📄 SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

Domain

Travel & Hospitality

Problem Statement

Travel Itinerary and Coordination Platform

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1. Preface

1.1 Expected Readership

This Software Requirements Specification (SRS) document is intended for faculty evaluators, project reviewers, system analysts, designers, and developers involved in the academic development of the **Travel Itinerary and Coordination Platform (TICP)**.

The document is written in clear and simple English so that readers with varying technical backgrounds can easily understand the system scope, actors, and requirements.

1.2 Version History

- **Version 1.0 – Initial version of the Requirements Analysis Document**

This version documents the finalized problem statement, actors, features, and system requirements identified during the requirements analysis phase. It establishes a baseline before moving to design-level artifacts such as UML diagrams.

1.3 Summary

This is the first version of the document; therefore, no changes from previous versions exist. Future revisions may include refinements based on faculty feedback, expanded system scope, or changes in project understanding.

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2. Introduction

2.1 Need for the System

Planning a trip involves multiple complex tasks such as:

- Selecting destinations
- Creating travel schedules
- Managing bookings
- Coordinating with travel guides
- Handling payments
- Tracking expenses

Currently, travelers rely on multiple disconnected platforms for these activities, which leads to confusion, poor coordination, and inefficiency.

A **Travel Itinerary and Coordination Platform** is required to provide a centralized system where travelers can plan trips, coordinate with travel guides, manage bookings, and receive assistance in a structured and organized manner.

2.2 System Overview and Functions

The TICP acts as a centralized platform that supports multiple roles and manages travel planning activities.

The system provides functionality such as:

- Traveler registration and authentication
- Creation and management of travel itineraries
- Destination and activity planning
- Integration with external booking services
- Communication with travel guides
- Payment processing
- Customer support and issue resolution

The system ensures smooth coordination between travelers, guides, administrators, and external services.

2.3 Interaction with Other Systems

The platform interacts with supporting external systems such as:

- Payment gateways
- Hotel and transport booking APIs
- Map and location services
- Notification services

These interactions support bookings, payments, navigation, and communication within the platform.

2.4 Business and Strategic Objectives

The platform aims to:

- Simplify trip planning

- Improve coordination between travelers and guides
- Provide secure payment processing
- Centralize travel-related services
- Reduce dependency on multiple applications
- Enhance user travel experience

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3. Glossary

Term	Definition
Travel Itinerary and Coordination Platform (TICP)	A centralized system for planning and managing travel activities
Traveler	End user who plans and manages trips
Travel Guide	Professional assisting travelers during trip planning
Customer Care	Support team assisting users
Administrator	Person managing platform operations
External Services	Third-party systems like payment, maps, booking APIs
Itinerary	A planned schedule of travel activities
Booking	Reservation of hotel or transport
Notification	Alerts and updates sent to users

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4. User Requirements Definition

4.1 User Services (Functional Requirements)

4.1.1 Traveler

- The system shall allow travelers to register and login.
- The system shall allow travelers to create new trips.
- The system shall allow travelers to add destinations.
- The system shall allow travelers to plan daily itineraries.
- The system shall allow travelers to book hotels and transport.
- The system shall allow travelers to make payments.
- The system shall allow travelers to track expenses.
- The system shall allow travelers to communicate with travel guides.
- The system shall allow travelers to view maps and directions.
- The system shall allow travelers to upload travel documents.

4.1.2 Travel Guide

- The system shall allow guides to view assigned travelers.
- The system shall allow guides to suggest itinerary changes.
- The system shall allow guides to add activities.
- The system shall allow guides to communicate with travelers.
- The system shall allow guides to update travel plans.

4.1.3 Customer Care

- The system shall allow customer care to handle user queries.

- The system shall allow customer care to create support tickets.
- The system shall allow customer care to resolve booking issues.
- The system shall allow customer care to process refunds.

4.1.4 Administrator

- The system shall allow administrators to manage users.
- The system shall allow administrators to manage guides.
- The system shall allow administrators to monitor bookings.
- The system shall allow administrators to generate reports.
- The system shall allow administrators to manage external services.

4.2 Non-Functional Requirements

- The system shall be easy to use and user-friendly.
- The system shall respond quickly to user actions.
- The system shall ensure secure handling of user data.
- The system shall be available 24/7 except during maintenance.
- The system shall protect payment information.

4.3 Product and Process Standards

- The system shall follow UML modeling standards.

- The system shall follow secure software engineering practices.
- The system shall maintain data privacy principles.

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5. System Architecture

5.1 High-Level Architectural Overview

The platform follows a modular architecture consisting of:

- User Management Module
- Itinerary Planning Module
- Booking Management Module
- Guide Coordination Module
- Payment Processing Module
- Support and Notification Module

5.2 Distribution of Functions Across Modules

- Travelers interact with planning and booking modules.
- Guides interact with coordination modules.
- Customer care interacts with support modules.
- Administrators manage all modules.

5.3 Reusable Components

- Authentication component
- Notification component
- Payment integration component
- Map integration component

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6. System Requirements Specification

6.1 Functional Requirements

- The system shall support user authentication.
- The system shall allow itinerary creation.
- The system shall integrate external booking services.
- The system shall support online payments.
- The system shall enable traveler–guide communication.

