Backpacker

Software requirement specification

Daniele d'Errico

A.A. 2022/2023

1. Introduction

1.1. Aim of the document

The aim of this document is to present a description of "Backpacker". It will present the purpose and features of the system and what the system will do.

1.2. Overview of the defined system

This application is a tool that helps users in choosing itineraries in a specific place. With its user-friendly interface and mapping technology, users can easily view the proposed itineraries. The app provides key information such as the availability of a tour guide along the way, allowing users to have a complete experience. Furthermore, tourist guides have the possibility of proposing personalized itineraries while restaurateurs can advertise their restaurants located near the points of interest that make up the itinerary, increasing visibility and attracting new customers. In addition, users can save their favorite itineraries. With this application, visiting a place has never been easier.

1.3. HW e SW requirements

"Backpacker" should run on any Operating System that supports the Java Environment (version 8 or higher).

1.4. Related systems

Comparison between Backpacker and Google Maps:

- Pros of Backpacker:

Specialized focus on points on interest, providing more comprehensive and relevant information compared to general mapping services like Google Maps.
Allows businesses to advertise in the vicinity of a selected point of interest, potentially attracting new customers.
User-friendly interface specifically designed for finding point of interest.

- Cons of Backpacker:

Lacking the broader mapping and navigation features of Google Maps.
May not have as many users or updated information as Google Maps, potentially leading to incorrect or outdated information.

- Pros of Google Maps:

Widely used and established with a large user base, leading to more accurate and up-to-date information.
Offers a comprehensive mapping and navigation experience, including features such as traffic updates, public transportation information, and detailed street-level imagery.
Integrates with other Google services, such as Google Search and Google Maps.

- Cons of Google Maps:

Not specifically designed for creating itineraries, it results in a less complete service and a less user-friendly experience for those who want to visit a place.
No possibility for restaurateurs to directly advertise their activities and no possibility for tourist guides to propose their own itineraries.

