

PATHPORT

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[Github Repo Link](#)

Functional Requirements

1. User and Admin Sign-In:

1.1 The system will allow users to "Sign Up."

1.2 For "Sign In," users choose whether they are an admin or a regular user, then enter their email and password, which the system authenticates against stored records.

1.3 If the credentials are correct, users gain access to the website; if incorrect, the system informs them that the email or password is wrong.

1.4 For "Sign Up," users complete a registration form with their username, password, and email, which the system validates to create a new account.

1.5 The system provides feedback for both successful and unsuccessful attempts, indicating reasons for any failures, such as an incorrect email format, weak password, or already existing username, and prompts users to sign up again if needed.

1.6 Upon successful sign-in, users are directed to the main page, which displays various destinations as cards.

2. Filters:

2.1 The system supports a variety of filters, including location, activity type, price range, and ratings, and allows users to combine multiple filters.

2.2 The system retrieves destination data from a database that includes details such as location, activity types, price, and user ratings.

2.3 Results are displayed in a user-friendly manner, providing key information about each destination (e.g., name, description, image, price, and rating).

2.4 The system validates user input for each filter option (e.g., ensuring valid numeric ranges for price).

2.5 If a filter returns no results, an empty page is displayed.

3. Search:

3.1 Users enter the name of a place in the search bar.

3.2 Users click the search button.

3.3 If the place exists, it appears as a card.

3.4 If the place does not exist, a message indicates that it is not available.

4. Add Places and Categories:

4.1 Admins can add new travel destinations to the system.

4.2 Admins can categorize travel destinations into various types.

4.3 The system allows admins to create new category types as needed.

4.4 When a new destination is added, the system automatically updates the main website pages to display the new destination information.

4.5 The system provides an interface for admins to manage destinations and categories (Edit, Delete).

4.6 The system maintains a comprehensive database of all destinations and categories.

5. Cards with Destinations and Tourism Information:

5.1 Each card displays the title of the place (e.g., Great Wall of China).

5.2 Each card includes a photo of the place.

5.3 Clicking on the card directs users to a detailed "Destination Page," which includes:

- 5.3.1 Location
 - 5.3.2 Reviews
 - 5.3.3 Description (general info about the destination)
 - 5.3.4 Discussion Forum
 - 5.3.5 Booking options
 - 5.3.6 Current events at this destination
-

6. Discussion Forums for Each Place:

6.1 The system creates a unique discussion forum for each destination.

6.2 New forums are automatically created when a destination is added to the system.

6.3 Each comment includes a thread where other users can respond, allowing nested discussions.

6.4 The system includes an upvote and downvote feature for comments.

7. Reviews for Recommendations:

7.1 When users enter a destination page, they can submit a review.

7.2 The review uses a five-star rating system.

7.3 Users can choose a rating from one to five stars.

8. Booking Options:

8.1 The system provides users with an integrated booking interface.

8.2 The system displays a booking summary page for users to review and confirm details before finalizing.

8.3 The system sends booking confirmation emails to users after successful booking.

8.4 Users can view their booking history through their user profile.

9. Display Event:

9.1 The destination page displays upcoming events and festivals.

9.2 Events and festivals are listed with relevant details, including:

- 9.2.1 Title of the event or festival
 - 9.2.2 Date and time
 - 9.2.3 Location
 - 9.2.4 Brief description of the event or festival
-

10. Add Places to Favorites:

10.1 The system provides users with a "Favorites" feature accessible through their profile.

10.2 Users can remove items from their "Favorites" list.

10.3 Each item includes a "Favorites" button to allow users to add items to the list.

11. User Moderation:

11.1 The system allows users to report inappropriate content or behavior directly to admins.

11.2 Admins have access to a dashboard to review reported messages and decide on appropriate actions (e.g., remove content).

