

1. TABLE DESIGN (Table Name + Attributes with Types)

Table: USERS

Field	Type
user_id	INT AUTO_INCREMENT PRIMARY KEY
name	VARCHAR(100)
email	VARCHAR(100) UNIQUE
phone	VARCHAR(20)
password_hash	VARCHAR(255)
rating	DECIMAL(3,2)
preferences	TEXT
created_at	DATETIME

Table: VERIFICATION

Field	Type
verification_id	INT AUTO_INCREMENT PRIMARY KEY
user_id	INT (FK)
status	ENUM('Pending','Approved','Rejected')
verified_at	DATETIME

Table: IDENTITY_DOCUMENTS

Field	Type
document_id	INT AUTO_INCREMENT PRIMARY KEY
user_id	INT (FK)
doc_type	VARCHAR(50)
doc_image	LONGBLOB / TEXT
uploaded_at	DATETIME

Table: RIDES

Field	Type
ride_id	INT AUTO_INCREMENT PRIMARY KEY
driver_id	INT (FK)
origin	VARCHAR(100)
destination	VARCHAR(100)
date_time	DATETIME

total_seats	INT
available_seats	INT
price_per_seat	DECIMAL(8,2)
description	TEXT
status	ENUM('Open','Closed','Completed')

Table: BOOKINGS

Field	Type
booking_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
passenger_id	INT (FK)
seats_booked	INT
amount_paid	DECIMAL(10,2)
booking_status	ENUM('Pending','Confirmed','Cancelled')
booked_at	DATETIME

Table: FEEDBACK

Field	Type
feedback_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
from_user	INT (FK)
to_user	INT (FK)
rating	INT
comments	TEXT
created_at	DATETIME

Table: CHAT_MESSAGES

Field	Type
message_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
sender_id	INT (FK)
message_text	TEXT
sent_at	DATETIME

Table: LONG_TRIP_GROUP

Field	Type
group_id	INT AUTO_INCREMENT PRIMARY KEY
created_by	INT (FK)
origin	VARCHAR(100)
destination	VARCHAR(100)
trip_date	DATE
vehicle_type	VARCHAR(50)
total_seats	INT

Table: GROUP_MEMBERS

Field	Type
member_id	INT AUTO_INCREMENT PRIMARY KEY
group_id	INT (FK)
user_id	INT (FK)
seats_taken	INT

2. TABLE NORMALIZATION (1NF → 2NF → 3NF)

UNNORMALIZED FORM (UNF)

A single mixed table containing user, ride, booking, document, and feedback fields.
Problems: redundancy, multivalued fields, anomalies.

FIRST NORMAL FORM (1NF)

- All values are atomic.
- Removed repeating groups.
- Separated entities into Users, Rides, Bookings, Identity_Documents, Feedback.

SECOND NORMAL FORM (2NF)

- Removed partial dependencies.
- User-related details moved to USERS.
- Booking table retains only booking-related attributes.

THIRD NORMAL FORM (3NF)

- Removed transitive dependencies.
- Rides store driver_id instead of driver attributes.
- All non-key attributes now depend only on the primary key.

3. FINAL TABLE DESIGN (Normalized to 3NF – Attributes with Types)

Table: USERS

Field	Type
user_id	INT AUTO_INCREMENT PRIMARY KEY
name	VARCHAR(100)
email	VARCHAR(100) UNIQUE
phone	VARCHAR(20)
password_hash	VARCHAR(255)
rating	DECIMAL(3,2)
preferences	TEXT
created_at	DATETIME

Table: VERIFICATION

Field	Type
verification_id	INT AUTO_INCREMENT PRIMARY KEY
user_id	INT (FK)
status	ENUM('Pending','Approved','Rejected')
verified_at	DATETIME

Table: IDENTITY_DOCUMENTS

Field	Type
document_id	INT AUTO_INCREMENT PRIMARY KEY
user_id	INT (FK)
doc_type	VARCHAR(50)
doc_image	LONGBLOB / TEXT
uploaded_at	DATETIME

Table: RIDES

Field	Type
ride_id	INT AUTO_INCREMENT PRIMARY KEY
driver_id	INT (FK)
origin	VARCHAR(100)
destination	VARCHAR(100)
date_time	DATETIME
total_seats	INT
available_seats	INT

price_per_seat	DECIMAL(8,2)
description	TEXT
status	ENUM('Open','Closed','Completed')

Table: BOOKINGS

Field	Type
booking_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
passenger_id	INT (FK)
seats_booked	INT
amount_paid	DECIMAL(10,2)
booking_status	ENUM('Pending','Confirmed','Cancelled')
booked_at	DATETIME

Table: FEEDBACK

Field	Type
feedback_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
from_user	INT (FK)
to_user	INT (FK)
rating	INT
comments	TEXT
created_at	DATETIME

Table: CHAT_MESSAGES

Field	Type
message_id	INT AUTO_INCREMENT PRIMARY KEY
ride_id	INT (FK)
sender_id	INT (FK)
message_text	TEXT
sent_at	DATETIME

Table: LONG_TRIP_GROUP

Field	Type
group_id	INT AUTO_INCREMENT PRIMARY KEY

created_by	INT (FK)
origin	VARCHAR(100)
destination	VARCHAR(100)
trip_date	DATE
vehicle_type	VARCHAR(50)
total_seats	INT

Table: GROUP_MEMBERS

Field	Type
member_id	INT AUTO_INCREMENT PRIMARY KEY
group_id	INT (FK)
user_id	INT (FK)
seats_taken	INT