

# Trip Diary-Travel Management & Tour Suggestion System

## Project Description:

Trip Diary is a travel management and planning system designed to help users record, organize, and improve their travel experiences. The platform allows users to log their past trips, plan upcoming journeys, estimate average travel costs, and store personal photos and videos from different places they have visited.

Users can sign up, log in, and use the system through a secure account. There is an admin panel to manage users, content, and location data.

One of the main features is the smart tour suggestion system, which recommends new travel destinations based on the user's travel history. It avoids suggesting places that the user has already visited. Users can choose whether they want to travel within their own country or explore international destinations.

The platform also includes a community tour event feature, where any user can create a tour event, and other users can view and join those events.

The goal of this project is to create an interactive and user-friendly travel platform that combines personal travel journaling with community-based trip planning.

## Defined Users:

1. Admin
2. Registered User
3. Guest User
4. System

## User Activities:

1. Admin Activities:
  - Manage user accounts (view, delete, block)
  - Manage destination database (add/edit/remove locations)
  - Approve or monitor public tour events
  - Monitor uploaded media (photos/videos)
  - Oversee system performance and content moderation
2. Registered User Activities (after login/signup):
  - Sign up and log in to the platform
  - View and update personal profile
  - Add past trips (destination, date, notes)
  - Plan upcoming trips
  - Upload and view travel photos and videos
  - Get travel suggestions based on travel history
  - Choose travel type: within the country or abroad

- Create tour events (public)
- View and enroll in available tour events
- View average cost estimations for trips

### 3. Guest User Activities (not logged in):

- Browse basic platform overview (homepage/features)
- View available public tour events (limited details)
- View travel suggestions (demo or limited preview)
- Sign up or log in to access full features

### 4. System:

- Suggests Destinations not yet visited by the user.

### Case Study:

In the Trip Diary travel management system, a guest can browse public tour events and view destination suggestions, but cannot create events, upload media, or receive personalized recommendations. A user must log in to access full features of the system. To log in, the system verifies the user's credentials.

A user can log their past trips by entering destinations, travel dates, notes, and uploading media like photos or videos. Users can also plan future trips by adding destinations they intend to visit. Based on their travel history and preferences (domestic or international), the system suggests new destinations not yet visited by the user.

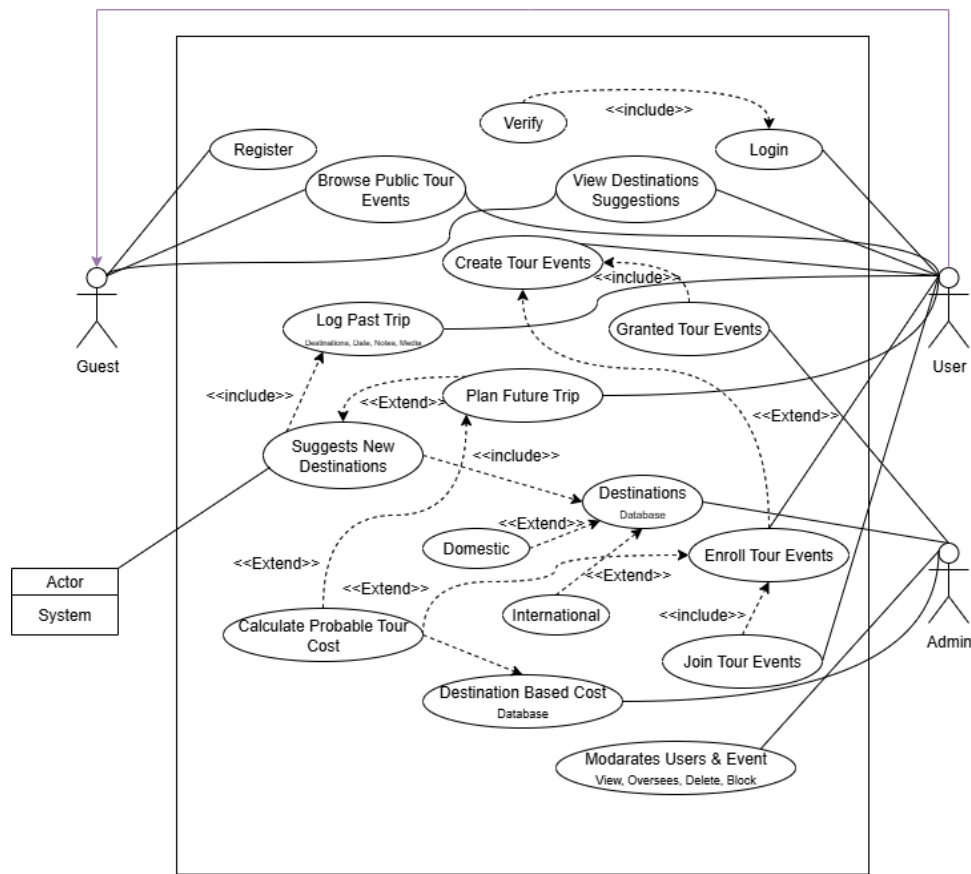
A user can also create public tour events. These events are visible to other users, who can then enroll to join them. All event creation and enrollment activities are managed and monitored by the admin.

