

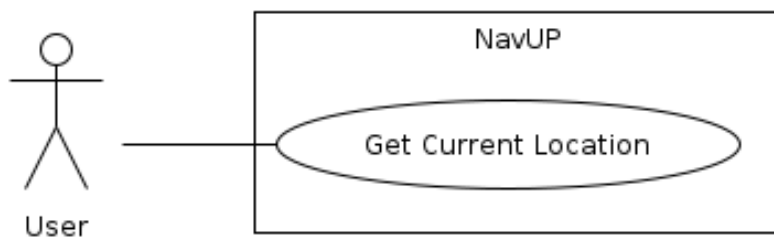
3.2 Functional Requirements:

This section includes the requirements that specify all the fundamental actions of the software system.

3.2.1 User Use Case

Use case: Get Current Location

Diagram:



Brief Description:

The system shall determine the user's current location, whether indoors or outdoors.

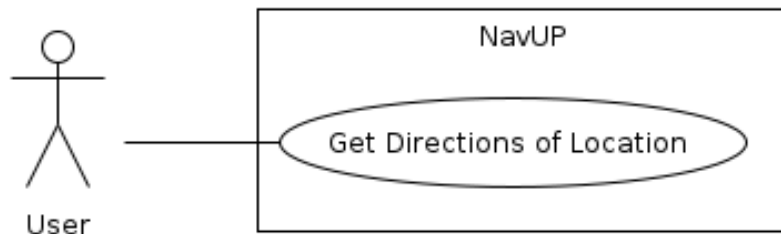
Initial Step-By-Step Description:

Before the use case can be initiated, the user has already logged in to the application.

1. The users sends a request to get their current location.
2. The system obtains and returns the location of the user.

Use case: Get Directions of Location

Diagram:



Brief Description:

The system shall navigate the user to their desired location.

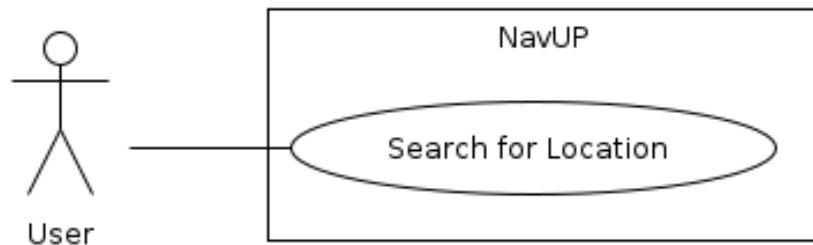
Initial Step-By-Step Description:

Before the use case can be initiated, the User has already logged into the application and has accessed the search location menu option.

1. The user chooses to search the location by building name, lecture hall or venue name.
2. The system displays the choices to the user.
3. The user selects the desired venue.
4. The system presents the optimal route based on pedestrian traffic and estimated time of arrival.
5. The user chooses the route to the venue
6. The system provides the directions of the location.

Use case: Search for Location

Diagram:



Brief Description:

The system will allow users to search for any location based on their criteria.

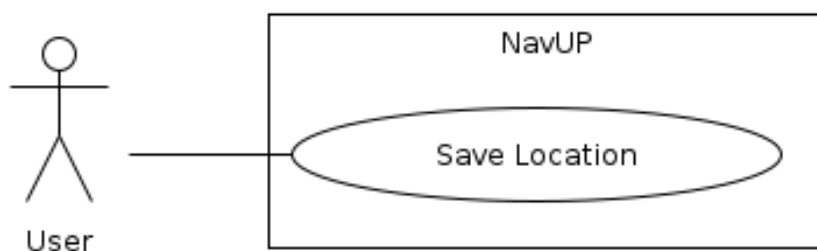
Initial Step-By-Step Description:

Before the use case can be initiated, the User has accessed search location menu option.

- 1.The user chooses to search the location by building name, lecture hall or venue name.
- 2.The system displays the choices to the user.
- 3.The user selects the desired location.
- 4.The system returns the location and gives user option to navigate to the location.

Use case: Save Location

Diagram:



Brief Description:

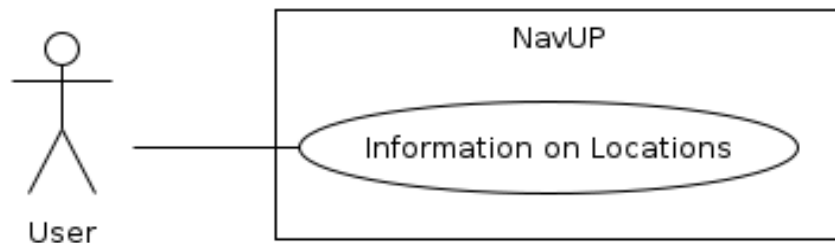
The system shall allow the user to save a location.