11.3 Admins can block users based on verified reports to ensure a safe environment.

12. Chatbot:

12.1 The chatbot is capable of answering specific user questions.

12.2 It is accessible from all pages of the website, either as a floating chat icon or an embedded widget.

Non-Functional Requirements

Scalability

1.1 The database shall support a large number of destinations, users, and reviews without performance degradation.

Usability

2.1 The system shall provide an intuitive interface for both users and admins, allowing easy navigation across pages.

2.2 Forms for sign-up, sign-in, and reviews shall be easy to complete, with guidance for error correction.

Compatibility

3.1 The system shall be compatible with major browsers, including Chrome, Firefox, Safari, and Edge.

Data Integrity

4.1 User and destination data shall be validated and sanitized before storage to prevent database corruption and ensure consistency.

Maintainability

5.1 The system shall be modular to allow for easier updates and the addition of new features.

5.2 Documentation shall be provided to enable future developers to understand and modify the system effectively.

Monitoring

6.1 Admins shall monitor messages and posts, taking necessary actions as needed.

Policies

7.1 Users shall not share inappropriate messages or posts.

Components Design

1. Authentication Component

Responsibilities:

- User Sign Up (1.1, 1.4)- User/ Admin Sign In (1.2)
- Feedback for authentication success or failure (1.3, 1.5)

2. Filter Component

Responsibilities:

- Supports various filters for destinations (2.1)
- Retrieves and displays filtered data (2.2, 2.3)
- Validates filter input and handles empty results (2.4, 2.5)

3. Search Component

Responsibilities:

- Manages search functionality for destinations (3.1, 3.2)
- Displays search results or “not found” messages (3.3, 3.4)

4. Admin Management Component

Responsibilities:

- Admins can add/edit/delete places and categories (4.1 - 4.5)
- Maintains a database of all destinations and categories (4.6)

5. Destination Display Component

Responsibilities:

- Manages display of destinations on cards (5.1, 5.2)
- Shows detailed destination information on click (5.3)

6. Discussion Forum Component

Responsibilities:

- Manages forums for each destination (6.1, 6.2)
- Supports nested discussions and voting on comments (6.3, 6.4)

7. Review Component

Responsibilities:

- Allows users to submit reviews with a star rating (7.1 - 7.3)

8. Booking Component

Responsibilities:

- Provides an interface for bookings (8.1)
- Manages booking summary, history, and confirmations (8.2 - 8.4)

9. Event Display Component

Responsibilities:

- Displays upcoming events on the destination page (9.1, 9.2)

10. Favorites Component

Responsibilities:

- Allows users to add or remove destinations from favorites (10.1 - 10.3)

11. User Moderation Component

Responsibilities:

- Allows users to report content, and admins to moderate (12.1 - 12.3)

12. Chatbot Component

Responsibilities:

- Provides user assistance through a chatbot (13.1, 13.2)

CRC Cards

UserAuthentication	
Responsibilities	Collaborations
Handle user and admin sign-in and sign-up	Database
Validate email, password, and input format	UserProfile
Provide feedback on success or failure of authentication	
Redirect to main page on successful sign-in	

FilterSystem	
Responsibilities	Collaborations
Apply filters (location, activity type, price range, ratings)	Database
Validate and combine multiple filter inputs	DestinationCard
Retrieve and display filtered data from the database	

Search System	
Responsibilities	Collaborations
Accept and process search queries for destinations	Database
Display search results as cards or notify if not found	DestinationCard

AdminPanel	
Responsibilities	Collaborations
Allow admins to add, edit, and delete destinations and categories	Database
Create and manage new category types	DestinationCard
Update main page to display new destinations	

DestinationCard	
Responsibilities	Collaborations
Display destination information (title, image)	DestinationPage
Link to detailed destination page with location, reviews, and booking	

DiscussionForum	
Responsibilities	Collaborations
Allow nested discussions with comment threads	Destination Page
Manage upvote/downvote system for comments	UserProfile

ReviewSystem	
Responsibilities	Collaborations
Allow users to submit reviews with star ratings	Destination Page
Display average rating for each destination	

