**Users Table**

|  |  |  |
| --- | --- | --- |
| **Column** | **Type** | **Description** |
| **id** | INT AUTO\_INCREMENT **PK** | Unique user identifier |
| first name | VARCHAR(100) | User’s given name |
| last name | VARCHAR(100) | User’s family name |
| email | VARCHAR(255) **UNIQUE** | Login email (must be unique) |
| phone | VARCHAR(20) | 10‑digit phone number |
| password | VARCHAR(255) | Hashed password |
| role | ENUM('user','super\_admin') | Account type / permission level |
| created at | TIMESTAMP DEFAULT CURRENT\_TIMESTAMP | Account creation timestamp |

**Departments Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique department identifier |
| name | VARCHAR(100) | Department name (e.g. “MIS”, “Finance”) |

**Book exchange Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique book listing identifier |
| book name | VARCHAR(255) | Title of the book |
| department\_id | INT **FK** → departments.id | Which department this book belongs to |

**Book offers Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique offer identifier |
| book\_id | INT **FK** → book\_exchange.id | The book being offered |
| user\_id | INT **FK** → users.id | Who is offering the book |
| desired\_book\_id | INT **FK** → book\_exchange.id | (Optional) Book they want in exchange (“Give‑for‑Take”) |
| details | TEXT | Notes on book condition, extras, etc. |
| timestamp | DATETIME DEFAULT CURRENT\_TIMESTAMP | When the offer was created |

**Book Requests Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique request identifier |
| offer\_id | INT **FK** → book\_offers.id | Which offer is being requested |
| requester\_id | INT **FK** → users.id | Who is requesting the book |
| status | ENUM('pending','accepted','rejected') | Current request state |
| timestamp | DATETIME DEFAULT CURRENT\_TIMESTAMP | When the request was made |

**Notification Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique notification identifier |
| user\_id | INT **FK** → users.id (sender) | Who triggered the notification (e.g. requester) |
| receiver\_id | INT **FK** → users.id | Who should receive the notification |
| action\_id | INT **FK** → book\_requests.id | What action this notification is about (link to request) |
| type | VARCHAR(100) | Notification category (e.g. “book\_request”) |
| message | TEXT | Human‑readable notification text |
| is\_read | BOOLEAN DEFAULT FALSE | Whether the notification has been seen by the receiver |
| created\_at | TIMESTAMP DEFAULT CURRENT\_TIMESTAMP | When the notification was created |

**Chat Messages Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique message identifier |
| sender\_id | INT **FK** → users.id | Who sent the message |
| receiver\_id | INT **FK** → users.id | Who receives the message |
| message | TEXT | The chat message content |
| timestamp | DATETIME DEFAULT CURRENT\_TIMESTAMP | When the message was sent |

**Courses Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique course identifier |
| department\_id | INT **FK** → departments.id | Which department offers this course |
| course\_name | VARCHAR(255) | Course title |
| course\_link | TEXT | URL or path to download/view course materials |
| course\_description | TEXT | Summary or syllabus description |

**Books Table (Static Materials) Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique static‑book identifier |
| department\_id | INT **FK** → departments.id | Which department this resource belongs to |
| book\_name | VARCHAR(255) | Title of the static learning material |
| book\_material | TEXT | URL or path to the file |

**Academic Staff Table**

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INT AUTO\_INCREMENT **PK** | Unique staff member identifier |
| name | VARCHAR(255) | Full name |
| email | VARCHAR(255) | University email |
| linkedin | VARCHAR(255) | Link to LinkedIn profile (optional) |
| image | TEXT | Path or URL to profile picture |
| office\_location | VARCHAR(255) | Office room or building (e.g., “Main 4th Floor”) |
| department\_id | INT **FK** → departments.id | Department the staff belongs to |