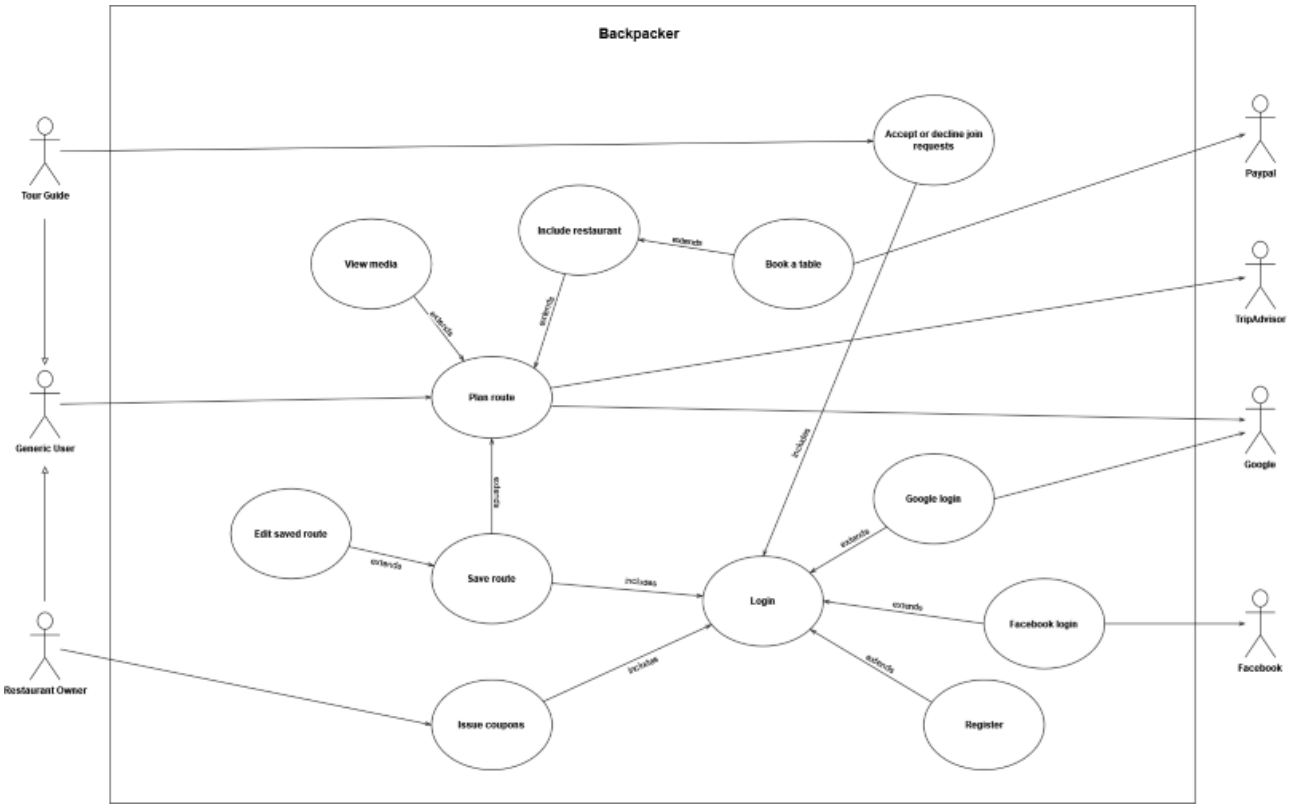
2. User Stories

- As a user, I want to save a route in my favorites, so that I can use it in the future.
- As a restaurateur, I want to release coupons, so that I can attract clients.
- As a tour guide, I want to receive requests to participate in my itineraries, so that I can better organize them.

3. Functional Requirements

- The system shall provide saving a route in the favorites.
- The system shall recommend the best restaurants based on customer reviews.
- The system shall provide to specify a search range within 8 km.

4. Use Case Diagram



5. Storyboard

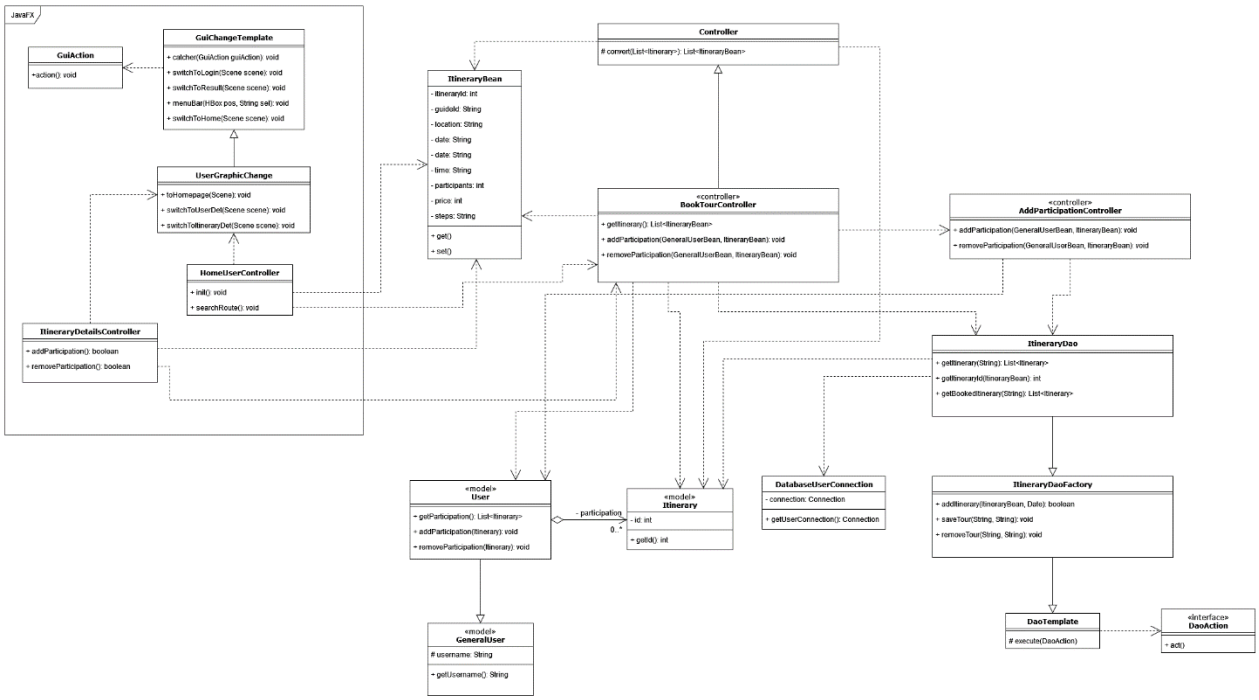
- Repo:

  https://github.com/derrik98/Backpacker-Documentation/blob/main/Storyboard/Storyboard.html