6.2 Non-Functional Requirements

- Performance: Handle multiple users simultaneously
- Security: Protect personal and payment data
- Reliability: Maintain accurate booking records
- Usability: Simple and intuitive interface

6.3 External Interfaces

- Web-based user interface
- Payment gateway interface
- Map service interface
- Booking API interface

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7. System Models

This section contains:

- Use Case Diagram
- Activity Diagrams
- Sequence Diagrams

(These diagrams will be designed based on the following actors and use cases)

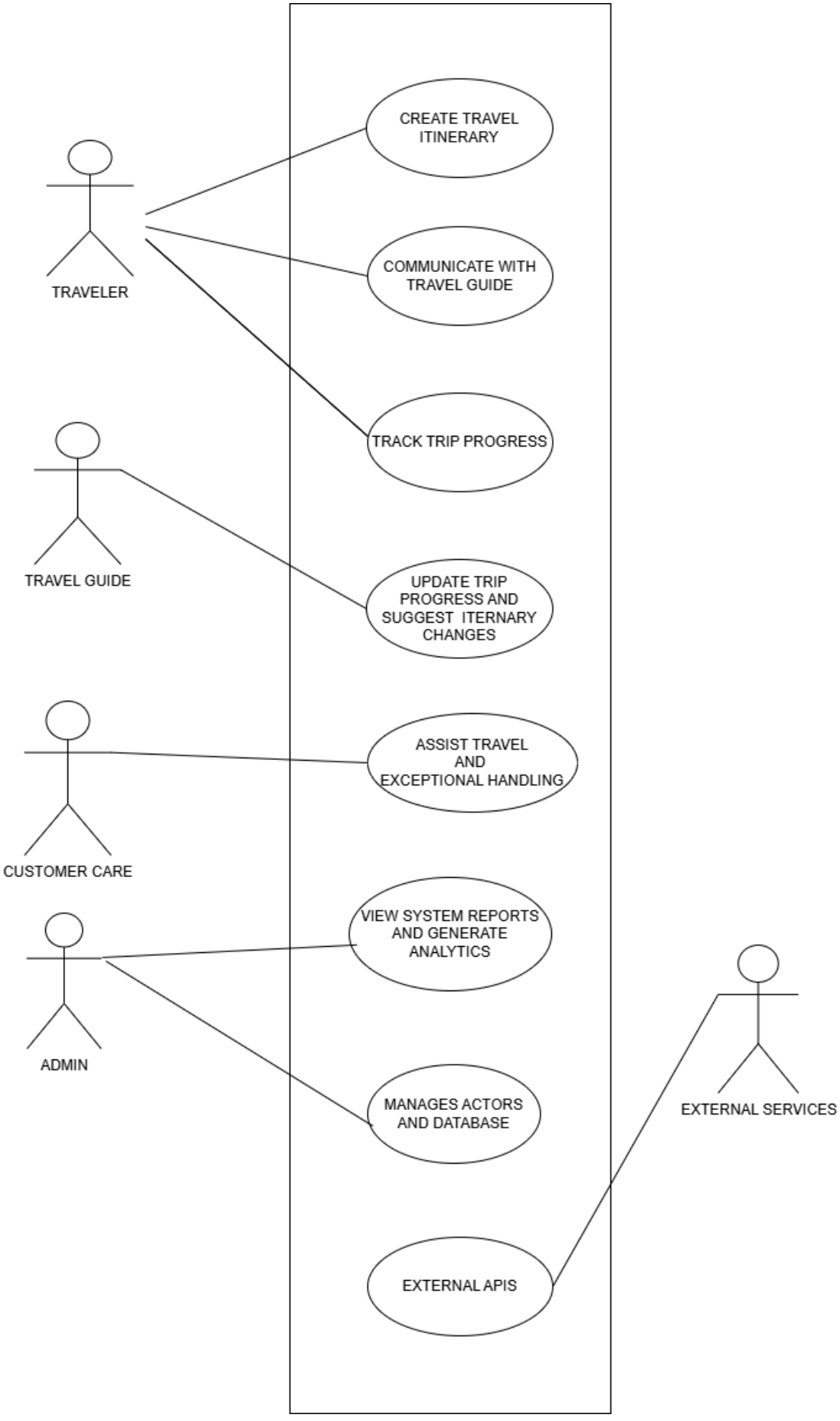
Actors in System Models

- Traveler
- Travel Guide
- Customer Care
- Administrator
- External Services

Core Use Cases

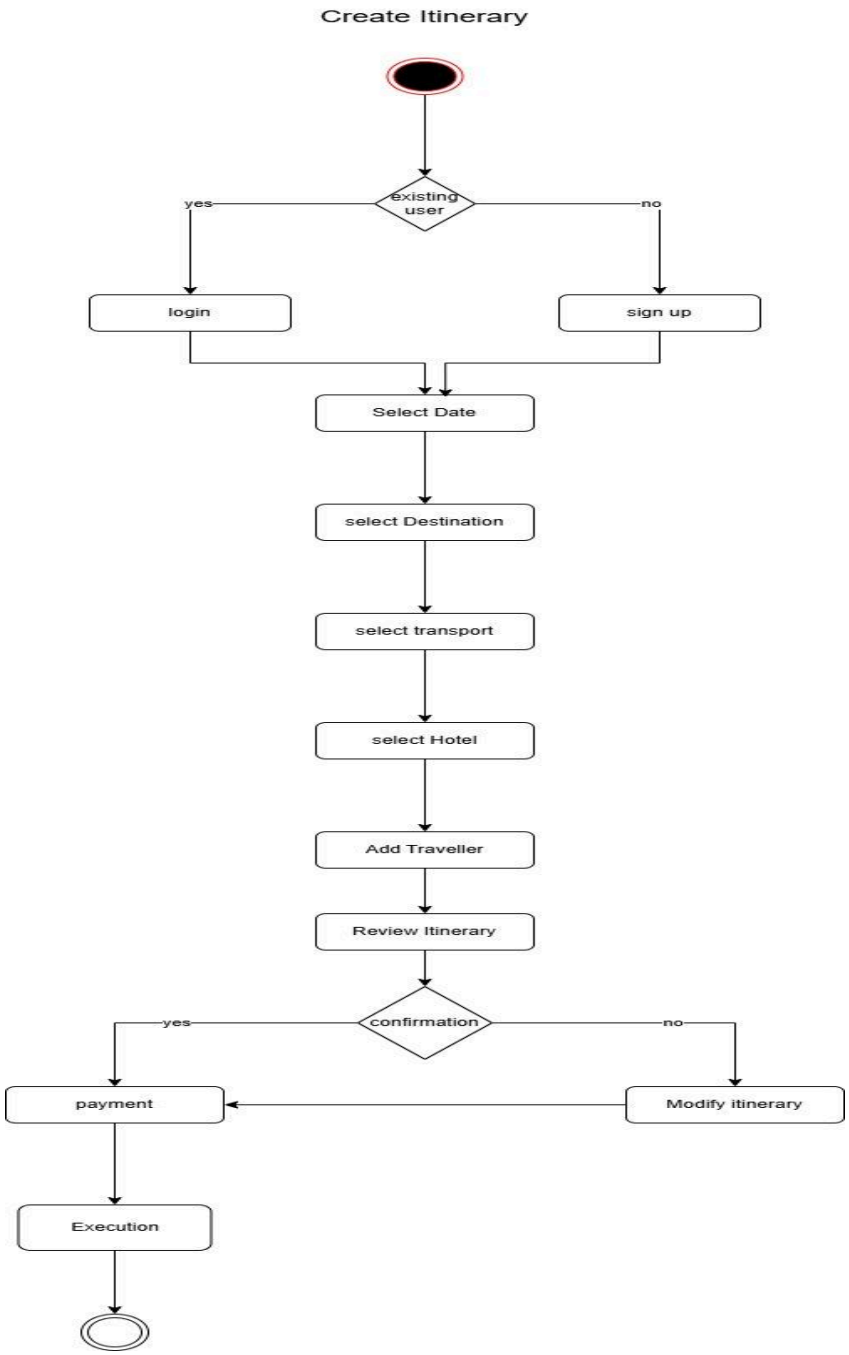
- Create Itinerary
- Book Services
- Make Payment
- Coordinate with Guide
- Handle Support Tickets
- Manage Use

USE CASE DIAGRAM

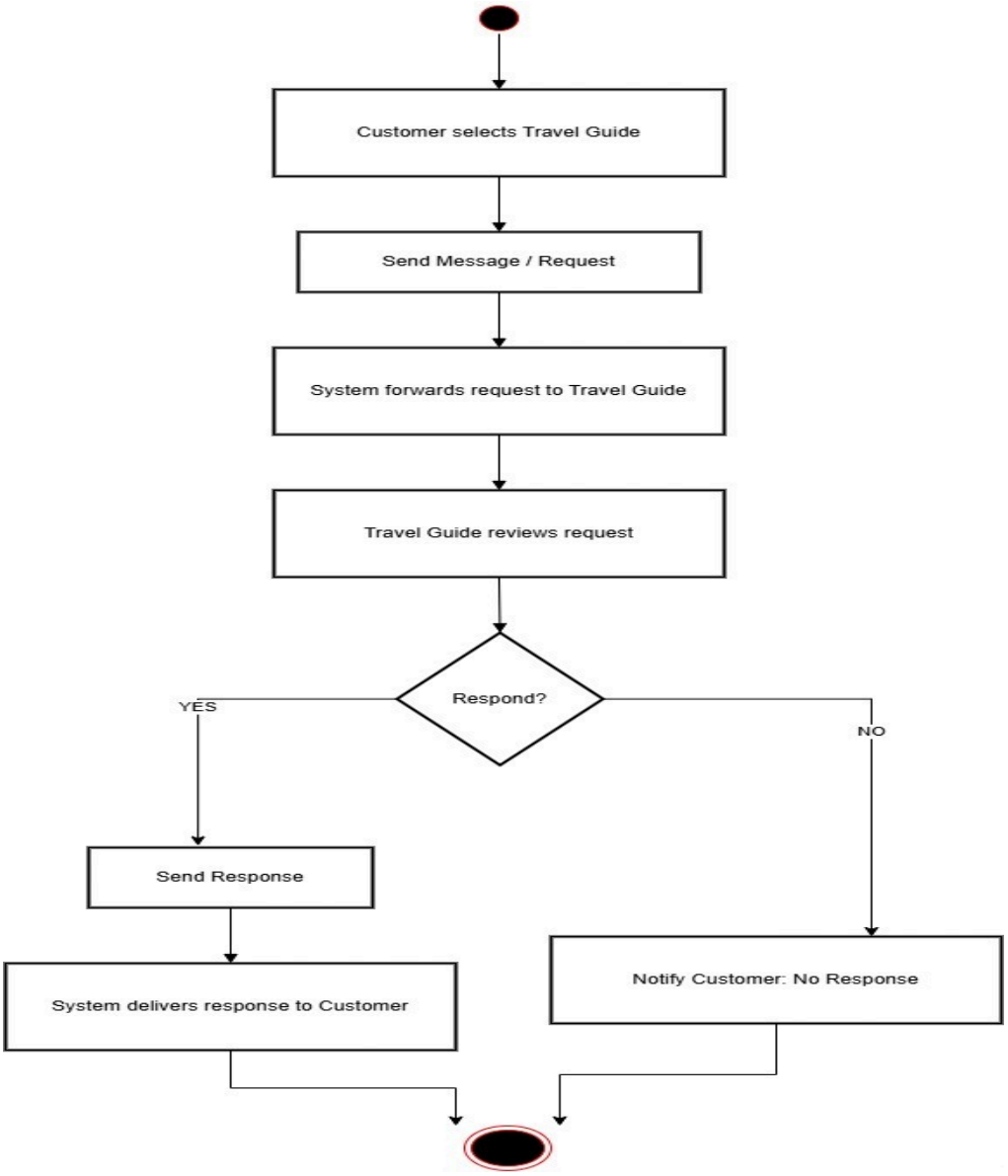

TRAVELER
CREATE TRAVEL ITINERARY
COMMUNICATE WITH TRAVEL GUIDE
TRACK TRIP PROGRESS
TRAVEL GUIDE
UPDATE TRIP PROGRESS AND SUGGEST ITERNARY CHANGES
CUSTOMER CARE
ASSIST TRAVEL AND EXCEPTIONAL HANDLING
ADMIN
VIEW SYSTEM REPORTS AND GENERATE ANALYTICS
MANAGES ACTORS AND DATABASE
EXTERNAL APIS
EXTERNAL SERVICES