BookingSystem	
Responsibilities	Collaborations
Provide booking interface and booking summary	UserProfile
Send confirmation emails and manage booking history	Database

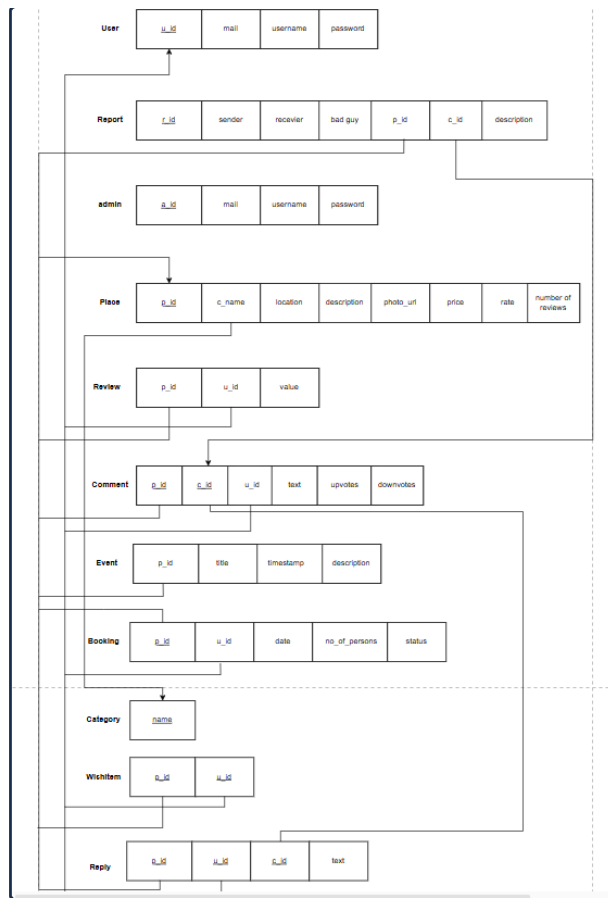
EventDisplay	
Responsibilities	Collaborations
Show upcoming events and festivals for each destination	DestinationPage
Display event details (title, date, location, description)	Database

FavoritesManager	
Responsibilities	Collaborations
Manage "Favorites" list, allowing items to be added or removed	UserProfile
	DestinationCard

ModerationSystem	
Responsibilities	Collaborations
Enable user reports on inappropriate content	AdminPanel
Allow admins to review and act on reports	UserProfile
	Discussion Forum

Chatbot	
Responsibilities	Collaborations
Answer user questions across the website	FAQDatabase
Provide interactive support via chat icon or widget	

