1️⃣ USER

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| **id** | **BIGINT** | **PK, auto-increment** | **Unique user ID** |
| **name** | **VARCHAR(100)** | **NOT NULL** | **Full name** |
| **email** | **VARCHAR(100)** | **UNIQUE, NOT NULL** | **Login email** |
| **password** | **VARCHAR(255)** | **NOT NULL** | **Hashed password** |
| **role** | **VARCHAR(20)** | **NOT NULL** | **USER, OWNER, ADMIN** |
| **created\_at** | **TIMESTAMP** | **DEFAULT CURRENT\_TIMESTAMP** | **Account creation time** |

HOSTEL

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| **id** | **BIGINT** | **PK, auto-increment** | **Unique hostel ID** |
| **name** | **VARCHAR(150)** | **NOT NULL** | **Hostel name** |
| **description** | **TEXT** | **NULL** | **Overview or details** |
| **address** | **VARCHAR(255)** | **NOT NULL** | **Full address** |
| **city** | **VARCHAR(100)** | **NULL** | **City** |
| **state** | **VARCHAR(100)** | **NULL** | **State/region** |
| **contact\_number** | **VARCHAR(20)** | **NOT NULL** | **Owner contact** |
| **latitude** | **DECIMAL(10,7)** | **NULL** | **Geo location latitude** |
| **longitude** | **DECIMAL(11,8)** | **NULL** | **Geo location longitude** |
| **approved** | **BOOLEAN** | **DEFAULT FALSE** | **Admin approval** |
| **owner\_id** | **BIGINT** | **FK → user(id)** | **Linked owner** |
| **created\_at** | **TIMESTAMP** | **DEFAULT CURRENT\_TIMESTAMP** | **Created timestamp** |

**Relationships:**

* 1:N → room\_type
* 1:N → facility

3️⃣ FACILITY (Hostel-level)

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| **id** | **BIGINT** | **PK, auto-increment** | **Facility ID** |
| **hostel\_id** | **BIGINT** | **FK → hostel(id)** | **Parent hostel** |
| **name** | **VARCHAR(100)** | **NOT NULL** | **Facility name (e.g., WiFi, Laundry)** |
| **description** | **VARCHAR(255)** | **NULL** | **Optional details** |

4️⃣ ROOM\_TYPE

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Room type ID |
| hostel\_id | BIGINT | FK → hostel(id) | Parent hostel |
| type | VARCHAR(50) | NOT NULL | e.g., 1-sharing, 2-sharing |
| price\_per\_month | DECIMAL(10,2) | NOT NULL | Monthly rate |
| total\_rooms | INT | DEFAULT 0 | Total rooms of this type |
| available\_rooms | INT | DEFAULT 0 | Currently vacant rooms |
| bathroom\_attached | BOOLEAN | DEFAULT FALSE | Private bathroom flag |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Timestamp |

**Relationships:**

* 1:N → room\_attribute
* 1:N → resident
* 1:N → room\_image

5️⃣ ROOM\_ATTRIBUTE (Room-level extendable attributes)

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Attribute ID |
| room\_type\_id | BIGINT | FK → room\_type(id) | Parent room type |
| key\_name | VARCHAR(100) | NOT NULL | Attribute key (e.g., AC, Balcony) |
| value | VARCHAR(255) | NULL | Attribute value (e.g., true, Split, 2) |

**Purpose:** Fully extendable features per room. Add new keys anytime.

ROOM\_IMAGE

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Image ID |
| room\_type\_id | BIGINT | FK → room\_type(id) | Linked room |
| url | VARCHAR(255) | NOT NULL | File path or S3 link |

7️⃣ RESIDENT (Current occupants)

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Resident ID |
| room\_type\_id | BIGINT | FK → room\_type(id) | Room they occupy |
| age | INT | NULL | Age |
| profession | VARCHAR(100) | NULL | Job or student |
| hometown | VARCHAR(100) | NULL | Place of origin |
| gender | VARCHAR(10) | NULL | Optional |

8️⃣ BOOKING

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Booking ID |
| user\_id | BIGINT | FK → user(id) | Booking user |
| room\_type\_id | BIGINT | FK → room\_type(id) | Booked room type |
| check\_in\_date | DATE | NOT NULL | Check-in |
| check\_out\_date | DATE | NULL | Check-out |
| status | VARCHAR(20) | DEFAULT 'BOOKED' | BOOKED / CANCELLED / COMPLETED |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Timestamp |

9️⃣ REVIEW

| **Column** | **Type** | **Constraints** | **Description** |
| --- | --- | --- | --- |
| id | BIGINT | PK, auto-increment | Review ID |
| user\_id | BIGINT | FK → user(id) | Reviewer |
| hostel\_id | BIGINT | FK → hostel(id) | Reviewed hostel |
| rating | INT | CHECK (1–5) | 1–5 stars |
| comment | TEXT | NULL | Optional feedback |
| created\_at | TIMESTAMP | DEFAULT CURRENT\_TIMESTAMP | Timestamp |