The system allows users to estimate travel costs by entering details such as destination, travel type, and trip duration. Based on past data, the system calculates an approximate budget for the trip.

The admin moderates user-generated content, maintains the destination database, and manages all tour events.

### Use Case Diagram:

## Trip Diary- Travel Management & Tour Suggestion System



### Trip Diary Story Card:

As a/an	I want to	So that	Acceptance Criteria
Guest User	Browse public tour events	I can explore travel opportunities	Can view event title, destination, and limited info without login
Guest User	View destination suggestions	I can get inspired to travel	System shows demo suggestions with limited personalization
Guest User	Sign up/log in	I can access full features	Successful login or registration shows profile dashboard
Registered User	Add past trips	I can log and revisit my travel history	User provides destination, date, notes, and optional media
Registered User	Plan upcoming trips	I can organize my future travel plans	User adds destination, dates, and preferences
Registered User	Upload travel media	I can document and share my trips	Uploading photos/videos with trip details is successful
Registered User	View and update profile	I can keep my account info current	Editable profile view with update confirmation
Registered User	Get travel suggestions	I can discover new places to visit	Suggestions are based on travel history and user preference (domestic/international)

Registered User	Create public tour events	I can invite others to join my trip	Event form submitted with location, date, cost, and visibility
Registered User	Enroll in public tour events	I can join others' tours	Enrollment success confirmation shown
Registered User	View cost estimations	I can estimate travel budget	System shows cost estimate based on input like destination, duration, and travel type
Admin	Approve/monitor public events	I can control what is visible to others	Event goes live only after admin approval
Admin	Manage destination database	I can ensure accurate and updated travel info	Admin can add/edit/delete destinations
Admin	Monitor uploaded media	I can keep the content appropriate	Uploaded media flagged or approved
Admin	Manage user accounts	I can control access to the system	Admin can view, block, or delete any user account
Admin	Oversee system performance	I can ensure smooth functioning	Admin dashboard shows system logs, user activity, and reports
System	Suggest new destinations	I can recommend places not yet visited	System compares travel history with available database to generate suggestions

### Product Requirement Document (PRD) - Version: 1.0

Template Name	<b>Trip Diary- Travel management &amp; Tour Suggestion System</b>
Goals & Objective	<p>The primary goal of the Trip Diary system is to develop a user-friendly travel management platform that allows users to plan, record, and share their travel experiences while receiving personalized trip suggestions and cost estimations.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Log past trips and plan upcoming travel with helpful notes, dates, and media uploads</li> <li>• Create or join public tour events to travel in groups</li> <li>• Get personalized travel suggestions based on their history and preferences</li> <li>• View estimated costs for planned trips using destination, duration, and travel type</li> <li>• Browse public tour events and destinations (for guests, with limited access)</li> <li>• Update their personal profile information anytime</li> <li>• Admins can manage destinations, user accounts, and moderate uploaded content</li> </ul>
Client Information	
Product Type	Windows Application / Android Application
Domain	Web2
Access Layers	Guest User, User, admin, System
Design Required	Yes