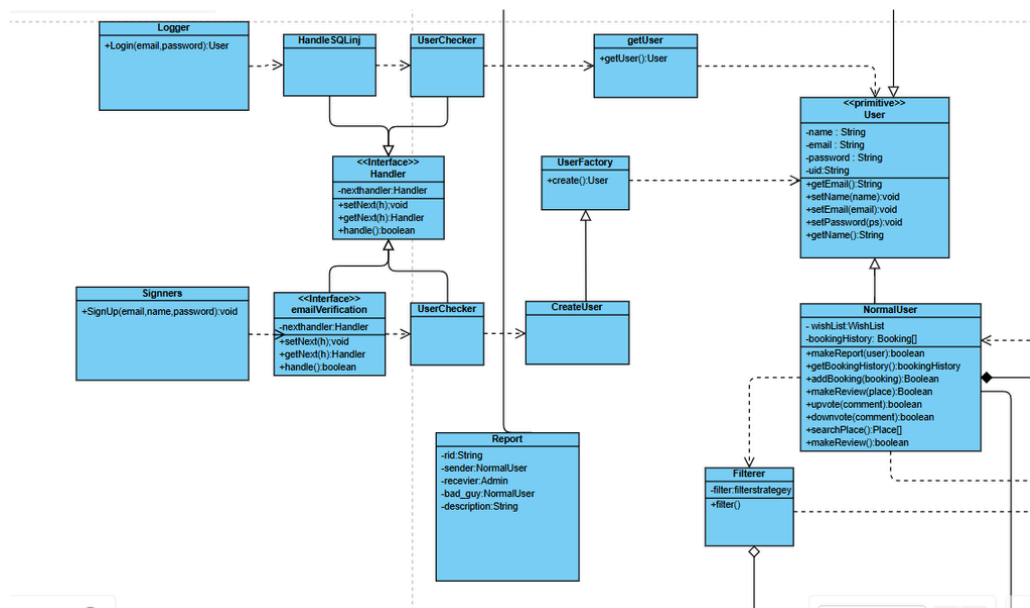
Database Schema



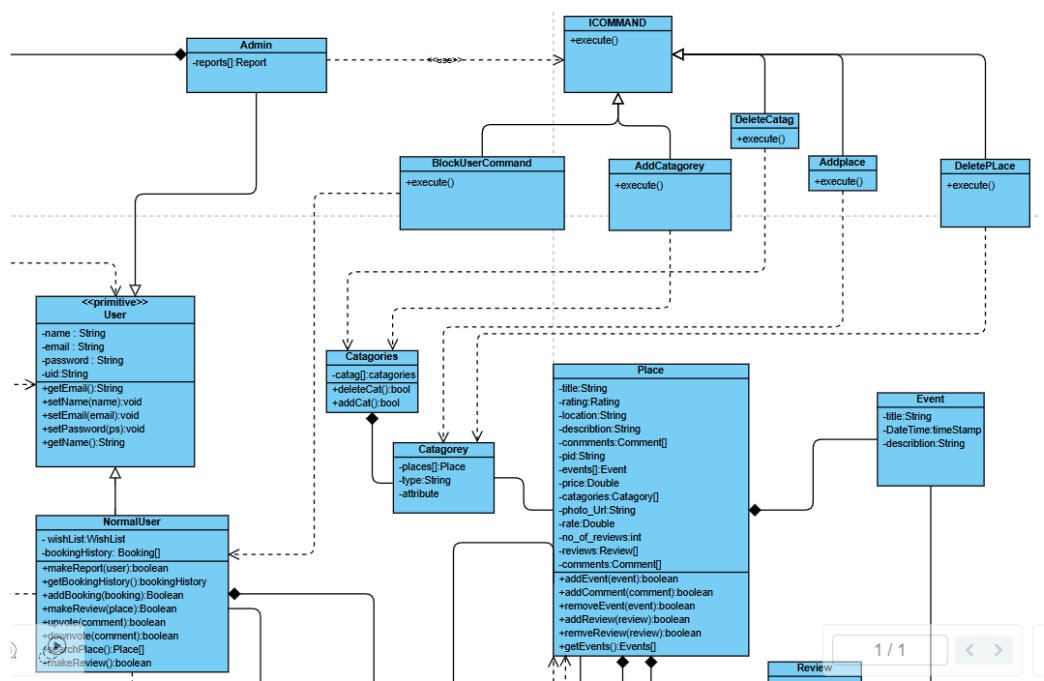
Class diagram:

for flexible use: <https://online.visual-paradigm.com/share.jsp?id=323836393637302d38>

