

# Travel Bridge

## An Travel Ticket Booking Application

### Tables:

#### 1. Users Table

This table stores user information for customers, transport providers, and admins.

Column Name	Data Type	Description
UserID	INT (Primary Key, Auto Increment)	Unique ID for each user.
UserName	VARCHAR(100)	The name of the user.
Email	VARCHAR(100) UNIQUE	The user's email address, must be unique.
PasswordHash	VARCHAR(255)	Encrypted password for security.
PhoneNumber	VARCHAR(15)	Contact number of the user.
UserRole	VARCHAR(50) CHECK ('Customer', 'Provider', 'Admin')	The role of the user in the system.
CreatedAt	DATETIME DEFAULT GETDATE()	Date and time when the account was created.
LastLogin	DATETIME	The last login timestamp.

#### 2. Transport Providers Table

Stores information about companies or providers offering transport services.

Column Name	Data Type	Description
ProviderID	INT (Primary Key, Auto Increment)	Unique ID for each provider.
ProviderName	VARCHAR(100)	Name of the transport provider.
TransportName	VARCHAR(100)	Name of the transport service.
ContactEmail	VARCHAR(100)	Email of the provider for contact.
ContactPhone	VARCHAR(15)	Phone number for contact.
ProviderType	VARCHAR(50) CHECK ('Bus', 'Train', 'Flight')	Type of transport provided.
UserID	INT (Foreign Key from Users)	UserID linked to the provider's account.

### 3. Transport Modes Table

Defines various types of transport modes.

Column Name	Data Type	Description
ModelID	INT (Primary Key, Auto Increment)	Unique ID for the transport mode.
ModeName	VARCHAR(50) UNIQUE	Type of transport (e.g., Bus, Train, Flight).

### 4. Transport Schedules Table

Holds schedules for buses, trains, and flights.

Column Name	Data Type	Description
ScheduleID	INT (Primary Key, Auto Increment)	Unique ID for each schedule.
ProviderID	INT (Foreign Key from TransportProviders)	ID of the transport provider.
ModelID	INT (Foreign Key from TransportModes)	Transport mode (Bus, Train, Flight).
TransportName	VARCHAR(100)	Name of the transport (e.g., specific bus or train name).
Origin	VARCHAR(100)	Start location of the trip.
Destination	VARCHAR(100)	End location of the trip.
DepartureTime	DATETIME	Departure time of the trip.
ArrivalTime	DATETIME	Arrival time of the trip.
SeatCapacity	INT	Total number of seats available.
Price	DECIMAL(10,2)	Price of the ticket.
AvailableSeats	INT	Number of seats still available for booking.

## 5. Bookings Table

Stores booking details for each user.

Column Name	Data Type	Description
BookingID	INT (Primary Key, Auto Increment)	Unique ID for each booking.
UserID	INT (Foreign Key from Users)	ID of the user making the booking.
ScheduleID	INT (Foreign Key from TransportSchedules)	Schedule being booked.
BookingDate	DATETIME DEFAULT GETDATE()	The date and time when the booking was made.
NumberOfSeats	INT	Number of seats booked.
TotalAmount	DECIMAL(10,2)	Total cost of the booking.
BookingStatus	VARCHAR(50) CHECK ('Booked', 'Cancelled', 'Completed')	Status of the booking.

## 6. Seat Allocations Table

Stores information about seat allocations for bookings.

Column Name	Data Type	Description
SeatID	INT (Primary Key, Auto Increment)	Unique ID for each seat allocation.
BookingID	INT (Foreign Key from Bookings)	Booking associated with the seat.
SeatNumber	VARCHAR(10)	Seat number assigned.

## 7. Payments Table

Tracks payment information for each booking.

Column Name	Data Type	Description
PaymentID	INT (Primary Key, Auto Increment)	Unique ID for each payment.
BookingID	INT (Foreign Key from Bookings)	Booking associated with the payment.
PaymentDate	DATETIME DEFAULT GETDATE()	Date and time of the payment.
PaymentMethod	VARCHAR(50) CHECK ('Credit Card', 'Debit Card', 'Net Banking', 'UPI', 'Wallet')	Method used for payment.
AmountPaid	DECIMAL(10,2)	Amount paid by the user.
PaymentStatus	VARCHAR(50) CHECK ('Success', 'Failed', 'Pending')	Status of the payment.

## 8. Cancellations Table

Stores cancellation details for bookings.

Column Name	Data Type	Description
CancellationID	INT (Primary Key, Auto Increment)	Unique ID for each cancellation.
BookingID	INT (Foreign Key from Bookings)	Booking associated with the cancellation.
CancelDate	DATETIME DEFAULT GETDATE()	Date and time of cancellation.
CancellationFee	DECIMAL(10,2)	Fee charged for cancellation.
RefundAmount	DECIMAL(10,2)	Amount refunded after cancellation.

## 9. Admin Table

Description: Stores information about admins, who manage the system.

Column Name	Data Type	Description
AdminID	INT	Unique ID for each admin (Primary Key, Auto Increment)
UserID	INT	Foreign Key referencing the <code>users</code> table (Links to the user account for admin)

## 10. AdminDashboardMetrics Table

**Description:** Stores metrics for the admin dashboard, providing an overview of platform activities.

Column Name	Data Type	Description
MetricID	INT	Unique ID for each metric (Primary Key, Auto Increment)
Date	DATETIME	Date of the metric record (Default GETDATE())
TotalBookings	INT	Total number of bookings
TotalUsers	INT	Total number of users
TotalProviders	INT	Total number of providers
TotalSales	DECIMAL(10, 2)	Total sales amount

## 11. Report Table

**Description:** Stores generated reports related to ticket sales, user activity, and provider performance.

Column Name	Data Type	Description
ReportID	INT	Unique ID for each report (Primary Key, Auto Increment)
ReportType	VARCHAR(50)	Type of report (e.g., 'Sales', 'User Activity', 'Provider Performance')
ReportDate	DATETIME	Date the report was generated (Default GETDATE())
ReportContent	TEXT	Content of the report (e.g., serialized JSON or other format)

## 12. AuditLog Table

**Description:** Tracks administrative actions such as updates or deletions performed by admins.

Column Name	Data Type	Description
AuditLogID	INT	Unique ID for each audit log (Primary Key, Auto Increment)
AdminID	INT	Foreign Key referencing the <code>Admins</code> table (Links to the admin who performed the action)
ActionDate	DATETIME	Date of the action (Default GETDATE())
ActionType	VARCHAR(50)	Type of action (e.g., 'Update', 'Delete', 'Create')
Details	VARCHAR(1000)	Description of the action