C of Seek

Deliverable 5

JMZ

Zachary Hudelson, Josh Sosa, Mike Cornejo

USE CASES:

Developing Wayspot:

Actors: 2 Developers

Preconditions: A location and scannable object have been selected to represent the Wayspot

Postconditions: The Wayspot is active and available to Niantic's Visual Positioning System (VPS), the Wayspot has a corresponding 3D model (GLB file) for the scanned object, and Wayfarer can now localize to the Wayspot

Main Scenario:

1) Developer starts registration process for new Wayspot within the Wayfarer app

2) Developer chooses a location, name, and corresponding photo for the proposed Wayspot

3) Submit Wayspot Proposition

4) Wayfarer's system registers Wayspot Proposition

5) 2nd Developer confirms Wayspot Proposition in the Wayfarer app

6) Wayfarer's system activates the Wayspot

7) Developer goes to Wayspot location and selects the scan option for the Wayspot in the Wayfarer app

8) Developer pans camera over the Wayspot location such that the entire Wayspot is lit up

9) Register scan

10) Submit scan of okay or better

11) Repeat steps 8-10 at different times of the day to account for varying lighting conditions until 10 scans are completed

12) Wayfarer returns a GLB file of the scanned object

Alternative Scenarios:

10.1) If scan is not okay or better, reject the scan and prompt the developer to scan the Wayspot again

Developing AR Experience for Wayspot:

Actors: Developer

Preconditions: Developer has completed the Wayspot creation process and has its corresponding GLB file

Postconditions: AR Experience is now mapped onto the Wayspot

Main Scenario:

1) Developer opens the Wayspot's GLB file in a 3D modelling software, such as Blender

2) Developer creates or imports 3D objects and places them relative to the Wayspot's GLB mesh where they would like the user to see them

3) Developer removes the original GLB mesh, leaving only the created or imported 3D objects, and exports the Blender project as a GLB file

4) The new GLB file is uploaded to the 8th Wall Project

Alternative Scenarios:

1.1) Instead of using a 3D modelling software, the developer can implement the AR experience using the A-Frame Inspector included within 8th Wall's Cloud Editor, and step 3 in the Main Scenario can be skipped

Viewing AR Experience:

Actor: Freshmen / Incoming CofC student

Precondition: Access to a given wayspot has been granted

Postcondition: A user will be able to use a mobile device to interact with the AR experience, via a link or QR code, and view three dimensional objects in the physical space.

Main Scenario:

1. Arrive at wayspot location
2. Receive link from staff
3. Open link on mobile device
4. Allow camera access
5. Localize camera onto wayspot
6. View AR experience.

Alternative Scenarios:

Access by QR code instead of link

2a. Scan QR code

Sharing AR Experience:

Actor: Freshman / Incoming Students

Precondition: The AR Experience is open, iPhone device is used

Postcondition: Proof of participation is saved

Main scenario:

1. Viewing AR Experience use case completed.
2. User selects front facing camera.
3. User aligns camera and self with Wayspot.
4. User begins screen recording
5. Experience is displayed in vicinity of user.
6. User ends screen record.
7. Recording of user and experience is saved as .mov file and ready to be shared.

Alternative Scenarios:

Screenshot

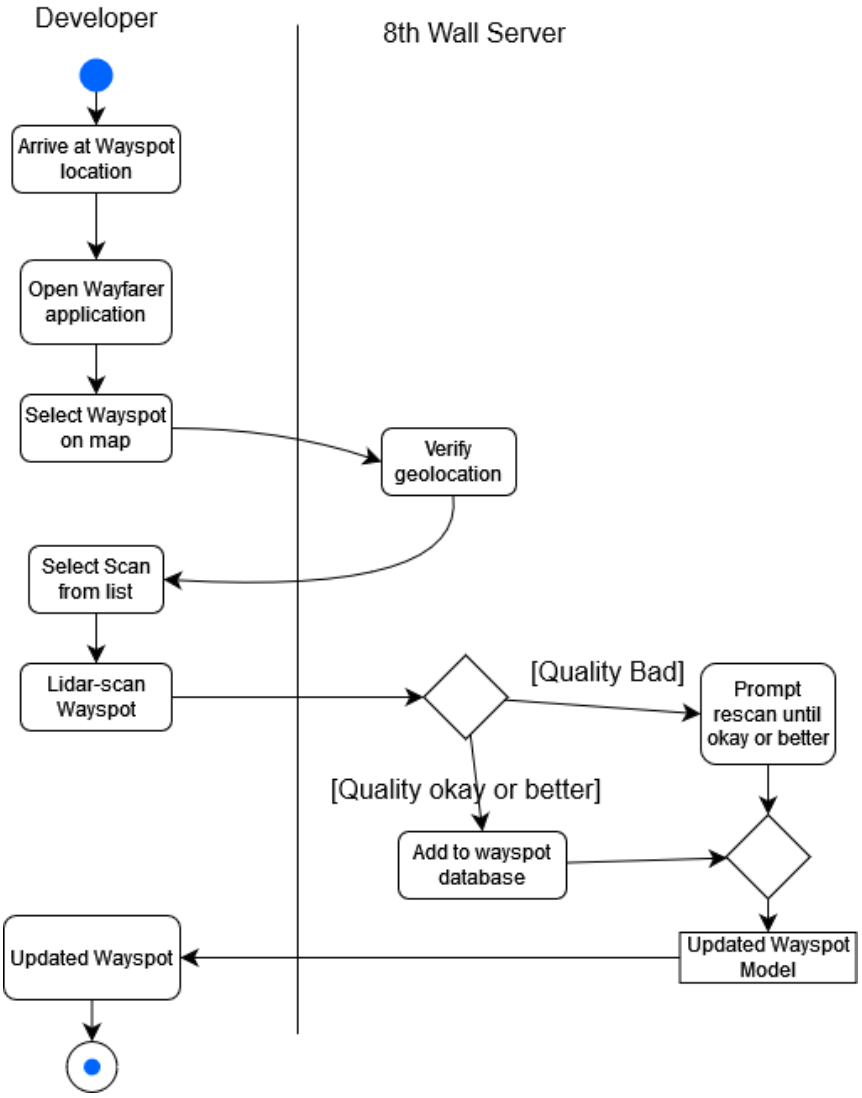
3.a. User aligns self with wayspot

4.a. Experience is displayed in vicinity of User

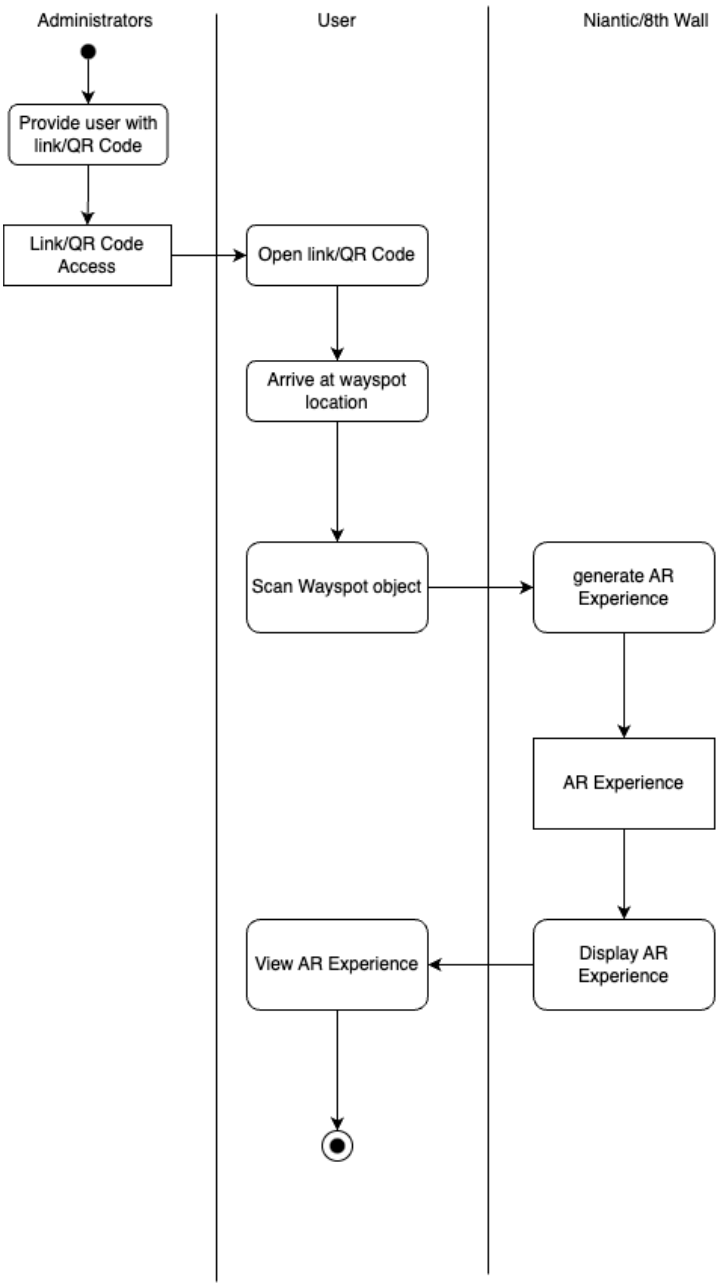
5.a. User takes screenshot, saving as .png to device.