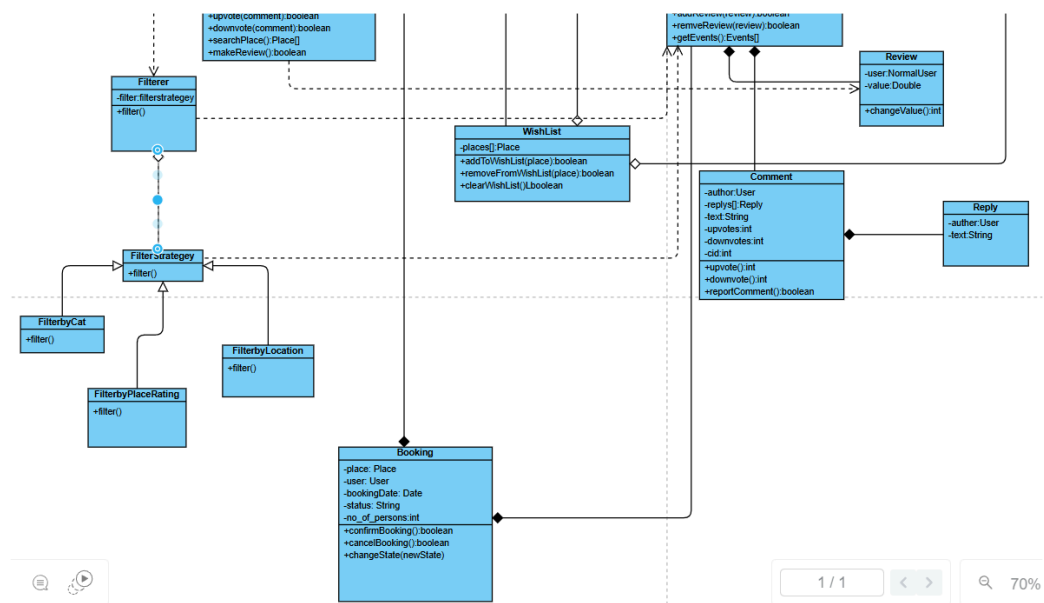
Authentication Component



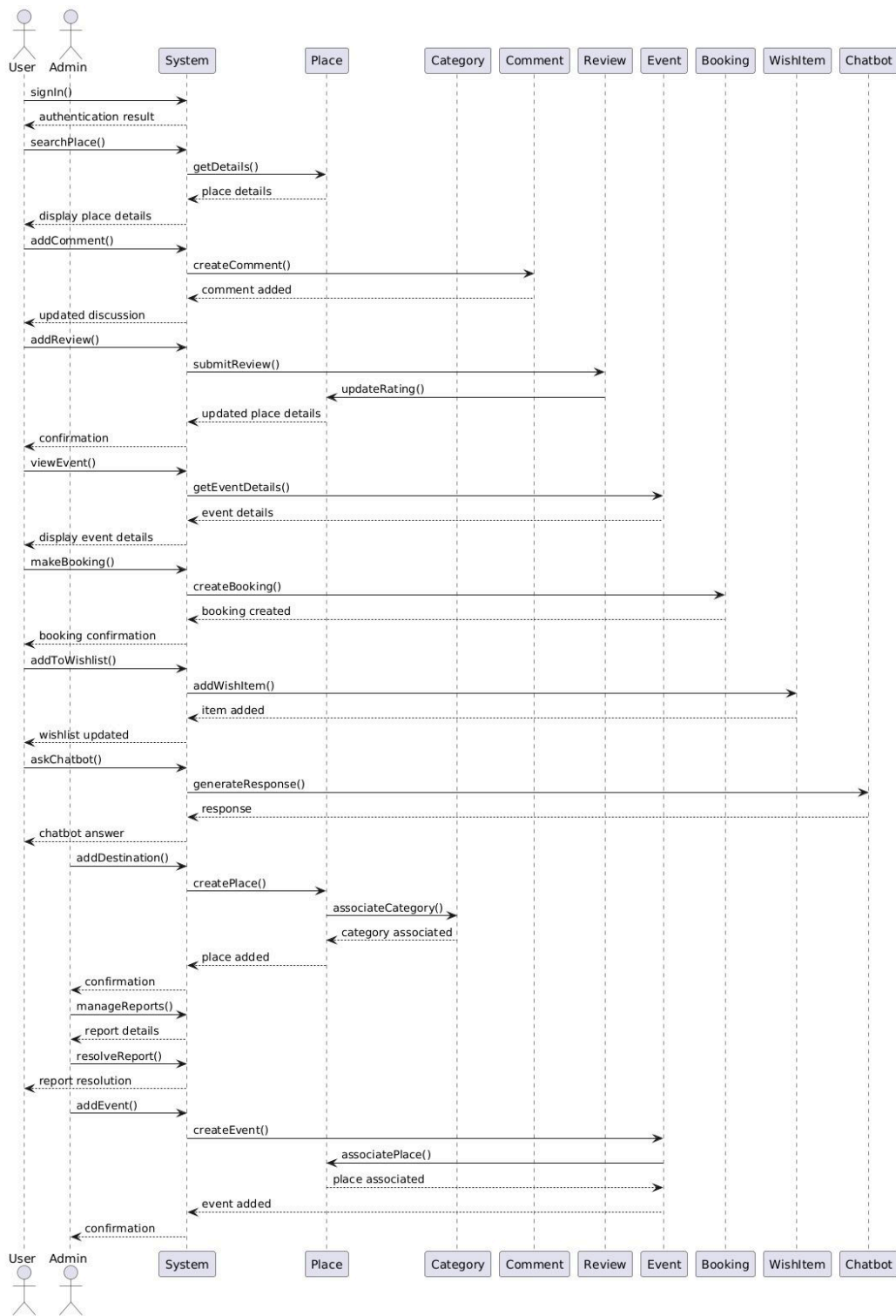
2- admin moderation / place design



3-filter, booking, discussion:



Sequence diagram:



Scheduling of the features delivered in each milestone

milestone	feature 1	feature 2	feature 3	Feature 4	feature 5
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1	Destination Page Description Section and Displaying events for places	Sign-In and