#### Feature 01: App Overview for Guest Users & Auth Feature

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 1	1	Browse public tour events [Guest Users]		As a Guest User, I want to browse public tour events so that I can explore travel opportunities.			Public Tour Event
phase 1	2	View Destination [Guest Users]		As a Guest User, I want to view destination suggestions so that I can get			Destinations

				inspired to travel.			
phase 2	3	Signup & Login [Guest Users]		As a Guest User, I want to sign up or log in so that I can access full features.			Signup & Log
Phase 2	4	Forgot password [admin] [User]		As an Admin & User, I want to reset my Password so that I can Login the System.			Forgot Password

#### Feature 02: Dashboard

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 2	5	Admin Interface		As an Admin, I want to access a centralized admin interface so that I can efficiently manage users, destinations, public events, uploaded media, and system performance.			Interface
phase 3	6	User Interface		As a registered user, I want a clear and user-friendly interface so that I can easily navigate the platform, plan trips, log travel history, and interact with tour events without confusion.			Interface
phase 3	7	User Interface [Admin][Users]		As a system user (Admin/User), I want a clear and user-friendly interface so that I can easily access and perform my specific tasks without confusion.			Menu or Dashboard

### Feature 03: Registered User Activities

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 4	7	Add Past Trips [user]		As a Registered User, I want to add past trips so that I can log and revisit my travel history.			Past Trips
phase 4	8	Plan Upcoming Trips [User]		As a Registered User, I want to plan upcoming trips so that I can organize my future travel plans.			Upcoming Tri
phase 4	9	Upload Media [User]		As a Registered User, I want to upload travel media so that I can document and share my trips.			Media
Phase 4	10	Update Personal Profile [User]		As a Registered User, I want to update my profile so that my account info stays current.			Personal Prof
Phase 4	11	Travel Suggestion based on Travel history [User]		As a Registered User, I want to get travel suggestions so that I can discover new places.			Travel Suggestion
Phase 4	12	Create Public Tour events		As a Registered User, I want to create public tour events so that I can invite others.			Create Events
Phase 4	13	Choose domestic or International Travel type		As a registered user, I want to choose between domestic or international travel so that I receive personalized suggestions and cost estimates.			Travel Type

Phase 5	14	Enroll Tour Event		As a Registered User, I want to enroll in public tour events so that I can join others' tours.			Enroll Event
Phase 6	15	average cost estimation		As a Registered User, I want to view cost estimations so that I can plan my budget.			Cost

#### Feature 04: Payment Feature

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 7	16	Payment for Enrolled Tour Event [User]		As a registered user, I want to make secure payments for tour events or travel bookings so that I can confirm my participation without any hassle.			Payment

#### Feature 05: Admin Activities

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 3	17	Approve/Monitor public Tour Event [Admin]		As an Admin, I want to approve or monitor public events so that I can control visible content.	Monitor Event		signup
phase 3	18	Manage Destination Database [Admin]		As an Admin, I want to manage the destination database so that info is accurate.	Destinations		signin
phase 3	19	Monitor Uploaded Media's [Admin]		As an Admin, I want to monitor media uploads so that content stays appropriate.	Monitor Media		forgot_passw
phase 3	20	Manage User Accounts [Admin]		As an Admin, I want to manage user accounts so that I can	Manage User		

				control system access.			
phase 3	21	Monitor System's Performance [Admin]		As an Admin, I want to oversee system performance so that I can ensure smooth operation.	Performance		

