**Experiment 3**

The **Data Dictionary** of the **Recruitment System** includes the following components. For recruitment system we are making Data Dictionary using MYSQL

:

1. **Authentication** – Handles user login, authentication, and role management.
2. **Admin** – Oversees platform configurations and manages recruiters.
3. **Recruiter** – Maintains recruiter profiles and job postings.
4. **Job Seeker** – Stores job seeker information, including resumes.
5. **Jobs** – Contains job listings and relevant details.
6. **Applications** – Tracks job applications and their statuses.
7. **Interviews** – Manages interview scheduling and progress.
8. **Messaging** – Facilitates communication between users.

CREATE DATABASE RecruitmentSystem;

USE RecruitmentSystem;

**-- 1. Authentication Table**

CREATE TABLE Authentication (

user\_id INT AUTO\_INCREMENT PRIMARY KEY,

email VARCHAR(255) UNIQUE NOT NULL,

password VARCHAR(255) NOT NULL,

role ENUM('admin', 'recruiter', 'job\_seeker') NOT NULL,

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| user\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each user |
| email | VARCHAR(255) | UNIQUE, NOT NULL | Email address used for login |
| password | VARCHAR(255) | NOT NULL | Hashed user password |
| role | ENUM('admin', 'recruiter', 'job\_seeker') | NOT NULL | Defines the user role in the system |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Account creation date |

**-- 2. Admin Table**

CREATE TABLE Admin (

admin\_id INT AUTO\_INCREMENT PRIMARY KEY,

user\_id INT UNIQUE,

full\_name VARCHAR(255) NOT NULL,

phone VARCHAR(20) UNIQUE,

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES Authentication(user\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| admin\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for admins |
| user\_id | INT | FOREIGN KEY (user\_id) | Links admin to authentication table |
| full\_name | VARCHAR(255) | NOT NULL | Full name of the admin |
| phone | VARCHAR(20) | UNIQUE | Contact number |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Account creation date |

**-- 3. Recruiter Table**

CREATE TABLE Recruiter (

recruiter\_id INT AUTO\_INCREMENT PRIMARY KEY,

user\_id INT UNIQUE,

company\_name VARCHAR (255) NOT NULL,

industry VARCHAR (100) NOT NULL,

phone VARCHAR (20) UNIQUE,

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES Authentication(user\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| recruiter\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for recruiters |
| user\_id | INT | FOREIGN KEY (user\_id) | Links recruiter to authentication table |
| company\_name | VARCHAR(255) | NOT NULL | Name of the company |
| industry | VARCHAR(100) | NOT NULL | Industry the recruiter operates in |
| phone | VARCHAR(20) | UNIQUE | Contact number |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Account creation date |

**-- 4. Job Seeker Table**

CREATE TABLE JobSeeker (

seeker\_id INT AUTO\_INCREMENT PRIMARY KEY,

user\_id INT UNIQUE,

full\_name VARCHAR(255) NOT NULL,

phone VARCHAR(20) UNIQUE,

resume TEXT,

created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES Authentication(user\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| seeker\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for job seekers |
| user\_id | INT | FOREIGN KEY (user\_id) | Links job seeker to authentication table |
| full\_name | VARCHAR(255) | NOT NULL | Full name of the job seeker |
| phone | VARCHAR(20) | UNIQUE | Contact number |
| resume | TEXT | NULLABLE | Link to resume file |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Account creation date |

**-- 5. Jobs Table**

CREATE TABLE Jobs (

job\_id INT AUTO\_INCREMENT PRIMARY KEY,

recruiter\_id INT,

title VARCHAR(255) NOT NULL,

description TEXT NOT NULL,

location VARCHAR(255) NOT NULL,

salary DECIMAL(10,2),

job\_type ENUM('full-time', 'part-time', 'remote', 'contract') NOT NULL,

posted\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (recruiter\_id) REFERENCES Recruiter(recruiter\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| job\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each job posting |
| recruiter\_id | INT | FOREIGN KEY (recruiter\_id) | Links job to the recruiter who posted it |
| title | VARCHAR(255) | NOT NULL | Job title |
| description | TEXT | NOT NULL | Detailed job description |
| location | VARCHAR(255) | NOT NULL | Job location |
| salary | DECIMAL(10,2) | NULLABLE | Salary offered |
| job\_type | ENUM('full-time', 'part-time', 'remote', 'contract') | NOT NULL | Type of job |
| posted\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Job posting date |

**-- 6. Applications Table**

CREATE TABLE Applications (

application\_id INT AUTO\_INCREMENT PRIMARY KEY,

job\_id INT,

seeker\_id INT,

status ENUM('pending', 'reviewed', 'accepted', 'rejected') DEFAULT 'pending',

applied\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (job\_id) REFERENCES Jobs(job\_id) ON DELETE CASCADE,

FOREIGN KEY (seeker\_id) REFERENCES JobSeeker(seeker\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| application\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each job application |
| job\_id | INT | FOREIGN KEY (job\_id) | Links application to a job posting |
| seeker\_id | INT | FOREIGN KEY (seeker\_id) | Links application to a job seeker |
| status | ENUM('pending', 'reviewed', 'accepted', 'rejected') | DEFAULT 'pending' | Application status |
| applied\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Date when application was submitted |

**-- 7. Interviews Table**

CREATE TABLE Interviews (

interview\_id INT AUTO\_INCREMENT PRIMARY KEY,

application\_id INT,

interview\_date DATETIME NOT NULL,

mode ENUM('online', 'offline') NOT NULL,

status ENUM('scheduled', 'completed', 'canceled') DEFAULT 'scheduled',

FOREIGN KEY (application\_id) REFERENCES Applications(application\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| interview\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each interview |
| application\_id | INT | FOREIGN KEY (application\_id) | Links interview to a job application |
| interview\_date | DATETIME | NOT NULL | Date and time of the interview |
| mode | ENUM('online', 'offline') | NOT NULL | Whether interview is virtual or in-person |
| status | ENUM('scheduled', 'completed', 'canceled') | DEFAULT 'scheduled' | Interview status |

**-- 8. Messaging Table**

CREATE TABLE Messaging (

message\_id INT AUTO\_INCREMENT PRIMARY KEY,

sender\_id INT,

receiver\_id INT,

content TEXT NOT NULL,

sent\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (sender\_id) REFERENCES Authentication(user\_id) ON DELETE CASCADE,

FOREIGN KEY (receiver\_id) REFERENCES Authentication(user\_id) ON DELETE CASCADE

);

| **Field Name** | **Data Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| message\_id | INT | PRIMARY KEY, AUTO\_INCREMENT | Unique identifier for each message |
| sender\_id | INT | FOREIGN KEY (user\_id) | User who sends the message |
| receiver\_id | INT | FOREIGN KEY (user\_id) | User who receives the message |
| content | TEXT | NOT NULL | Message content |
| sent\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Timestamp when the message was sent |

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