Sign-Up Page	Adding new cards and places	Card displaying the name and photo of the place	database related to these features
2	search	filter	Discussion Forum on the Destination Page	booking system	database related to these features
3	chatbot	review system	Wishlist for Saving User's Favorite Places	User Moderation That Allows Reporting and Banning Bad Users	database related to these features

Milestone 1

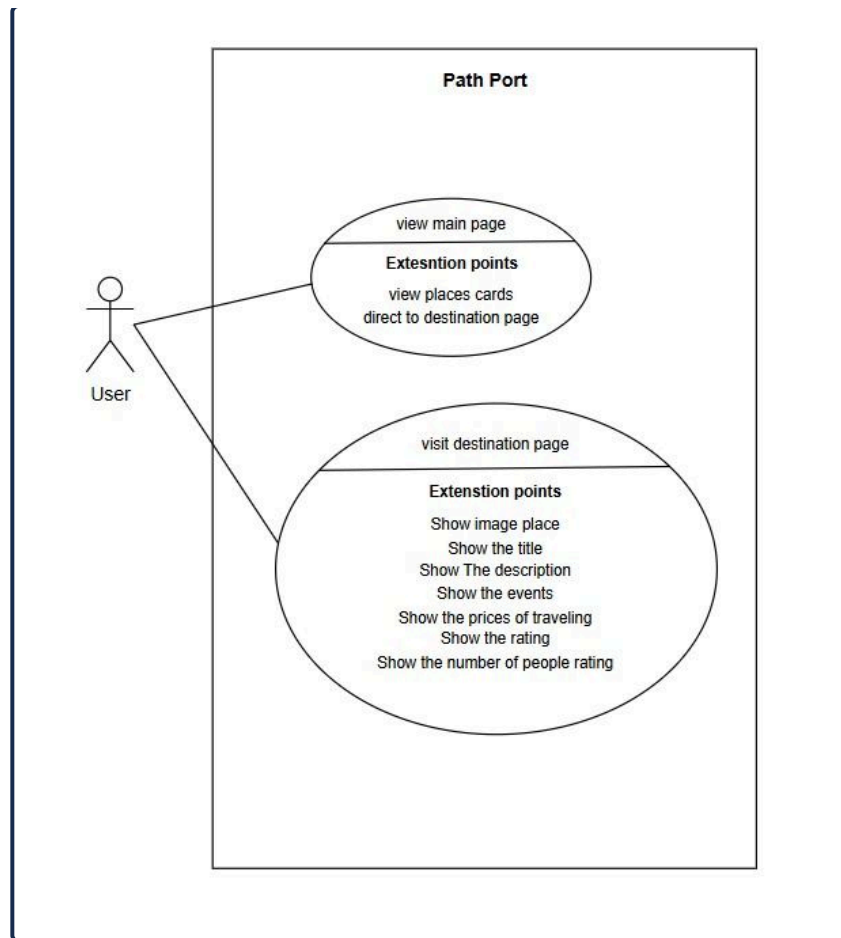
Requirements:

1. Destination Display Component

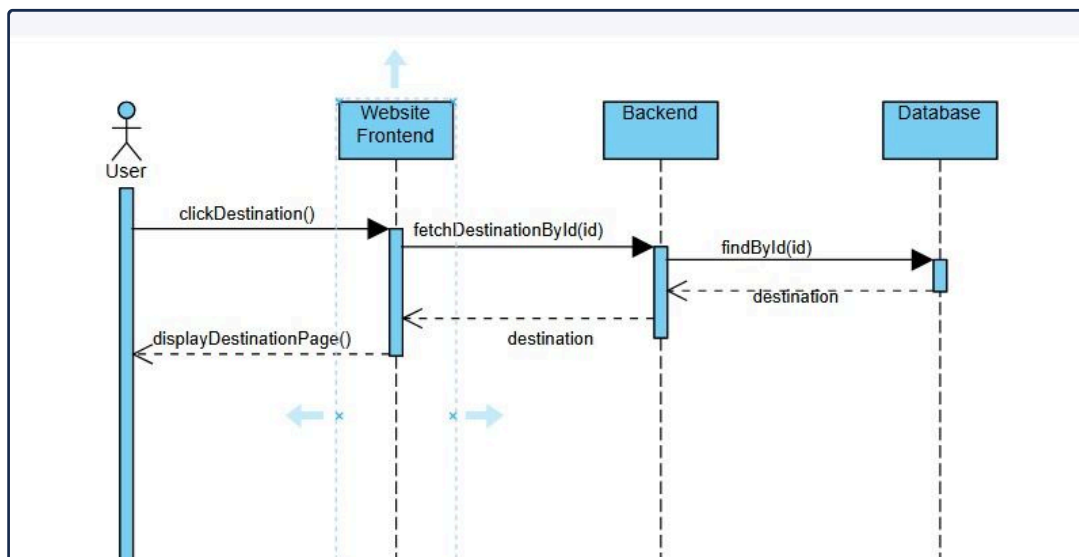
Responsibilities:

- Manages display of destinations on cards (1.1, 1.2)
- Shows detailed destination information on click (1.3)

Use case Diagram:



Sequence Diagram:



Current Collection Structure:

Destinations
id
title
location
event
description
photo_Url
price
rating
no_of_reviews
tourism_type

```
{
  "_id": "ObjectId",
  "title": "String",
  "location": "String",
  "event": "String",
  "description": "String",
  "photo_Url": "String",
  "price": "Number",
  "rating": "Number",
  "no_of_reviews": "Number",
  "tourism_type": ["String"]
}
```

System Updates

- 1. event to be static information in the destination page.
- 2. use MongoDB (NoSQL instead of SQL) for database management.
- 3. Schema will be transferred to json with the project progress
- 4. add tourism attributes to the destination document.
- 5. change the name of place relation to destination.

