Description of use case :

1, “Enter a new request”

- **Brief Format:**

The user clicks on a button to add a new request. A text appears telling the user to choose an intersection on the map and they select an intersection, a list of buttons with the time-windows appears and the user chooses one. The system registers the request. The system also displays the new request.

- **Structured Description :**

Precondition : A map is loaded.

Nominal Scenario :

1. The user clicks on a button to add a new request.
2. The system displays the text telling the user to choose an intersection on the map.
3. The user clicks on an intersection.
4. The system also displays a list of buttons with time-windows on the left of the map.
5. The user selects a time-window from the list.
6. The system registers the request.
7. The system displays the new request with the others on the left of the map.

Extension:

2a. The user made a mistake by clicking the add button.
→ The user clicks on the cancel button and quits the use case.

3a. The user made a mistake by clicking on the wrong intersection.
→ The user clicks on the undo button and goes back to step 2.

5a. The user made a mistake by clicking on the wrong time window.
→ The user clicks on the undo button and goes on to step 4.

2, “Save the requests”

- **Brief Format:**

The user clicks on a button to save the current requests in format XML file. A pop-up with the file system appears and tells the user to choose the file location and file name. Following the user's choice, the system creates a new file or updates an existing file from the map.

- **Structured Description :**

Precondition : A map is loaded.

Nominal Scenario :

1. The user clicks on a button to save the current requests in format XML file.
2. A pop-up appears with the file system.
3. The system asks to select a file location.
4. The user enters the file location.
5. The system asks to enter a file name.
6. The user enters a file name.
7. The system creates a new XML file.

Extension:

2a. The user made a mistake by clicking the button to save the requests.
→ The user clicks on the cancel button and quits the use case.

7a. The file already exists.
→ The system updates the already existing file and quits the use case.

3, “Load the requests”

- **Brief Format:**

The user clicks on a button to save a tour in format XML file. A pop-up with the file system appears and the system asks the user to choose a .XML file existing in the file system. The system verifies the validity of the chosen file and its conformity with the loaded map. The system then loads the requests from the file and then displays them on the right of the map.

- **Structured Description :**

Precondition : A map is loaded.

Nominal Scenario :

1. The user clicks on a button to save a tour in format XML file.
2. A pop-up with the file system appears.
3. The system asks to select a XML file in the file system.
4. The user selects a file.
5. The system verifies the validity of the chosen file.
6. The system verifies the conformity with the loaded map.
7. The system loads the requests.
8. The system displays the requests on the left of the map.

Extension:

2a. The user made a mistake by clicking the button to load the requests.
→ The user clicks on the cancel button and quits the use case.

5a. The chosen file is not in format XML
→ The system displays a warning pop-up and goes back to step 3.

5b. The file is corrupted.
→ The system displays a warning pop-up and goes back to step 3.

6a. The requests doesn’t correspond to the map.
→ The system displays a warning pop-up and goes back to step 3.

4, “Load a map”

- **Brief Format:**
  The user clicks on a button to load a map in format XML file. A pop-up with the file system appears and the system asks the user to choose a .XML file existing in the file system. The system verifies the validity of the chosen file. The system then loads the map from the file and displays the loaded map in the center of the screen.

- **Structured Description :**
  Precondition : The application is open.

  Nominal Scenario :
  1. The user clicks on a button to load a map in format XML file.
  2. A pop-up with the file system appears.
  3. The system asks to select a XML file in the file system.
  4. The user selects a file.
  5. The system verifies the validity of the chosen file.
  6. The system loads the map.
  7. The system creates different objects (Intersection, plan,...)
  8. The system displays the map in the center of the screen.

  Extension:

  2a. The user made a mistake by clicking the button to load the requests.
  → The user clicks on the cancel button and quits the use case.

  5a. The chosen file is not in format XML
  → The system displays a warning pop-up and goes back to step 2.

  5a. The chosen file is corrupted.
  → The system displays a warning pop-up and goes back to step 2.

5, “Modify a request”

- **Brief Format:**
  The user clicks on a button to modify an existing request. A text appears asking the user to select a request and then the user selects the request which they want to modify. A text and two buttons (yes or no) appear telling the user to choose if they want to modify the intersection on the map and they select an intersection if they choose yes. A list of buttons with the time-windows also appears and the user chooses one. The system registers the request. The system also displays the modified request.

- **Structured Description :**
  Precondition : A map and a tour are loaded.

  Nominal Scenario :

  1. The user clicks on a button to modify an existing request.
  2. A text appears asking the user to select a request.
  3. The user selects the request
  4. A text and two buttons (yes or no) appear telling the user to choose if they want to modify the intersection.
  5. The user clicks on yes.
  6. The system displays the text telling the user to choose an intersection on the map.
  7. The user selects a new intersection.
  8. A list of buttons with the time-windows appears.
  9. The user chooses a time-window.
  10. The system registers the request.
  11. The system displays the modified request with the others on the left of the map.

  Extension:

  2a. The user made a mistake by clicking the button to modify a request.
  → The user clicks on the cancel button and quits the use case.

  5a. The user clicks on no.
  → The use case jumps to step 8.

  7a. The user made a mistake by clicking on the wrong intersection.
  → The user clicks on the undo button and goes back to step 6.

  9a. The user made a mistake by clicking on the wrong time window.
  → The user clicks on the undo button and goes on to step 8.

6, “Compute a tour”

- **Brief Format:**
  The user clicks on a button to compute a tour. The system computes the best possible tour with all the requests that the user registered and an available courier. The system displays the tour on the map. If the system can’t find a tour that respects the constraints, a pop-up appears asking the user if they want to change the courier. If the system can’t find another tour, it rejects the tour.

- **Structured Description :**
  Precondition : A map is loaded and the user registered at least two requests.

  Nominal Scenario :

  1. The user clicks on a button to compute a tour.
  2. The system computes the best possible tour with all the requests and a courier.
  3. The system displays the tour on the map.

  Extension:

  2a. The system can’t find a tour that respects the constraints.
  → The user clicks on the cancel button and quits the use case.

  5a. The chosen file is not in format XML
  → The system displays a warning pop-up and goes back to step 2.

  5a. The chosen file is corrupted.
  → The system displays a warning pop-up and goes back to step 2.

7, “Delete a request”

- **Brief Format:**
  The user clicks on a button to delete an existing request. A text appears asking the user to select a request and then the user selects the request which he wants to delete. A pop-up appears and asks the user if he is sure to delete it. The user clicks on yes and the system deletes the request.

- **Structured Description :**
  Precondition : A map is loaded and the user registered at least two requests.

  Nominal Scenario :

  1. The user clicks on a button to delete an existing request.
  2. A text appears asking the user to select a request.
  3. The user selects the request.
  4. A pop-up appears asking the user if he is sure to delete the request.
  5. The user clicks on the button yes.
  6. The system deletes the request.

  Extension:

  2a. The user made a mistake by clicking the button to delete a request.
  → The user clicks on the cancel button and quits the use case.

  5a. The user clicks on no.
  → The user quits the use case.