# Travel Plan Assistant - User Manual

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## System Overview

The Travel Plan Assistant is a comprehensive web application that helps users create, discover, and manage group travel plans. The system supports real-time communication, collaborative decision-making through polls, and shared expense management.

### Key Features

* **User Management**: Registration, authentication, and profile management
* **Travel Plan Creation**: Create detailed travel plans with multiple criteria
* **Plan Discovery**: Search and filter travel plans based on preferences
* **Member Management**: Invite users, accept applications, and manage group members
* **Real-time Communication**: Chat room functionality with WebSocket support
* **Polling System**: Create and participate in polls for group decisions
* **Expense Sharing**: Track and split shared expenses among group members

## Getting Started

### 1. User Registration

**Test Users for Demonstration:**

* **Tester AAA**: Birthday 1990, English speaker
* **Tester BBB**: Birthday 2000, Japanese speaker

**Registration Process:**

1. Navigate to the registration page
2. Fill in required information:
   * Email address
   * Password
   * First name and last name
   * Date of birth
   * Gender
   * Preferred language
   * Location (city, country)
3. Submit registration
4. System automatically creates user profile

### 2. User Login/Logout

**Login Process:**

1. Enter email and password
2. System validates credentials
3. JWT token is generated for session management
4. User is redirected to the main dashboard

**Logout Process:**

1. Click logout button
2. JWT token is invalidated
3. User is redirected to login page

## User Plan Status Scenarios

Understanding user plan statuses is crucial for navigating the system effectively. Here are the different scenarios and their meanings:

### User Plan Status Values

| **Status** | **Description** | **When It Occurs** |
| --- | --- | --- |
| **OWNED** | User created/owns the travel plan | When user creates a new travel plan |
| **APPLIED** | User applied to join a travel plan | When user applies to a public plan |
| **APPLIED\_CANCELLED** | User cancelled their application | When applicant cancels their own application |
| **APPLIED\_ACCEPTED** | Application was accepted by owner | When plan owner accepts the application |
| **APPLIED\_REFUSED** | Application was refused by owner | When plan owner refuses the application |
| **INVITED** | User was invited to join a plan | When plan owner sends invitation |
| **INVITED\_ACCEPTED** | Invitation was accepted by invitee | When invitee accepts the invitation |
| **INVITED\_REFUSED** | Invitation was refused by invitee | When invitee refuses the invitation |

### Current Plan Scenarios

**When a user HAS a current plan:**

* User has user\_plan\_status in OWNED, APPLIED/APPLIED\_ACCEPTED, or INVITED/INVITED\_ACCEPTED for a plan with status NEW/IN\_PROGRESS
* User can access plan details, chat room, polls, and shared expenses
* User CANNOT apply to other plans or be invited to other plans
* One and only one Travel Plan card appears in "Current" tab of My Plans

**When a user DOES NOT have a current plan:**

* User has no active plan relationships
* User can search and apply to plans in Discovery
* User can be invited to plans, plan type can be PUBLIC or PRIVATE
* User sees "No current plans" in My Plans Current tab

### Discovery Restrictions

Users can only see and apply to plans that meet ALL these criteria:

* Plan status is NEW
* Plan type is PUBLIC
* Plan is not full (current members < max members)
* User is not already a member of any active plan (user has any related plan whose status is COMPLETE/CANCELLED or any related plan whose status is NEW/IN\_PROGRESS and the user\_plan\_status is APPLIED\_CANCELLED/APPLIED\_REFUSED/INVITED\_REFUSED is valid for this criteria)
* User meets age, language, and gender restrictions (if specified)

## Complete User Workflow

### Step 1: Create Travel Plan (Tester AAA)

**Using Tester AAA account:**

1. **Navigate to My Plans → Current tab**
2. **Click "Create Plan" button**
3. **Fill in plan details:**
   * Title: "Weekend Hiking Trip"
   * Category: TRIP
   * Plan Type: PUBLIC or PRIVATE
   * Destination: "Banff National Park"
   * Start Date: Future date
   * End Date: After start date
   * Max Members: 4
   * Description: Detailed plan description
   * Age restrictions: 18-50
   * Language: English
   * Gender preference: ANY
4. **Submit plan creation**
5. **System automatically:**
   * Creates plan with status NEW
   * Sets user status to OWNED
   * Shows plan in Current tab

### Step 2: Invite Members (Tester AAA)

**Invite**[**liangli5100@gmail.com**](mailto:liangli5100@gmail.com)**:**

1. **Open plan details**
2. **Click "Invite Member" button**
3. **Enter email:**[**liangli5100@gmail.com**](mailto:liangli5100@gmail.com)
4. **Send invitation**
5. **System automatically:**
   * Creates INVITED status for invitee
   * Sends email notification
   * Shows invitation in plan members list
6. **Plan owner can close plan when its status is NEW, and system will automatically refuse all members applications or invitations**

**Different warning scenarios:**

* **User doesn't exist in system**: "User not found"
* **User has a current plan**: "Invitee already has a current travel plan"
* **APPLIED\_REFUSED**: "User has already been refused to join the plan"
* **APPLIED\_CANCELLED**: "User has already cancelled the application"
* **INVITED\_REFUSED**: "User has already refused to join the plan"