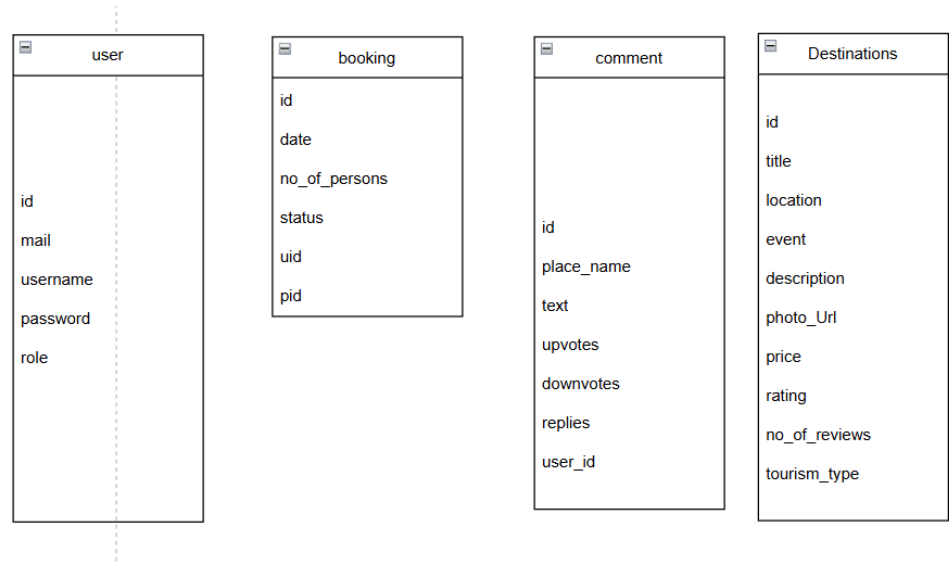
Scheduling of the features delivered in each milestone (modified)

milestone	feature 1	feature 2	feature 3	Feature 4	feature 5	feature 6	feature 7
1	Destination Page Description Section	Card displaying the name and	database related to these features				

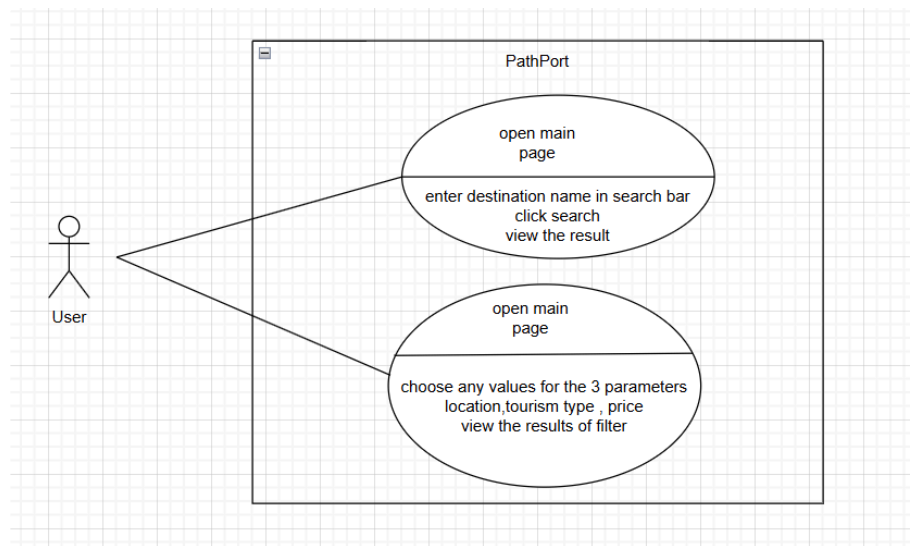
	and Displaying events for places	photo of the place					
2	search	filter	Discussion Forum on the Destination Page	booking system	database related to these features	Sign-In and Sign-Up Page	Adding new cards and places
3	chatbot	review system	Wishlist for Saving User's Favorite Places	User Moderation That Allows Reporting and Banning Bad Users	database related to these features		

milestone	feature 1	feature 2	feature 3	Feature 4	feature 5	feature 6
2	search	filter	Discussion Forum on the Destination Page	booking system	Sign-In and Sign-Up Page	database related to these features
3	chatbot	review system	Wishlist for Saving User's Favorite Places	Adding new cards and places	database related to these features	

Current Collection Structure:



Use case Diagram:



Sequence Diagram:

