Cairo University **SEM - team 7**

Faculty of Engineering

Computer Engineering Department

CMP2020 for semester

Introduction to Database Systems

TripSync

***ER diagram Report***

Team Number: 7

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# Problem definition:

TripSync addresses the major challenges faced by travelers and travel agencies in the modern travel industry. Currently, travelers deal with disjointed systems that fail to integrate essential features like trip booking, itinerary management, feedback, and communication. This fragmentation creates a poor user experience, making it difficult for travelers to stay organized, book trips efficiently, or engage with service providers effectively.

For travel agencies, the lack of a centralized platform limits their ability to attract and retain customers. Agencies struggle to showcase their services, manage bookings, and foster loyalty. In a competitive industry, this reduces their ability to build meaningful relationships with travelers or create repeat business opportunities.

Another significant issue is the absence of a structured rewards system. Most platforms do not provide travelers with incentives to engage consistently. Without a way to earn and redeem points for bookings, reviews, or referrals, travelers lack motivation to return, leading to reduced customer retention for both the platform and the agencies.

Communication barriers also contribute to inefficiencies. Travelers often face delays in receiving information or responses from travel agencies, while agencies lack the tools to engage users effectively. This disconnect is compounded by a lack of personalized notifications, trip suggestions, and feedback systems, further diminishing user satisfaction.

Trip Sync aims to solve these problems by creating a centralized travel management platform that bridges the gap between travelers and travel agencies. It incorporates a robust loyalty and rewards system, enabling travelers to earn points for booking trips, writing reviews, and engaging with the platform. These points can be redeemed for discounts, exclusive deals, or upgrades, incentivizing frequent use and fostering long-term loyalty.

For travel agencies, Trip Sync offers tools to promote services, manage bookings, and encourage repeat business through targeted promotions and user feedback. Administrators are equipped with oversight features to monitor platform quality, resolve issues, and ensure a seamless experience for all users. By addressing these challenges, Trip Sync creates a unified and engaging ecosystem that transforms how travelers and agencies interact in the digital travel landscape.

# Users:

## Traveler

The Traveler is an individual who uses the TripSync platform to browse and book trips offered by various travel agencies. They can create an account, manage their profile, write blogs, and track their travel history. Travelers can also provide feedback on their experiences by leaving reviews for agencies, and if necessary, report any issues with agencies, can give reviews for agencies they have dealt with and the trips they’ve completed. They are incentivized to stay engaged with a loyalty points system and have the option to report issues with travel agencies or their trips. Travelers can also communicate through messages within the platform and receive notifications.

## Travel Agency

The Travel Agency user type is designed for businesses that organize and manage travel experiences for travelers. Agencies can set up detailed trip listings, share travel blogs, and offer promotions to enhance the business. The platform also participate in a rewards system to build customer loyalty. Through these tools, agencies can reach a wider audience and tailor their services to meet traveler preferences. Additionally, they have messaging capabilities for direct communication with travelers and if necessary, report any issues with travelers and add their own Questions&Answers section to provide information about their agency.

## Admin

Admins play a crucial role in maintaining the integrity and quality of the platform. They have full control over user accounts and trip listings, enabling them to edit or delete content as needed based on user behavior or complaints. Admins can create additional admin accounts, manage app policies, and push notifications to keep users informed. Admins also manage rewards giving them comprehensive control over the platform’s ecosystem and add Questions&Answers section to provide information about the platform.

# entity types:

1.User

Represents individuals interacting with the system. This includes anyone accessing the platform, such as travelers, admins, and travel agencies. It manages general information and accounts for all users.

2. Admin

Represents system administrators who manage the platform's operations, monitor user activity and resolve disputes or issues.

3. Travelers

Represents users who book trips and actively participate in the services offered by travel agencies. This entity tracks their activities and interactions, such as bookings and rewards.

4. Travel Agency

Represents companies or organizations offering travel-related services and trips.

5. Trips

Represents the travel packages or experiences offered by agencies. This entity includes information about destinations, durations, pricing, and available seats, forming the core of the system.

6. Blogs

Represents written content, Blogs are created to engage users, provide valuable information.

7. Policies

Represents terms, conditions, and guidelines related to trips, bookings, cancellations, and rewards. This ensures clarity for users and agencies about platform rules.

8. Q&A

Represents a database of questions and answers, facilitating user inquiries and support. This entity helps improve user engagement and provides quick assistance.

9. Rewards

Represents a system to incentivize travelers for their activity on the platform, such as booking trips or leaving reviews. Rewards can include points, discounts, or other benefits.

10. Tickets

Represents booked tickets for specific trips. This entity manages ticket details, including trip, traveler, and payment status, to ensure proper tracking and organization.

11. Notification

Represents system-generated messages or updates sent to users about bookings, promotions, reminders, or other important activities.

12. Profile

Represents detailed user information, allowing users to personalize their experience on the platform.