Triplico Project Documentation

1. Project Overview

Triplico is a web application built using ASP.NET Core MVC with Entity Framework Core for data access. The application allows users to explore Egyptian cities, destinations, and book trips. Admins can manage Users And Trips.

Key Features:

- User registration and authentication using ASP.NET Identity.

- Browsing Egyptian cities and their tourist destinations.

- Viewing and booking trips with date selection and total price calculation.

- Admin management of users and trips.

- Data seeding with pre-defined cities, destinations, and trips.

2. Architecture & Design

Project Structure:

- Separate Configuration Files.

- Controllers

- Models

- Views

- Repositories

- Repository Interfaces

-View Models

- wwwroot For Static Files

- AppDbContext File For Data Access

Technology Stack:

- Backend: ASP.NET Core MVC

- Authentication: ASP.NET Identity

- ORM: Entity Framework Core

- Database: SQL Server

- Frontend: Razor Views, Bootstrap

3. Database Design

Entities:

- AppUser (inherits from identityUser To Add Additional Attributes)

- City

- Destination

- Trip

- Booking

Relationships:

- City → Destination (1-to-many)

- City → Trip (1-to-many)

- AppUser ↔ Trip (many-to-many via Booking)

-Trip → Booking (1-to-many)

-AppUser → Trip (Many-to-Many)

-Trip → City (Many-to-1)

-Booking → Trip (Many-to-1)

-Booking → AppUser (Many-to-1)

-City → Destination (1-to-many)

4. Repositories

Repositories follow the Repositories Interfaces:

- AppUserRepository

- BookingRepository

- CityRepository

- DestinationRepository

- TripRepository

Common Methods:

- Create()

- Read()

- GetOne()

- Update()

- Delete()

- Save()

5. Data Seeding

Pre-populated Data:

- Cities (11)

- Destinations (70+)

- Trips (11)

6. Views

Razor Views support:

- Admin Pannel (User Management , Trips Management)

- Booking and Calculation

- City and Destination Browsing

- Trip Browsing and Details

7. Future Enhancements

- Payment integration

_Booking Hotels And Rooms

- Advanced roles

- Reviews system