Initial Description:

Before the use case can be initiated, the User has already searched for the desired location to save.

- 1.The user chooses to search for the location by building name, lecture hall or venue name or access previously searched venues.
- 2.The system displays the location to the user.
- 3.The user selects to save the location.

Use case: Information on Locations

Diagram:**Brief Description:**

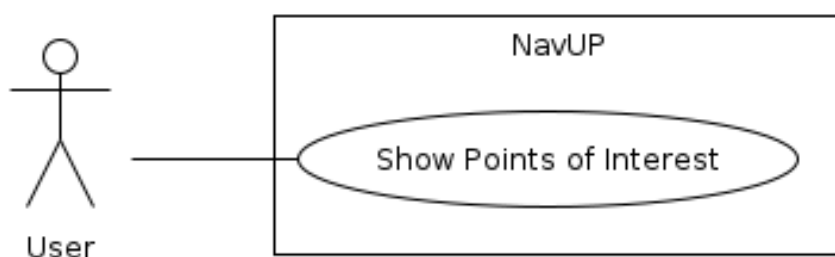
The system shall allow the user to access information about locations, buildings and venues.

Initial Description:

Before the use case can be initiated, the user has searched for the desired location in order to obtain more information about the location.

- 1.The user chooses the location, venue or building.
- 2.The system returns information based on the user's criteria.
- 3.The user access the desired information.

Use case: Show Points of Interest

Diagram:

Brief Description:

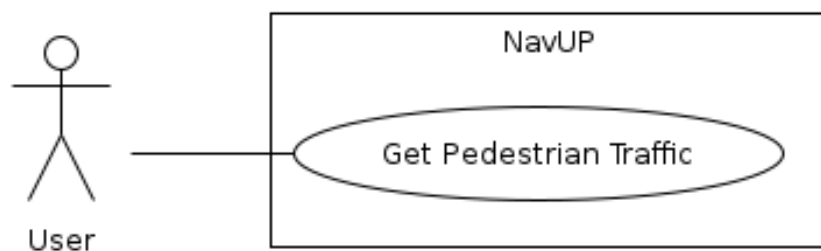
The system shall allow the user access to points of interest around campus based on their interests.

Initial Description:

Before the use case can be initiated, the user has provided the application with information about their interests.

- 1.The user selects from a list of points of interests.
- 2.The system returns points of interests based on the user's criteria.
- 3.The user selects which one they want to navigate to.
- 4.The system returns information about the venue and also directions to that venue.

Use case: Get Pedestrian Traffic

Diagram:**Brief Description:**

The system shall provide users with accurate information about pedestrian traffic based on how many devices are connected to certain WI-FI access point.

Initial Description:

Before the use case can be initiated, the user has searched for a location to navigate to.

- 1.The user has selected to navigate to a desired location.
- 2.The system returns general pedestrian traffic for the route selected and the optimal route with less pedestrian traffic.

Use case: Sharing Location

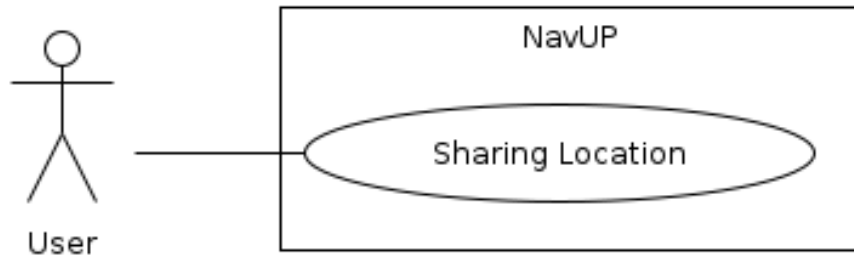


Diagram:

Brief Description:

The system shall allow users who have logged in to the application the ability to share their current location.

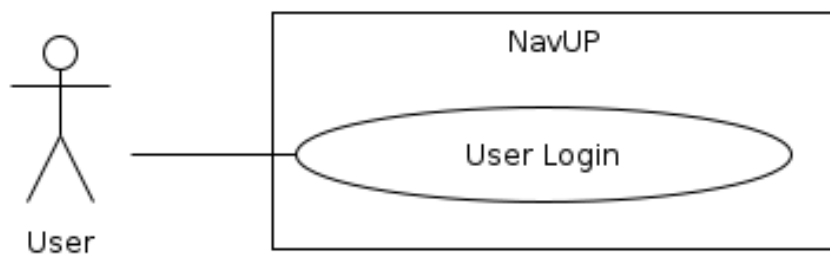
Initial Description:

Before the use case can be initiated, the user has obtained their current location.