ACTIVITY DIAGRAMS:

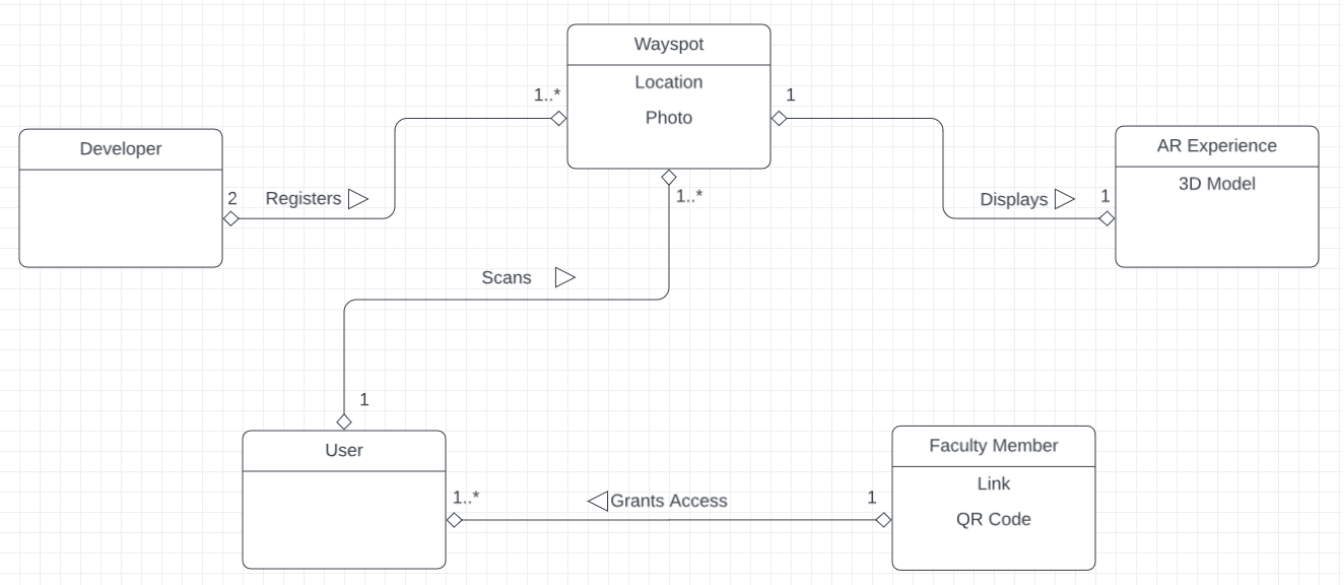
Develop Wayspot Activity Diagram:



Viewing AR Experience Activity Diagram:



Domain Model:


Wayspot
Location
Photo
1..*
1
Developer
2
Registers
1..*
Displays
1
AR Experience
3D Model
Scans
1
User
1..*
Grants Access
1
Faculty Member
Link
QR Code