |  | tion | |
| Candidate | Interview | One-to-Many |  | A candidate can have multiple interviews. | |
| Candidate | Skill | Many-to-Many (via Skill& | | A candidate can have multiple skills (program- | |
|  |  | Candidate) |  | ming, qualifications, etc.) and a skill can be | |
|  |  |  |  | owned by multiple candidates | |
| Candidate | Preference | Many-to-Many(via Pref- | | A candidate can have multiple job preferences | |
|  |  | erence&Candidate) |  | (salary, industry, etc.). and multiple candi- | |
|  |  |  |  | dates can have the same job preference | |
| Candidate | Payment | One-to-Many |  | A candidate can make multiple payments for | |
|  |  |  |  | different services. | |
| Candidate | Service | One-to-Many |  | A candidate can use multiple services. | |
| Candidate | Placement | One-to-one |  | A candidate can be hired(placed) in only one | |
|  |  |  |  | position at a time. | |
| Candidate | Job alert | One-to-Many |  | A candidate can be subscribed to multiple | |
|  |  |  |  | types of job alerts. | |
| Recruiter | Job Listing | One-to-Many |  | A recruiter manages multiple job listings. | |
| Company | Job Listing | One-to-Many |  | A company posts multiple job listings. | |
| Company | Recruiter | One-to-Many |  | A company can have multiple recruiters for | |
|  |  |  |  | different job listings. | |
| Company | Placement | One-to-many |  | A company can have multiple placements for | |
|  |  |  |  | different positions | |
| Job Listing | Placement | One-to-One |  | A job in my definition is filled after a the po- | |
|  |  |  |  | sition is filled by a candidate . | |
| Job Listing | Skill | Many-to-Many | (via | A job listing can require different skills and a | |
|  |  | Skill&Listing) |  | skill can be required by different jobs. | |
| Payment | Service | One-to-one |  | A payment is made for a specific service. | |
|  |  |  |  |  |  |

Table 2: Entity-Relationship Table

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