

System Requirements

Team Tech Ballers

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Overview: System's Functional Requirements

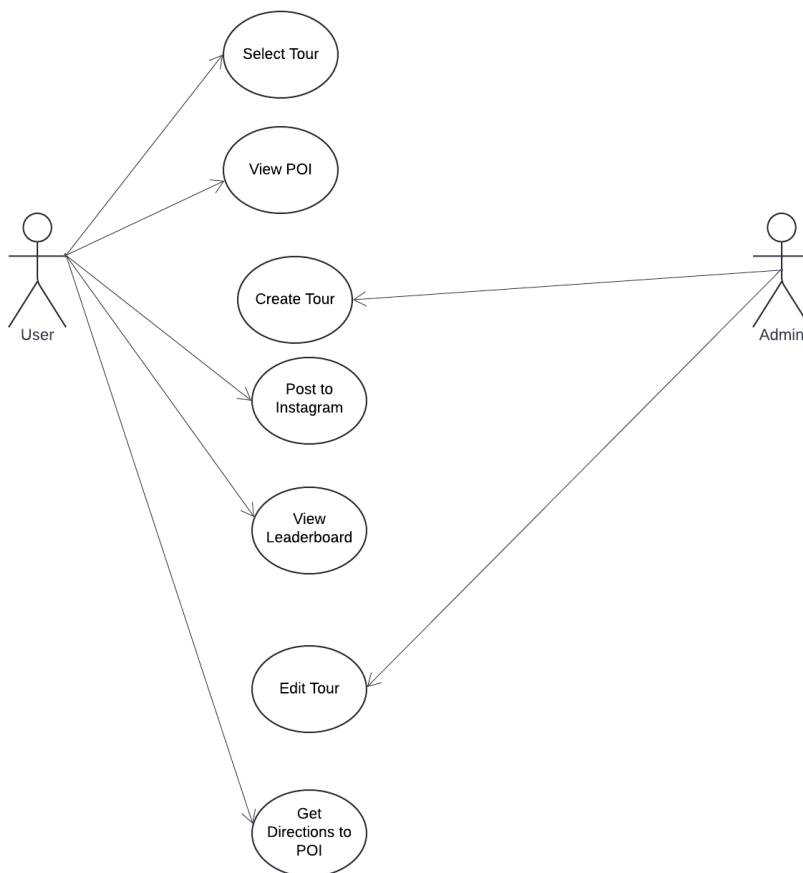
- The Connecticut Explored App is designed to provide users with walking tours across Connecticut, based on historical articles. The app is especially built to enhance engagement with Connecticut history through interactive walking tours, where it allows users to visit points of interest (POIs) on a map, upload pictures to social media sites and track progress with scores on a leaderboard. The primary stakeholders include magazine subscribers, and casual users interested in Connecticut history alongside admins, CT Explored organization and development team responsible for app's overall functionality and maintenance.
- Core Features
 - **User Registration and Login:** Users can register or log into the app using OAuth for Google, Facebook, and Apple.
 - **Interactive Tours:** Users can explore guided tours that feature multiple POIs.
 - **Uploading and Sharing Photos:** Users can take photos at POIs and share them on Instagram to earn leaderboard points.
 - **Leaderboard:** A competitive feature that ranks users based on their shared content from the tours.
 - **Tour Management (Admin):** Admins can add and update tours and their POIs.
 - **Geolocation:** The app confirms whether a user is near a POI before allowing photo uploads.

User Stories

1. **View Tours on a Map:** As a user, I want to view tours on a map so that I can explore historical points of interest.
 - **Pre-condition:** User has access to the app and map functionality.
 - **Post-condition:** User can see a route with POIs and details about each location.
 - **Decomposition:** No
2. **Navigate a Tour:** As a user, I want to start a tour and navigate between my current location and POI or between POIs.
 - **Pre-Condition:** User has selected a tour.
 - **Post-Condition:** The user is directed to the first POI which begins the tour.
 - **Decomposition:** Yes (This epic can be broken down into smaller stories such as selecting a tour, getting directions using preferred map service, and navigating between POIs.)
3. **Post a Picture on Instagram After Visiting a POI:** As a user, I want to post a picture on Instagram after visiting a POI so that I can contribute to the leaderboard.
 - **Pre-condition:** User has visited a POI and linked their Instagram account.
 - **Post-condition:** Picture is posted, and points are added to the leaderboard.
 - **Decomposition:** No
4. **Track Progress on the Leaderboard:** As a user, I want to track my progress on a leaderboard so that I can compete for rewards and compete with others.
 - **Pre-condition:** User has visited POIs and uploaded photos to Instagram.
 - **Post-condition:** Points are displayed, and rewards are tracked.
 - **Decomposition:** No

5. **Create and Edit Tours:** As an admin, I want to create and edit tours so that I can update the app content without technical help.
- **Pre-condition:** Admin has logged into an admin panel.
 - **Post-condition:** New or updated tours appear on the app for users.
 - **Decomposition:** Yes (This can be split into smaller stories such as adding new tours, editing existing tours, and removing outdated tours.)
6. **Manage User Subscription:** As an admin, I want to manage user subscriptions so that subscribers have free access to tours while non-subscribers pay a fee.
- **Pre-condition:** User account exists with subscription data.
 - **Post-condition:** Subscribers can access tours for free, and non-subscribers are prompted for payment.
 - **Decomposition:** Yes (This can be broken down into smaller stories such as subscription validation, payment handling, and renewal.)

Use Case Diagram:



Key actors

- **User:** End-user of the application who interacts with the app.
- **Admin:** System administrator responsible for managing and updating the app's content.

Non-Functional Requirements

- **Performance:** The app should load POIs and tours within 2 seconds.
- **Security:** User data (login, leaderboard scores) should be encrypted.
- **Accessibility:** App must include speech-to-text functionality for visually impaired users.
- **Scalability:** The app should handle up to 10,000 users simultaneously without performance degradation.
- **Usability:** Interface should be intuitive, with clear instructions for users unfamiliar with mobile apps.
- **Compatibility:** The app must be compatible with IOS and Android platforms.

Domain Requirements

- **Historical Accuracy:** All information on the app must be verified for factual accuracy.
- **Cultural Sensitivity:** The app must ensure that all content is presented in a culturally sensitive manner without causing any discomfort to audiences.
- **Legal and Copyright Compliance:** All content must comply with copyright laws.

Glossary

- **POI (Point of Interest):** A specific location or site on the tour that holds historical significance.
- **Leaderboard:** A ranked list of users based on the points earned from visiting POIs and uploading photos via Instagram.
- **Subscription:** Users who are CT Explored subscribers or non-subscribers.
- **Admin:** The role with permission to add, edit, and manage content on the app.
- **Speech Capability:** An accessibility feature that allows the app to read information aloud for visually impaired users.
- **Instagram Integration:** The process by which users post pictures and interact with the app leaderboard through Instagram.
- **Epic:** Larger and more complex stories that require decomposition into smaller, manageable stories
- **OAuth:** An open standard for authorization with third-party applications.