- 1.The user selects to share their location with a friend or anyone with access to the application.
- 2.The systems generates a pin and allows the user to share their location

Use case: User Login

Diagram:



Brief Description:

The system shall provide the user with a user interface to allow the user to enter their information and interests.

Initial Step-By-Step Description:

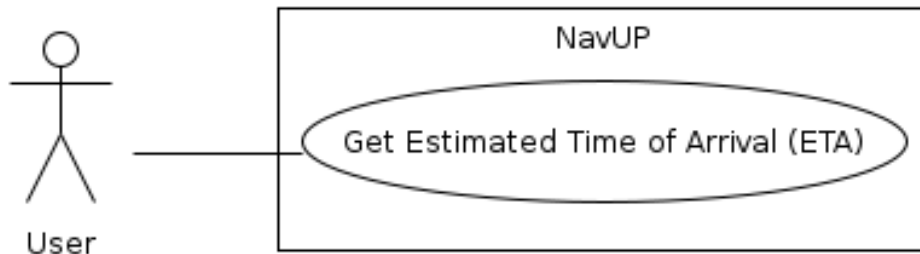
Before the use case can be initiated, the user has logged in to the application using their login credentials.

- 1.The user selects from the user interface whether they would like to enter/update their information and interests.

2.The system process the user request and updates their information and interests accordingly within the application.

Use case: Get Estimated Time of Arrival (ETA)

Diagram:



Brief Description:

The system shall provide the user with an estimated time of arrival to the location they are navigating to.

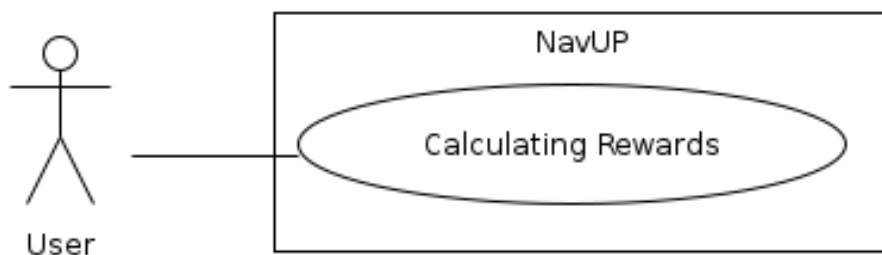
Initial Description:

Before the use case can be initiated, the user has searched for a location to navigate to.

- 1.The user selects the venue to navigate to.
- 2.The system returns the optimal route and the ETA to the venue.

Use case: Calculating Rewards

Diagram:



Brief Description:

The system shall provide rewards for the user based on calculating the amount of steps the user has walked and also rewards based on class attendance.

Initial Description:

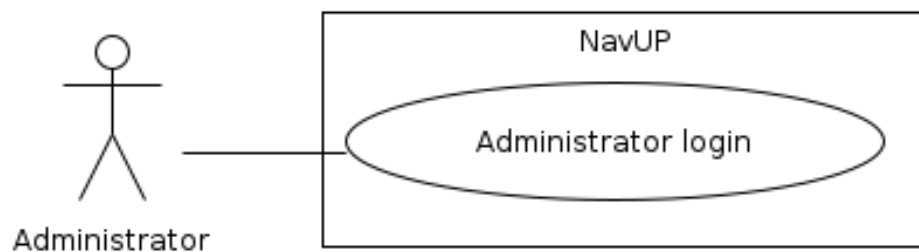
Before the use case can be initiated, the user has logged into the application and selected a goal to meet.

- 1.The user uses the application to navigate to all their classes/locations on campus.
- 2.The system calculates the steps the user has taken and sums it up for the period within the goal.
- 3.The user receives updates based on their rewards.
- 4.After completing the goal, the system provides the user with a reward.

3.2.2 Administration Use Case:

Use case: Administrator Login

Diagram:



Brief Description:

The system shall provide the administrator with a user interface to perform maintenance on the application.