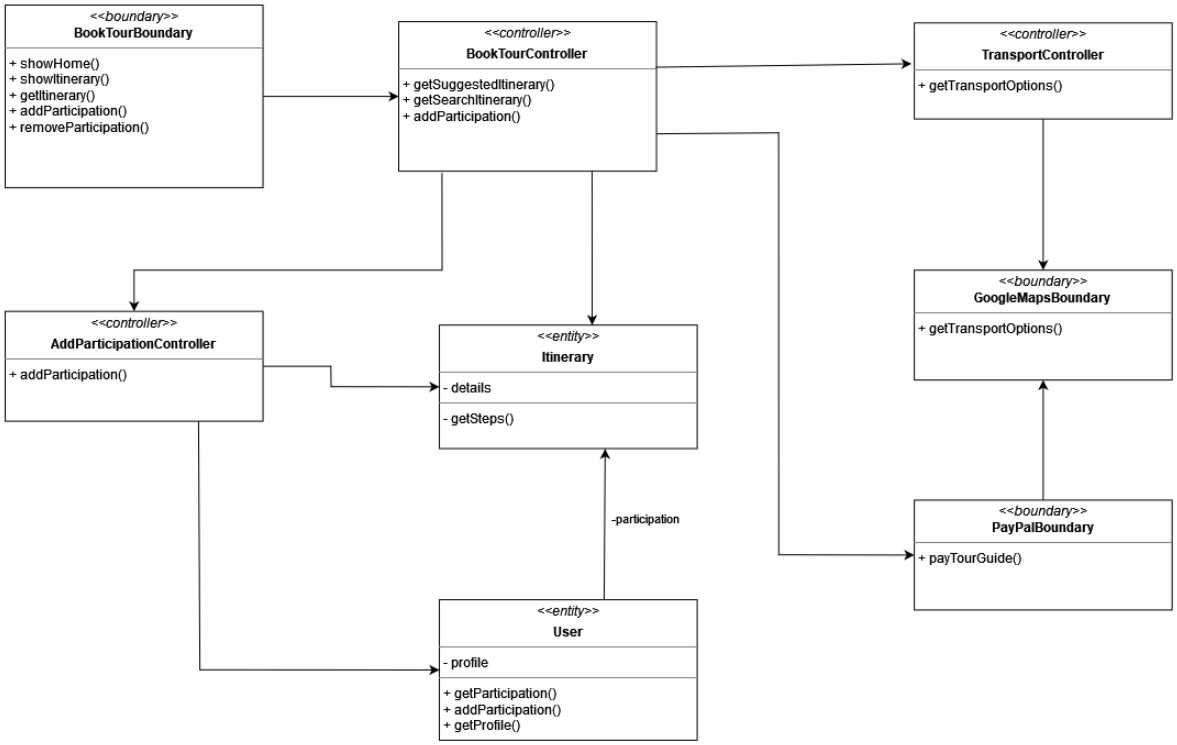
- Preview:
  https://htmlpreview.github.io/?https://github.com/derrik98/Backpacker-Documentation/blob/main/Storyboard/Storyboard.html