#### Feature 06: System Activities

Phase	Item No	Specification [Role]	Screen Definition	User Story	Acceptance Criteria	UI Screen / Wireframe	Tags
Phase 1	22	Suggest Destinations [System]		As a System, I want to suggest destinations not visited by the user so that they discover new places.	Suggest Destination		signup

#### Final Term Tasks...

##### Project Effort Estimation:

It is a dynamic multivariable model for effort estimation.

$$E = \left[ \frac{LOC * B^{0.333}}{P} \right]^3 * \left( \frac{1}{t^4} \right)$$

**We assumed,**

LOC=6000

Productivity Factors, B=1.12(assumed for normal business app)

productivity parameter, P=600LOC/pm

t=3 months

Now,

$$E = \left[ \frac{LOC * B^{0.333}}{P} \right]^3 * \left( \frac{1}{t^4} \right)$$

$$E = \left[ \frac{6000 * 1.12^{0.333}}{600} \right]^3 * \left( \frac{1}{3^4} \right)$$

$$E = 13.825 \approx 14 \text{ Person/Months (Answer)}$$

##### COCOMO(Constructive Cost Model):

- **Person-Months needed for project,**

$$Effort = PM = Coefficient_{<EffortFactor>} * \left( \frac{SLOC}{1000} \right)^P$$

- **Duration time in months for project,**



$$DM = 2.50 * (PM)^T$$

- Required Number of people,

$$ST = \frac{PM}{DM}$$

**We Assumed,**

**Our project type is Semi-detached project.**

**So,**

$$Coefficient_{<EffortFactor>} = 3.0$$

$$P = 1.12$$

$$T = 0.35$$

$$SLOC = 6000$$

**Now,**

Person-Months Needed for Project,

$$Effort = PM = Coefficient_{<EffortFactor>} * \left(\frac{SLOC}{1000}\right)^P$$

$$Effort = PM = 3.0 * \left(\frac{6000}{1000}\right)^{1.12}$$

$$Effort = PM = 22.317(Answer)$$

Development Time,

$$DM = 2.50 * (PM)^T$$

$$DM = 2.50 * (22.317)^{0.35}$$

$$DM = 7.412 Week - days(Answer)$$

Required Number of people,

$$ST = \frac{PM}{DM}$$

$$ST = \frac{22.317}{7.412}$$

$$ST = 3.0109 \approx 4 Person(Answer)$$

**Make-Buy decision:**

We assumed, we will build our project and after analyzing the project concepts we can say that the project either a little bit difficult or simple.

So, Our Projects make-Buy Decisions is,

Project name (**Trip Diary**) → Build [Simple(**0.30**)] → Estimated Path Cost(**\$380,000**)

Project name (**Trip Diary**) → Build [Difficult(**0.70**)] → Estimated Path Cost(**\$450,000**)

**Computing Expected Cost From Decision Tree:**

$$Expected - Cost = (pathProbability)_i * (Estimated - Path - Cost)_i$$

$$Expected - Cost = 0.30(380k) * 0.70(450k)$$

$$Expected - Cost = 429k(Answer)$$

Effort Allocation(40-20-40):