### Step 3: Handle Invitations ([liangli5100@gmail.com](mailto:liangli5100@gmail.com))

**Login with**[**liangli5100@gmail.com**](mailto:liangli5100@gmail.com)**:**

1. **Check email for invitation notification**
2. **Navigate to plan details**
3. **Two options:**
   * **Accept**: Status changes to INVITED\_ACCEPTED
   * **Refuse**: Status changes to INVITED\_REFUSED
4. **Automatic rejection when plan is full:**
   * When max members reached, remaining applications or invitations are automatically refused
   * System shows green for decided members, blue for pending

### Step 4: Discovery and Application (Tester BBB)

**Using Tester BBB account:**

1. **Navigate to Discovery page**
2. **Search for available plans:**
   * Only shows NEW, PUBLIC, not full plans
   * Filters by age, language, gender restrictions
   * Cannot apply if the user has a current plan
3. **Click on a plan to view details**
4. **Click "Apply" button**
5. **System automatically:**
   * Creates APPLIED status
   * Shows application to plan owner
   * Prevents user from applying to other plans

### Step 5: Handle Applications (Tester AAA)

**As plan owner:**

1. **Open plan details**
2. **View pending applications in members list**
3. **For each application:**
   * **Accept**: Status changes to APPLIED\_ACCEPTED
   * **Refuse**: Status changes to APPLIED\_REFUSED
4. **Automatic rejection when plan is full:**
   * When max members reached, remaining applications or invitations are automatically refused
   * System shows green for decided members, blue for pending

### Step 6: CRON Job - Plan Start

**Automatic plan start (scheduled job):**

1. **CRON job runs twice daily (01:00 and 13:00)**
2. **For plans starting today:**
   * Automatically refuses all pending applications and invitations
   * Changes plan status from NEW to IN\_PROGRESS
   * Sends start reminder emails to all members
   * Enables chat room, polls, and shared expenses

### Step 7: Active Plan Features

**During IN\_PROGRESS status:**

**Chat Room:**

* Real-time messaging via WebSocket
* Only active members can participate
* Message history is preserved

**Polls:**

* Create polls for group decisions
* Multiple choice or single choice options
* Time-based expiration
* Anonymous or named voting

**Shared Expenses:**

* Record expenses paid by any member
* Automatically calculate individual shares
* Upload receipt images
* Track payment status

### Step 8: CRON Job - Plan Completion

**Automatic plan completion:**

1. **CRON job runs twice daily (01:10 and 13:10)**
2. **For plans ending today:**
   * Changes plan status from IN\_PROGRESS to COMPLETED
   * Sends completion reminder emails
   * Disables chat room, polls, and shared expenses
   * Moves plan to History tab

### Step 9: History Tab

**View completed plans:**

1. **Navigate to My Plans → History tab**
2. **View all attended COMPLETED and CANCELLED plans history**
3. **Click on plan to view details**
4. **Access chat history, polls, and expense records**

### Step 10: User Profile Management

**Profile features:**

* Edit personal information
* Upload profile picture
* Update preferences
* View plan statistics

## Feature Details

### Plan Types

**PUBLIC Plans:**

* Visible in Discovery page
* Anyone can apply (if they meet criteria)
* Searchable and filterable

**PRIVATE Plans:**

* Not visible in Discovery
* Only accessible via direct invitation
* Owner must invite specific users

### Member Management

**Active Members (counted toward max):**

* OWNED - Plan creator
* APPLIED\_ACCEPTED - Accepted applicants
* INVITED\_ACCEPTED - Accepted invitees

**Pending Members (not counted):**

* APPLIED - Pending applications
* INVITED - Pending invitations

**Inactive Members:**

* APPLIED\_REFUSED - Refused applications
* APPLIED\_CANCELLED - Cancelled applications
* INVITED\_REFUSED - Refused invitations

### Email Notifications

**Automatic notifications sent for:**

* Invitation received
* Plan start reminders
* Plan completion reminders

### Real-time Updates

**Polling mechanisms:**

* Discovery page: 15-second intervals
* My Plans: 12-second intervals
* Plan Details: 10-second intervals
* Chat room: Real-time via WebSocket

## Troubleshooting

### Common Issues

**"User already has a current travel plan"**

* User must complete or leave current plan before joining another
* Check My Plans → Current tab for active plans

**"Plan is not available for application"**

* Plan might be private, full, or not in NEW status
* Check plan details for current status

**"User already has a relationship with this plan"**

* User has previously applied, been invited, or is already a member
* Check plan members list for user's current status

**"Travel plan has reached maximum number of members"**

* Plan is full and cannot accept more members
* Wait for someone to leave or find another plan

### Status Color Coding

**In plan member lists:**

* **Green**: Decided members (accepted/owned)
* **Blue**: Pending members (applied/invited)
* **Red**: Refused members (refused/cancelled)

### Plan Status Transitions

**NEW → IN\_PROGRESS**: Automatic via CRON job on start date

**IN\_PROGRESS → COMPLETED**: Automatic via CRON job on end date

**NEW/IN\_PROGRESS → CANCELLED**: Manual by plan owner

### Best Practices

1. **Plan Creation**: Set realistic member limits and clear descriptions
2. **Invitations**: Send invitations to users who are likely to participate
3. **Applications**: Review applications promptly to maintain user engagement
4. **Communication**: Use chat room for real-time coordination
5. **Decision Making**: Use polls for group decisions
6. **Expense Tracking**: Record expenses promptly for accurate sharing

This manual provides comprehensive guidance for using the Travel Plan Assistant system. For technical support or additional questions, please refer to the system documentation or contact the development team.