ACTIVITY DIAGRAMS

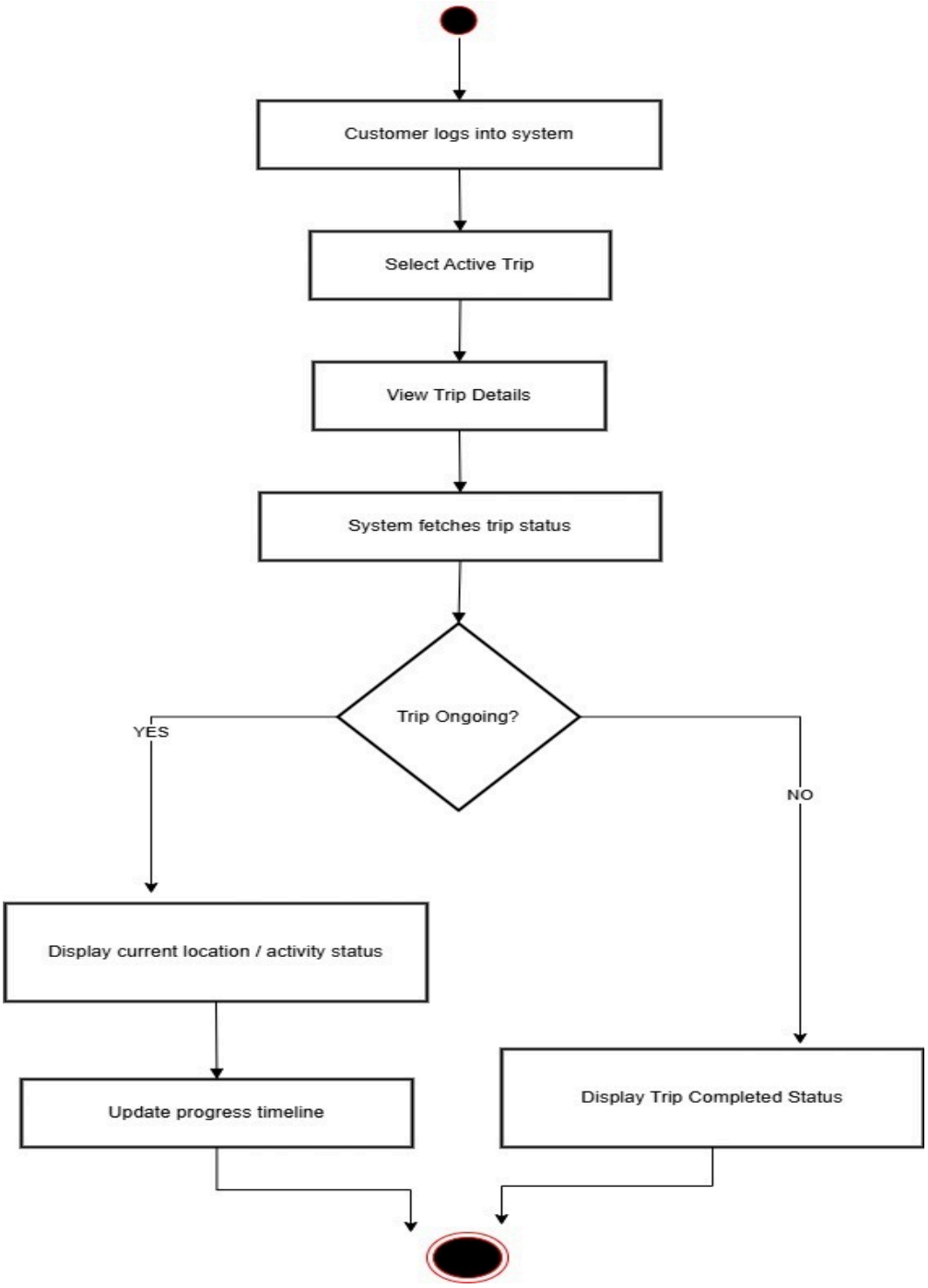
Create Itinerary



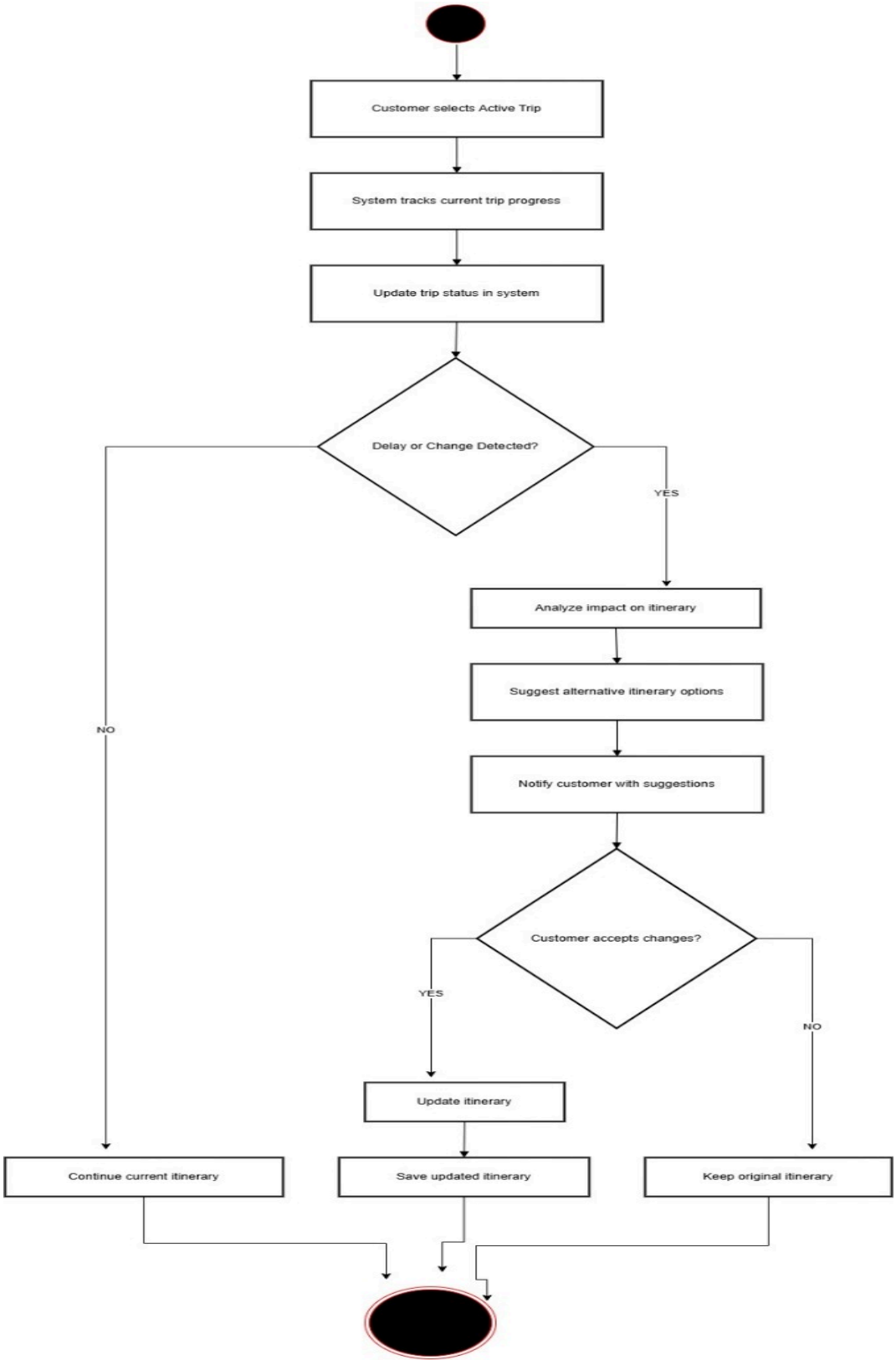