[Timeline Charts:](https://viewer.diagrams.net/?border=0&tags=%7B%7D&lightbox=1&highlight=0000ff&edit=_blank&layers=1&nav=1&dark=auto#R%3Cmxfile%3E%3Cdiagram%20name%3D%22Page-1%22%20id%3D%22bbJl_lQq7eR2wh4Y-pfa%22%3E7Vldc5s4FP01nmkfnBEIHPsxseNtZptpZpOd7u6bDAKREYgK4Y%2F99b0CgQ2YhExCus1sPBNLRx9I99xzdYVHeB7tFpMkWd8In%2FKRjfdCC9Gtn0%2BncB%2FDewLwLUMEErmF5B1AO7Yv9SAyKAZ82la66iE4IolddATcUw9VcOIIIGJb7xYIXn9qQkLaAu48wtvoV%2BardYFOXTAP1EWrssnW8i0RKTSblB0TXyxPYLw1QjPpRCqKEW7OeXadqVdinHLjtZqYZLGqs%2BAyltx7%2F5ZztezkP%2F%2B1ft0v8nmYz1AT7MhPDM7NqtV%2B9IEsPBEF71sBV%2BX2zVT9C4hnsa2QDpgaxVxqFIQXlks9qn%2FevUBxHslpUa%2FZlqzmBrcJ%2FLhC0zDIHYNDlbcOmjqnQ4ZMM7nggsJCNe2HutuH0Y2Dnxqu9ORPR%2FpzWPq689HGJlqKR5oOQiaUP4HLWa%2FVCq667SkVfEdfk1FRJXcQxczwHYMpcansT0r6tuDh8xMl%2FWxc2ADEuOUYTX1gTcoGOqeQ6P1a9PoTiAwVDQ6jn1uO29Ooz3pR%2BN0MBadFmmyoEHbEDYtpFqLUMSEfxYiMQR8o0rtTeAkmRJ1HumOqb%2FMcF3%2B%2B6i80laYVTvBiunT1dvqWSwLSrNgGJp1G%2BFy4a5Yfkix59bJ%2FoNC%2BSqclYpv6AU1Y2Q28Fg0dXfOLZBp%2FliqU%2BhiAypMqMaXFXLeAF96JcW4coLFEIqEVolezh4cxHOeobS2WAidE%2BwOOFKM2PVyJx8z%2FTZfRmBW7F4rLQil6AHSna5bcp2KIX6eylFrMY09qHPgqYsjMuJYaF67qJbCfps04QEbyKclcg8SxWYQMLkcxFFWcw8EJM4fsahc3v4rRTfdP6kVfg9Y5JGNNcWgWCzT1nacxq%2Fua%2FH0ku6YXSbP0TbJBI%2BC%2FqsGsC2JQA8YbETOEO%2BNbShWXBuVdfIKdkKEHA8wRvzXyfxnqDtegdcpKmplwig6glMJ8GJMvXdaxVkn3lflm4uHgd2TVjpVWePUe6qzLXeg7jDiW8yVDCW9AN5SlpPPoRxsUnHKOFpapB8OA4hJUILcPrKOG5jHKPPnu%2BSz%2BxnoHctDvcN%2FxxWWrtg%2FijXdaf8sfhkrHZOQjGBs%2BxslV75VjtifATEXVZ5GDJGj6VrL1KtLmnqSqiweV%2Bf3HqSJ6QUngnj9jporU7TpWNJTPOfrzMLESu2L8JYccM6%2F1PMP7POw%2FG946D9vI4kq%2FWRgkuQGJ3fOwRUNFN9y%2Bmvwf3VpEOWj2OtGtNdHQQ13RrdA5AttzfdME5zcnV4s6Yd8Q2jsb6zuUeqLebsLVzC9R0BLsFapyb9UqsLEn9%2BYRoikC7vuh%2FX%2FVSKlr2C6nj2WndS163rddq%2BIE5PyHWw13vYeTmdTgedlpu%2FuHjPdEZozxqEovZtp%2BT8bqjtfnsnwYn06aOy%2Bc0lb%2BrR%2Buj67r6696Zx0pZOSJfqFESNyP76XZJP%2FvnZDYhle3tHoppMejhT4usvCUGegOiNDV0EAB7IORTkX5ZsV9AFcx6iOPoj4%2FTjz3cVq%2B4qfRO1A%2FoabmU10rT2FdRBJ9xq8ny3gurrhh7%2FiOD%2F8eoqvfgA%3D%3C%2Fdiagram%3E%3C%2Fmxfile%3E</a></p>
</div>
<div data-bbox=)