6. Design

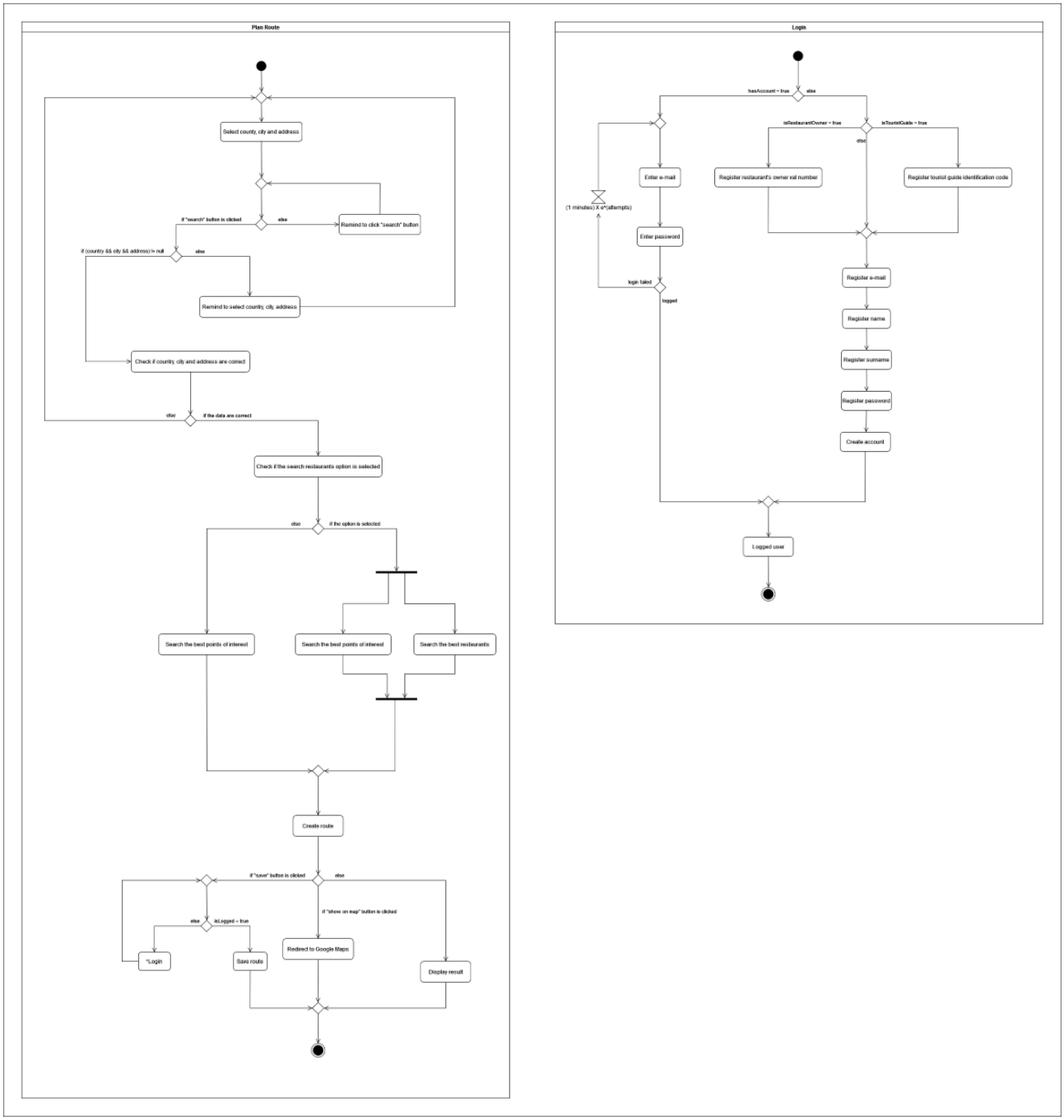
6.1. Class Diagram



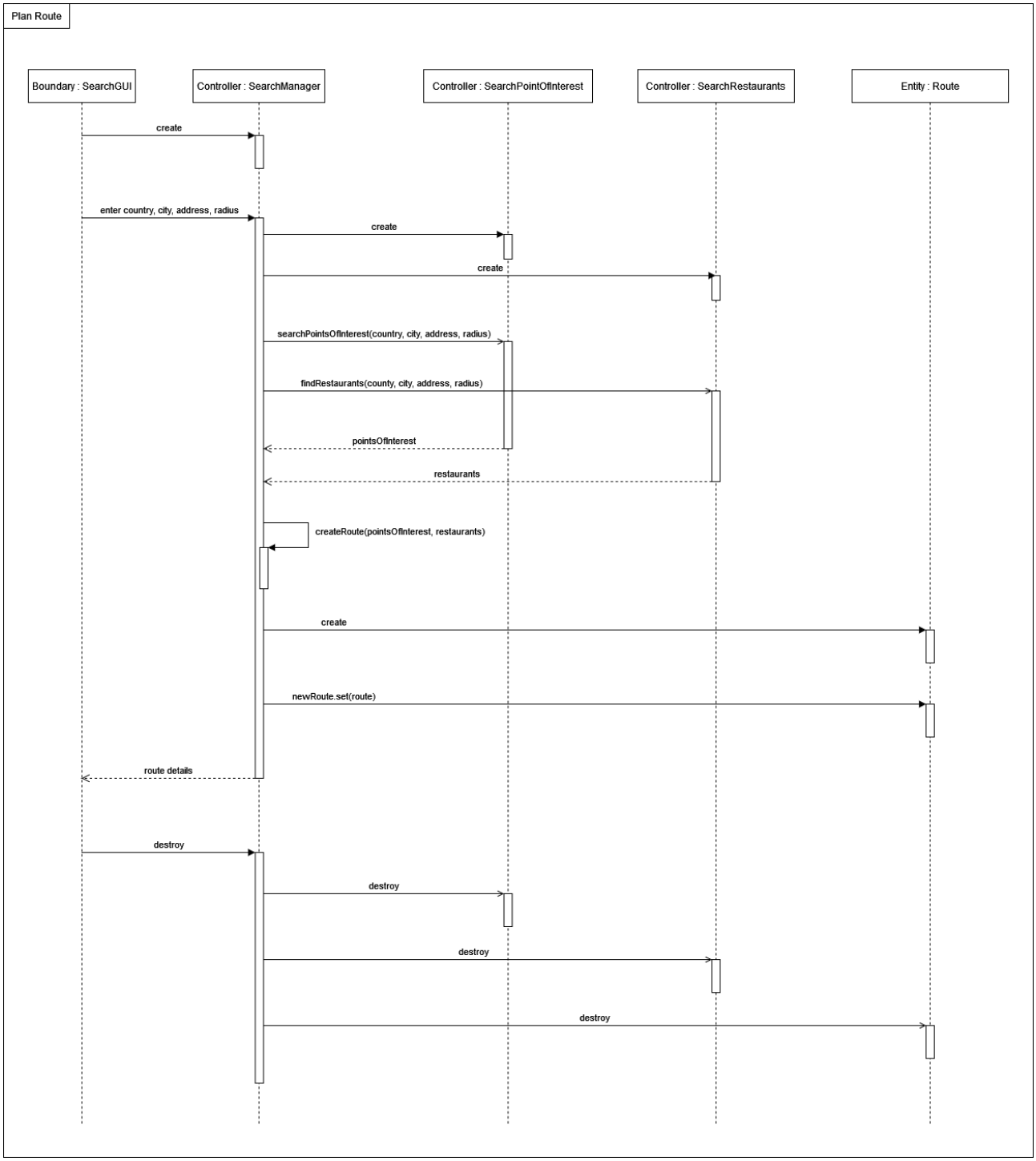
6.2. BCE


<<boundary>>
BookTourBoundary
+ showHome()
+ showItinerary()
+ getItinerary()
+ addParticipation()
+ removeParticipation()
<<controller>>
BookTourController
+ getSuggestedItinerary()
+ getSearchItinerary()
+ addParticipation()
<<controller>>
TransportController
+ getTransportOptions()
<<boundary>>
GoogleMapsBoundary
+ getTransportOptions()
<<controller>>