Communicate with travel guide



Track Trip Progress

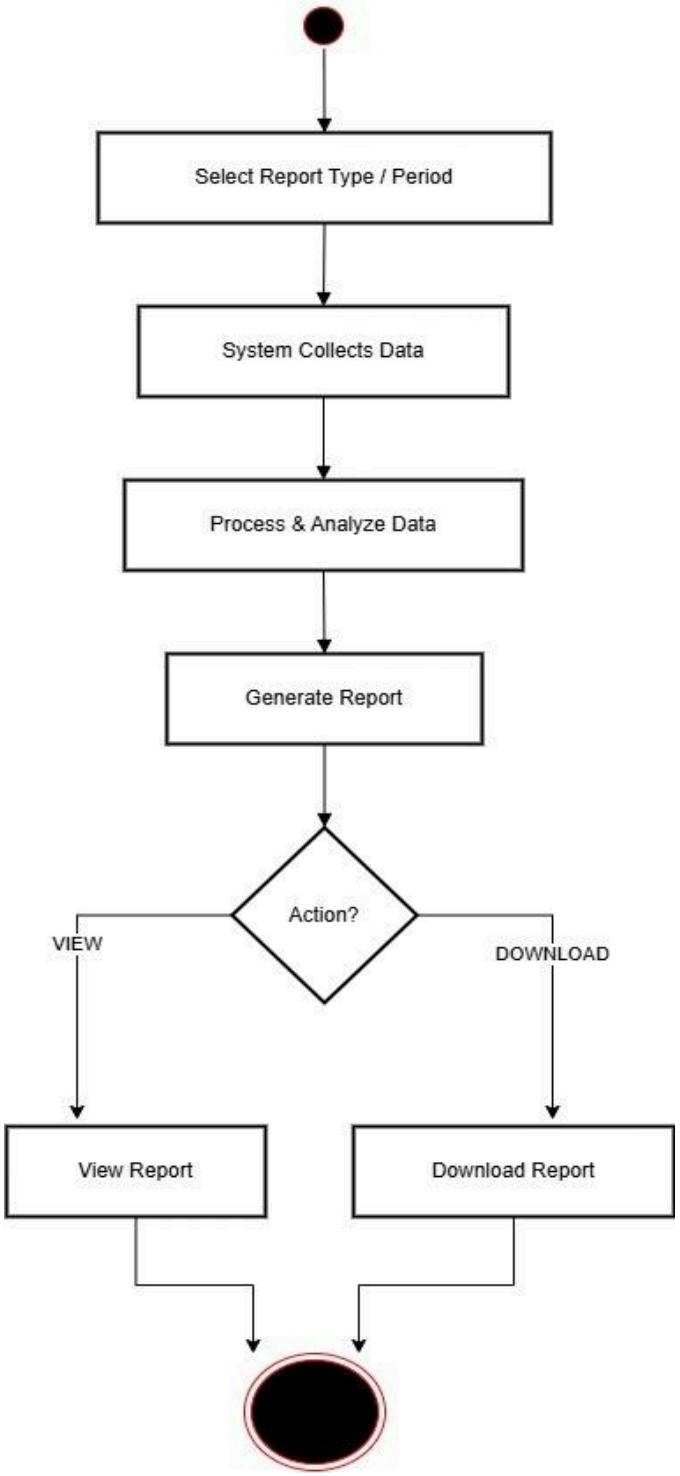


Update Trip Progress And Suggest Itinerary changes

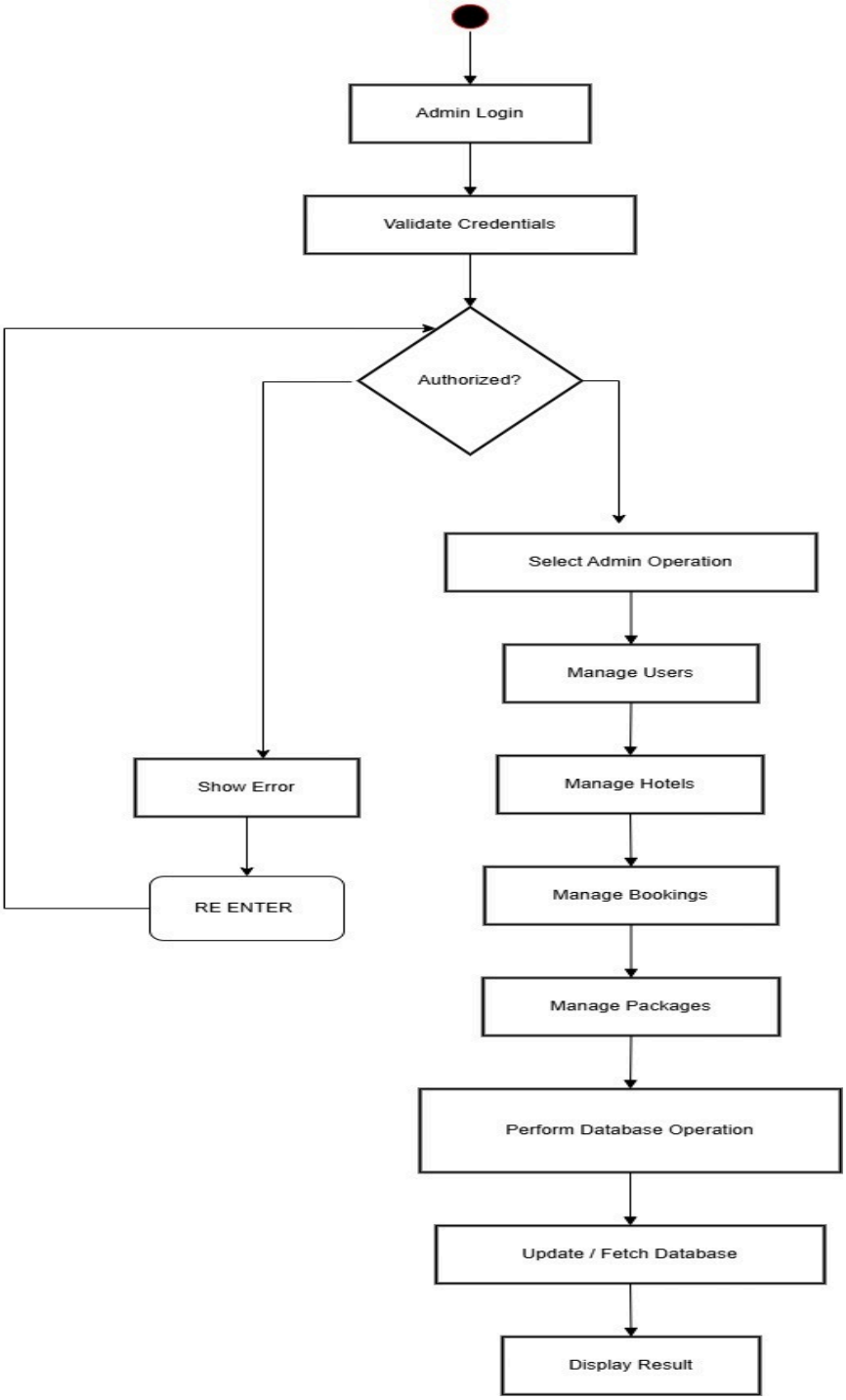


Assist Travel and EXCEPTIONAL HANDLING

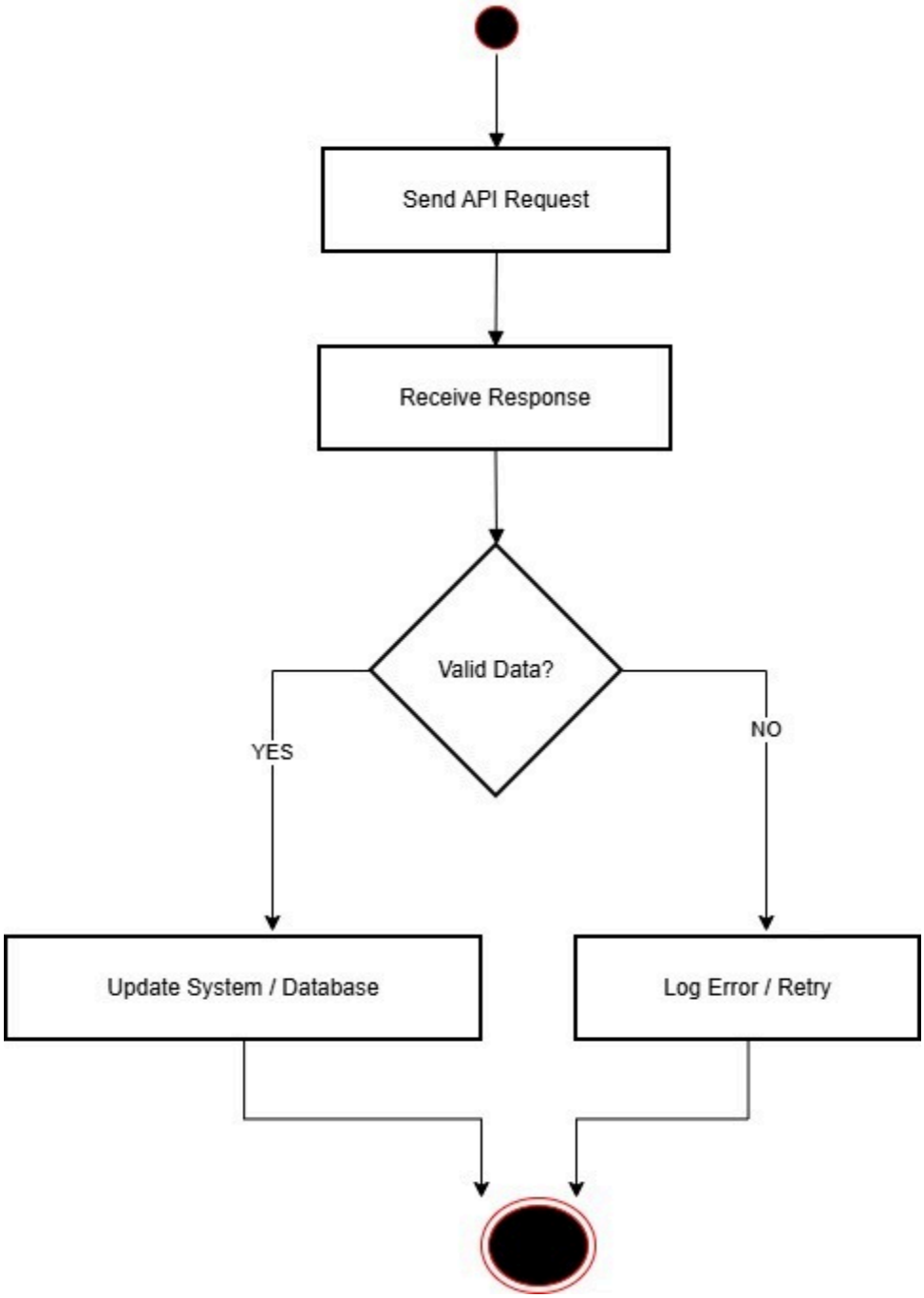
View System Reports And Generate Analytics



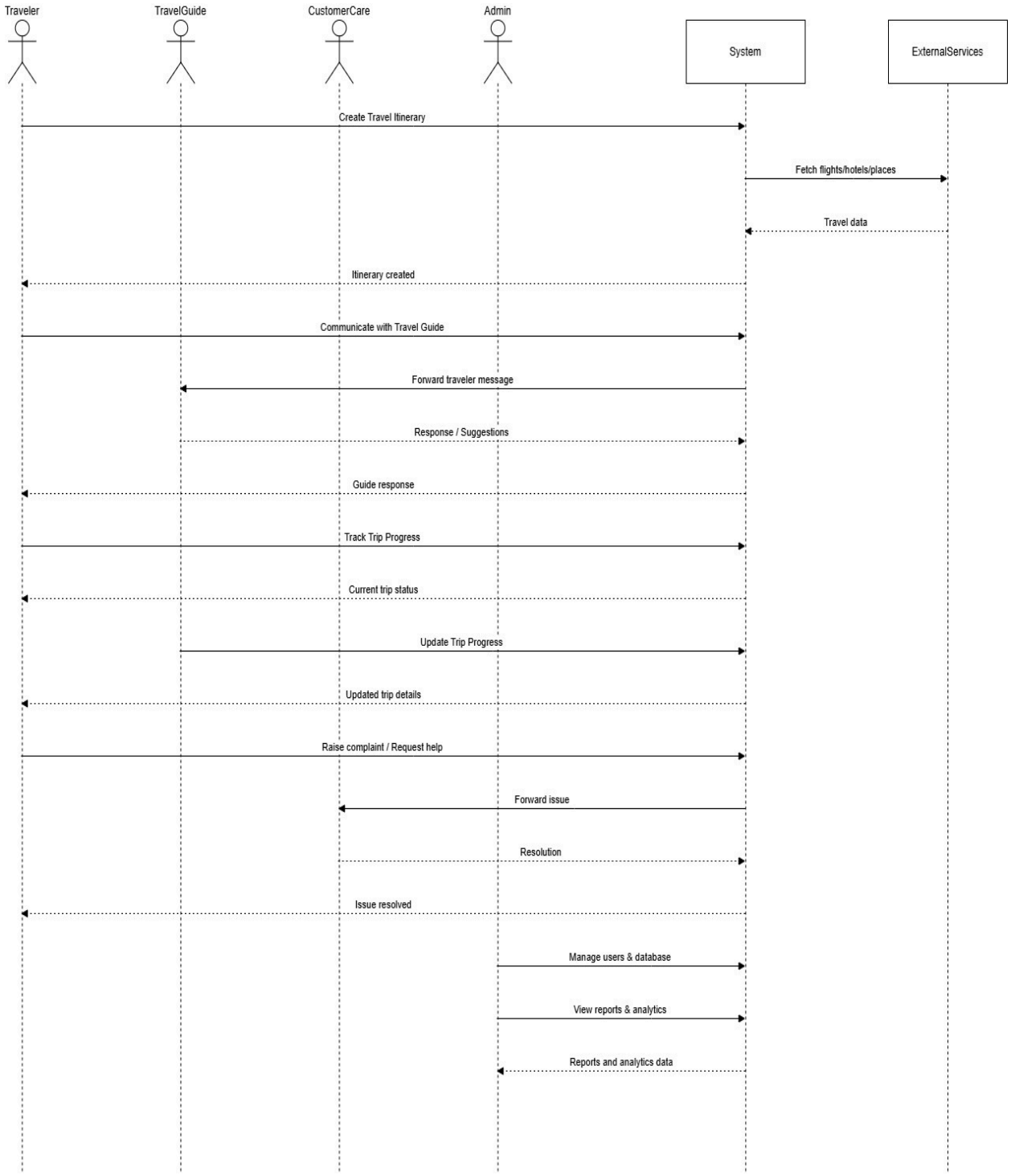
Manages Actors And Database



External API’S



SEQUENCE DIAGRAM


Traveler
TravelGuide
CustomerCare
Admin
System
ExternalServices
Create Travel Itinerary
Fetch flights/hotels/places
Travel data
Itinerary created
Communicate with Travel Guide
Forward traveler message
Response / Suggestions
Guide response
Track Trip Progress
Current trip status
Update Trip Progress
Updated trip details
Raise complaint / Request help
Forward issue
Resolution
Issue resolved
Manage users & database
View reports & analytics
Reports and analytics data

8. System Evolution

8.1 Fundamental Assumptions

- The system is accessed via a web interface.
- The number of users will grow over time.
- New services may be integrated later.

8.2 Anticipated Future Changes

- Mobile application support
- AI-based trip recommendations
- Advanced analytics
- Integration with more travel APIs

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9. Appendices

9.1 Hardware Requirements

- Basic server infrastructure
- Internet connectivity

9.2 Database Requirements

- Centralized database for users and bookings
- Secure data storage
- Backup and recovery support

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10. Index

- Actor Index
- Function Index
- Diagram Index