Days Task: Person	Day-1	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Task: Person							
Task: Person							
Task: Person							
Task: Person							
Task: Person							
Task: Person							
Task: Person							
Task: Person							
Task: Person							

Computing Earned Value Analysis:

Task	Planned Effort	Actual Effort
1	15.0	15.0
2	12.5	14.0
3	14.5	13.0

Task	Planned Effort	Actual Effort
4	8.5	8.0
5	8.5	8.5
6	10.0	8.5
7	4.0	4.5
8	9.5	9.0
9	3.5	3.5
10	12.5	9.0
11	11.5	10.5
12	17.5	15.5
13	15.5	10.0
14	7.5	7.0
15	12.0	11.0
16	6.5	7.0
17	8.5	10.5
18	12.0	10.5
19	17.0	15.0
20	9.5	10.5
21	15.0	15.0
22	18.5	18.0
23	4.0	6.0
24	8.5	8.0
25	8.0	9.0
26	12.5	12.0
27	13.5	14.0
28	14.0	16.0
29	10.5	9.0
30	6.0	6.5
31	15.0	14.5
32	4.5	5.0
33	5.0	7.0
34	7.5	5.5
35	16.0	
36	11.5	
37	10.5	
38	13.0	
39	6.0	
40	9.5	
41	15.5	
42	10.0	
43		

Here,

Budgeted cost of work performed, **BCWP=323.5**

Budgeted cost of work scheduled, **BCWS=415.5**

Actual cost of work performed, **ACWP=347**

**Total tasks=105**

**Effort Estimated=810 person day**

Now,

**Budget at Completion,**

$$BAC = \sum (BCWS_k)$$

**Schedule Performance Index,**

$$SPI = \frac{BCWP}{BCWS}$$

**Schedule Variance,**

$$SV = BCWP - BCWS$$

**Percent Schedule for Completion,**

$$\text{Percent - Schedule - for - Completion} = \frac{BCWS}{BAC}$$

**Percent Complete,**

$$\text{Percent - Complete} = \frac{BCWP}{BAC}$$

**Cost Performance Index,**

$$CPI = \frac{BCWP}{ACWP}$$

**Cost V,**

$$CV = BCWP - ACWP$$

**Calculations...**

$$BAC = \sum (BCWS_k)$$

$$BAC = 810.00(\text{Answer})$$

$$SPI = \frac{BCWP}{BCWS}$$

$$SPI = \frac{323.5}{415.5}$$

$$SPI = 0.778(\text{Answer})$$

$$SV = BCWP - BCWS$$

$$SV = 323.5 - 415.5$$

$$SV = -92\text{Person - day}(\text{Answer})$$

$$\text{Percent} - \text{Schedule} - \text{for} - \text{Completion} = \frac{BCWS}{BAC}$$

$$\text{Percent} - \text{Schedule} - \text{for} - \text{Completion} = \frac{415.5}{810.00}$$

$$\text{Percent} - \text{Schedule} - \text{for} - \text{Completion} = 51.3\text{Percent}(\text{Answer})$$

51.3% of work scheduled to be done at this time.

$$\text{Percent} - \text{Complete} = \frac{BCWP}{BAC}$$

$$\text{Percent} - \text{Complete} = \frac{323.5}{810.00}$$

$$\text{Percent} - \text{Complete} = 39.9\text{Percent}(\text{Answer})$$

39.9% of work completed at this time.

$$CPI = \frac{BCWP}{ACWP}$$

$$CPI = \frac{323.5}{347.0}$$

$$CPI = 0.932(\text{Answer})$$

$$CV = BCWP - ACWP$$

$$CV = 323.5 - 347.0$$

$$CV = -23.5\text{Person} - \text{day}(\text{Answer})$$

#### Group Members.

Name	ID.
Marin Rahman	23-52296-2
Umme Fahmida Sultana	23-52918-2
Rashed faruque	23-52924-2
Eyamin Khan Emon	23-52922-2