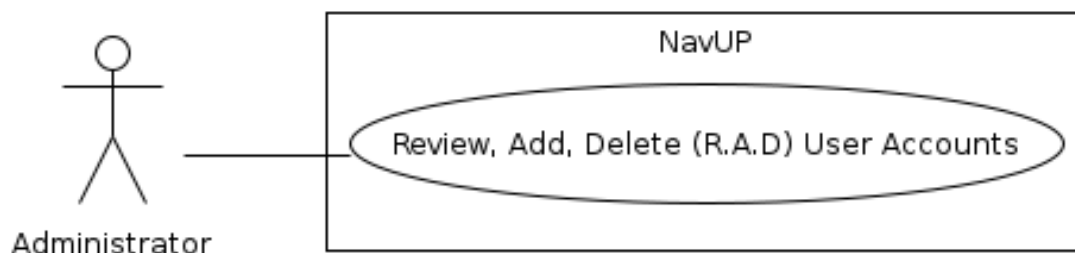
Initial Step-By-Step Description:

Before the use case can be initiated, the administrator has logged in to the application using their login credentials.

- 1.The administrator performs maintenance on the application.
- 2.The system process the procedure performed and updates accordingly.

Use case: Review, Add, Delete (R.A.D) User Accounts

Diagram:



Brief Description:

The system shall provide the administrator with the ability to review, add or delete user accounts of registered users.

Initial Step-By-Step Description:

Before this use case can be initiated, the administrator has logged in to the application database.

1. The administrator queries the database for the desired user account/accounts,
2. The system returns the results from the query.
3. The administrator selects from the results returned to perform a R.A.D operation.
4. The system updates the database after the changes have been made.

Use case: Review, Add, Delete (R.A.D) Venue Information

Diagram:**Brief Description:**

The system shall allow the administrator the ability to review, add or delete information about different venues on campus.

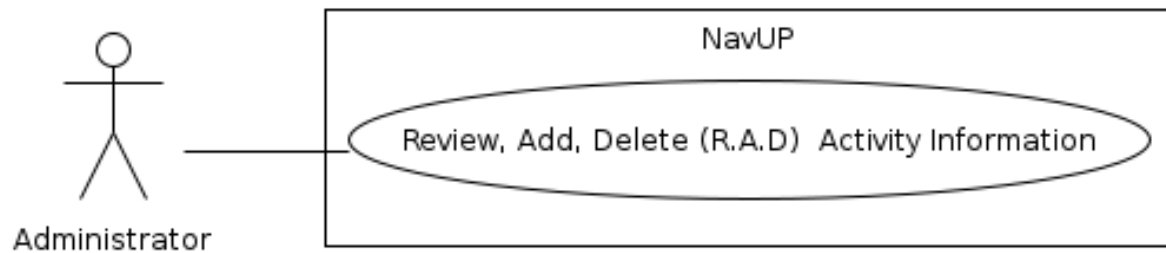
Initial Step-By-Step Description:

Before the use case can be initiated, the administrator has logged in to the application database.

1. The administrator queries the database for the desired venue.
2. The system returns the results from the query.
3. The administrator selects from the results to perform a R.A.D operation.
4. The system updates the database after the changes have been made.

Use case: Review, Add, Delete (R.A.D) Activity Information

Diagram:



Brief Description

The system shall allow the administrator the ability to review, add, or delete information on cultural and sporting activities users might be interested in.

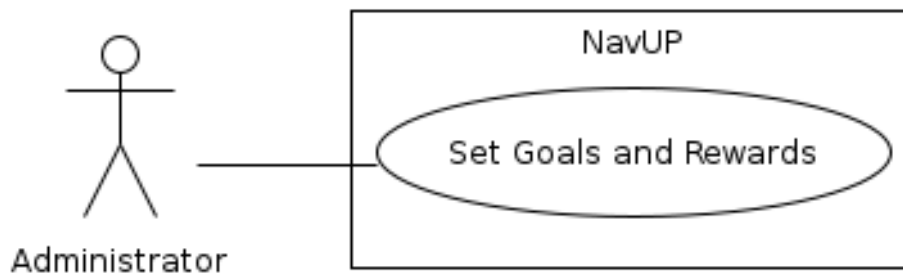
Initial Step-By-Step Description:

Before the use case can be initiated, the administrator has logged in to the application database.

1. The administrator applies R.A.D operations on the database for various activities and other places of interest on campus.
2. The system updates the database after the changes have been.

Use case: Set Goals and Rewards

Diagram:



Brief Description:

The system shall all the administrator the ability to set and add goals and rewards for the users.

Initial Step-By-Step Description:

Before the use case can be initiated, the administrator has logged in to the application database.

1. The administrator sets goals for users to match to in order to receive a reward.
2. The system tracks the user progress through the period the goal has been set.
3. The administrator reviews the progress report from the system and the appropriate reward is awarded to the user.