a recommended schema with key tables and columns:

**1. Employees Table**

This table stores basic employee information, which will be used for authentication and as the primary source for answering queries.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| employee\_id | INT (Primary Key, Auto Increment) | Unique identifier for each employee |
| first\_name | VARCHAR(50) | Employee's first name |
| last\_name | VARCHAR(50) | Employee's last name |
| email | VARCHAR(100) | Employee's email (used for authentication) |
| phone\_number | VARCHAR(15) | Employee's contact number |
| department | VARCHAR(50) | Employee's department |
| position | VARCHAR(50) | Job title or position |
| hire\_date | DATE | Date when the employee was hired |

**2. Salaries Table**

This table stores salary-related information.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| salary\_id | INT (Primary Key, Auto Increment) | Unique identifier for each salary record |
| employee\_id | INT (Foreign Key) | References the employee |
| base\_salary | DECIMAL(10, 2) | Base salary of the employee |
| bonus | DECIMAL(10, 2) | Latest bonus amount |
| currency | VARCHAR(10) | Currency of the salary |
| last\_updated | DATE | Date when salary data was last updated |

**3. Leaves Table**

This table stores information related to leave balances.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| leave\_id | INT (Primary Key, Auto Increment) | Unique identifier for each leave record |
| employee\_id | INT (Foreign Key) | References the employee |
| annual\_leave\_balance | INT | Number of annual leave days remaining |
| sick\_leave\_balance | INT | Number of sick leave days remaining |
| last\_updated | DATE | Date when leave data was last updated |

**4. Performance Table**

This table stores performance-related information.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| performance\_id | INT (Primary Key, Auto Increment) | Unique identifier for each performance record |
| employee\_id | INT (Foreign Key) | References the employee |
| rating | DECIMAL(3, 2) | Employee's performance rating (e.g., 4.5) |
| review\_period | VARCHAR(20) | Period of the review (e.g., Q1, 2024) |
| last\_review\_date | DATE | Date of the last performance review |

**5. Authentication Table**

This table handles employee login and authentication details.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| auth\_id | INT (Primary Key, Auto Increment) | Unique identifier for each authentication record |
| employee\_id | INT (Foreign Key) | References the employee |
| password\_hash | VARCHAR(255) | Hashed password for secure authentication |
| last\_login | DATETIME | Date and time of the last login attempt |

**Relationships:**

* Employees is the core table, and the other tables (Salaries, Leaves, Performance, Authentication) have a foreign key relationship to employee\_id.
* Each employee can have multiple entries in the Salaries, Leaves, and Performance tables (e.g., for bonuses, different leave periods, and performance reviews).

simplify the schema into a single table that combines essential employee information. Here's how it could look:

**Employees Table (Single Table Schema)**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Data Type** | **Description** |
| employee\_id | INT (Primary Key, Auto Increment) | Unique identifier for each employee |
| first\_name | VARCHAR(50) | Employee's first name |
| last\_name | VARCHAR(50) | Employee's last name |
| email | VARCHAR(100) | Employee's email (used for authentication) |
| phone\_number | VARCHAR(15) | Employee's contact number |
| department | VARCHAR(50) | Employee's department |
| position | VARCHAR(50) | Job title or position |
| hire\_date | DATE | Date when the employee was hired |
| base\_salary | DECIMAL(10, 2) | Employee's base salary |
| bonus | DECIMAL(10, 2) | Most recent bonus amount |
| currency | VARCHAR(10) | Currency of the salary |
| annual\_leave\_balance | INT | Number of annual leave days remaining |
| sick\_leave\_balance | INT | Number of sick leave days remaining |
| performance\_rating | DECIMAL(3, 2) | Latest performance rating (e.g., 4.5) |
| review\_period | VARCHAR(20) | Period of the last review (e.g., Q1, 2024) |
| last\_review\_date | DATE | Date of the last performance review |
| password\_hash | VARCHAR(255) | Hashed password for secure authentication |
| last\_login | DATETIME | Date and time of the last login |

**Explanation:**

* This table combines employee personal details, salary, leave balances, performance information, and authentication data.
* For authentication, the password\_hash field is used, and last\_login tracks the employee’s most recent login attempt.
* Fields like base\_salary, bonus, annual\_leave\_balance, and performance\_rating cover the essential queries employees might ask.