

**Instructor:** Ms. Noor-ul-Ain

**Course:** Database Systems

**Course Code:** CS2006

Travel Ease Data Model

23I-0662 | 23I-0 636 | 23i-0662

Zaid Fareed | Muhammad Tayyab | Muhammad Umair

The TravelEase platform is designed to be a centralized solution for planning, booking, and managing diverse travel experiences. It brings together travelers, tour operators, hotels, local guides, and transport providers under one unified system. To ensure smooth operations and data integrity, a well-structured and normalized relational database is essential.

This report outlines the database model developed for TravelEase, detailing its core entities, relationships, and design rationale. The model supports key functionalities such as trip customization, booking management, payment tracking, service coordination, and performance reporting. It is implemented using SQL Server and is intended to integrate seamlessly with a C#-based front-end built in Visual Studio.

## Database Model

# Users:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **RegNo** | Password\_hash | Created\_date | Last\_login | Contact\_email | Contact\_phone |

* **RegNo** – VARCHAR(20): Unique registration number that identifies each user.
* **Password\_hash** – VARCHAR(255): Securely stored hashed version of the user’s password.
* **Created\_date** – DATETIME: Timestamp of when the user account was created.
* **Contact\_email** – VARCHAR(100): Email address used for communication and login.
* **Contact\_phone** – VARCHAR(15): User’s phone number for contact or verification purposes.
* **Last\_login** – DATETIME: Timestamp of last login

# Travelers:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RegNo** | FName | LName | Nationality | CNIC | DOB |  |

* **RegNo** – VARCHAR(20): Foreign key referencing Users, uniquely identifies the traveler.
* **FName** – VARCHAR(50): Traveler’s first name.
* **LName** – VARCHAR(50): Traveler’s last name.
* **Nationality** – VARCHAR(50): Country of citizenship or origin.
* **CNIC** – VARCHAR(15): National ID or identification number for verification.
* **DOB** – DATE: Date of birth of the traveler.

# Tour Operator:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RegNo** | Operatror\_name | Business\_address | website\_url |  |

* **RegNo** – VARCHAR(20): Foreign key referencing Users, uniquely identifies the tour operator.
* **Operator\_name** – VARCHAR(100): Official name of the tour operating business.
* **Business\_address** – VARCHAR(255): Physical address of the tour operator’s office or headquarters
* **Website\_url** – VARCHAR(100): Optional website link for users to check their tours/services..

# Service Provider:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RegNo** | Provider\_name | Provider\_location | Provider\_type |  |

* **RegNo** – VARCHAR(20): Foreign key referencing Users, uniquely identifies the service provider.
* **Provider\_name** – VARCHAR(100): Name of the service provider (e.g., hotel, transport agency, guide service).
* **Provider\_location** – VARCHAR(100): Base location or city where the provider primarily operates.
* **Provider\_type** – VARCHAR(50): Type of service offered (e.g., hotel, guide, transport).

# Admin:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RegNo** | Admin\_name | Assigned\_region | Last\_action\_time |  |

* **RegNo** – VARCHAR(20): Foreign key referencing Users, uniquely identifies the admin.
* **Admin\_name** – VARCHAR(100): Full name of the admin.
* **Assigned\_region** – VARCHAR(100): Region or domain the admin is responsible for (could be "Global" or city-specific).
* **Last\_action\_time** – DATETIME: Timestamp of the admin’s most recent platform activity (for audit/logs).

# Location:

|  |  |  |  |
| --- | --- | --- | --- |
| **Dest\_id** | Destination\_name | Region | Country |

* **Dest\_id** – INT (Primary Key): Unique identifier for each destination.
* **Destination\_name** – VARCHAR(100): Name of the destination (e.g., Paris, Hunza, Kyoto).
* **Region** – VARCHAR(100): Specific region within the country (e.g., "Gilgit-Baltistan", "California").
* **Country** – VARCHAR(100): Country where the destination is located.

# Trips:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **trip\_id** | Title | description | Start\_loc\_id | Start\_date | End\_date | Duration | capacity |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Status(active, cancelled, completed) | category | Price\_per\_person | Image\_url | Operator\_id |