AddParticipationController
+ addParticipation()
<<entity>>
Itinerary
- details
- getSteps()
-participation
<<boundary>>
PayPalBoundary
+ payTourGuide()
<<entity>>
User
- profile
+ getParticipation()
+ addParticipation()
+ getProfile()

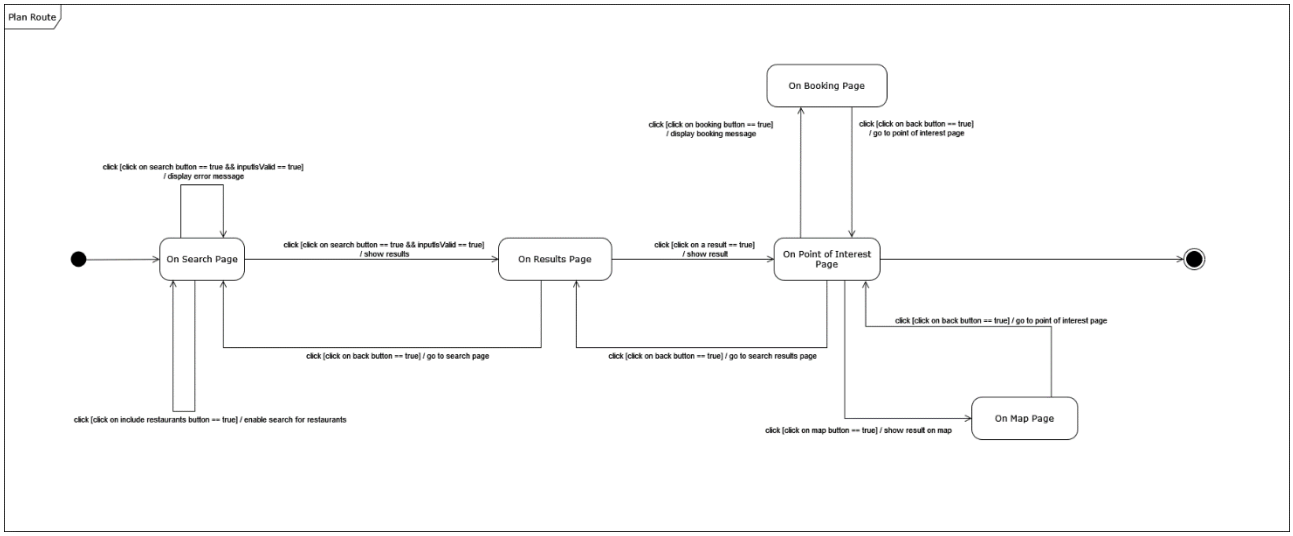
6.3. Activity Diagram



6.4. Sequence Diagram



6.5. State Diagram



7. SonarCloud

- https://sonarcloud.io/project/overview?id=derrik98_Backpacker

8. GitHub Repository

- https://github.com/derrik98/Backpacker