Deliverable 6

C of Seek

JMZ

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Operation Contracts:

Developing Wayspot

Operation	WayspotDev()
GRASP association	Creator
Cross Reference	Use Case: Developing Wayspot
Precondition	A suitable wayspot has been confirmed on the Wayfarer application
Postcondition	• Wayspot is active • Wayspot is VPS available • The Wayspot has an available GLB file to use in the project • There have been at least 10 scans of the site • Wayfarer can localize to wayspot

Viewing AR Experience

Operation	ViewAR()
GRASP association	Info Expert
Cross Reference	Use Case: Viewing AR Experience
Precondition	• User must have iOS or android device • User must have network access • User must have valid link or QR code • User must allow camera access • Wayspot must be active
Postcondition	AR Experience is successfully accessed by the user

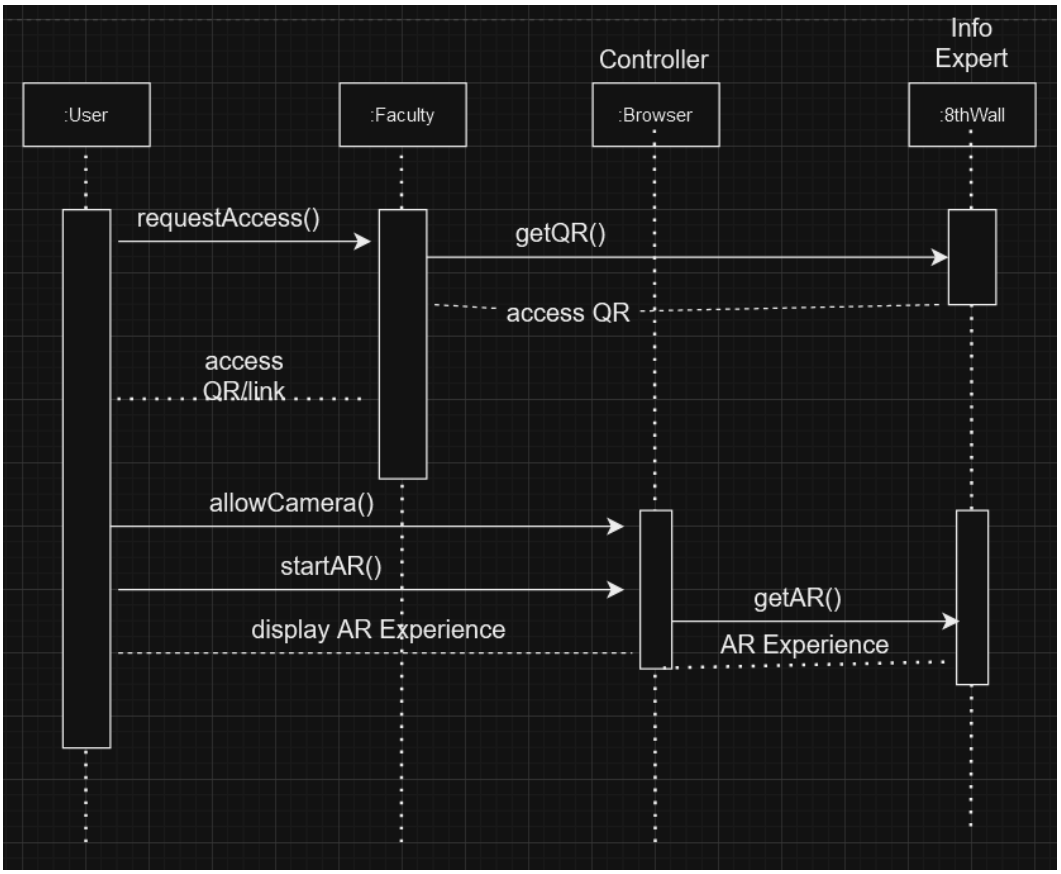
Developing AR Experience for Wayspot:

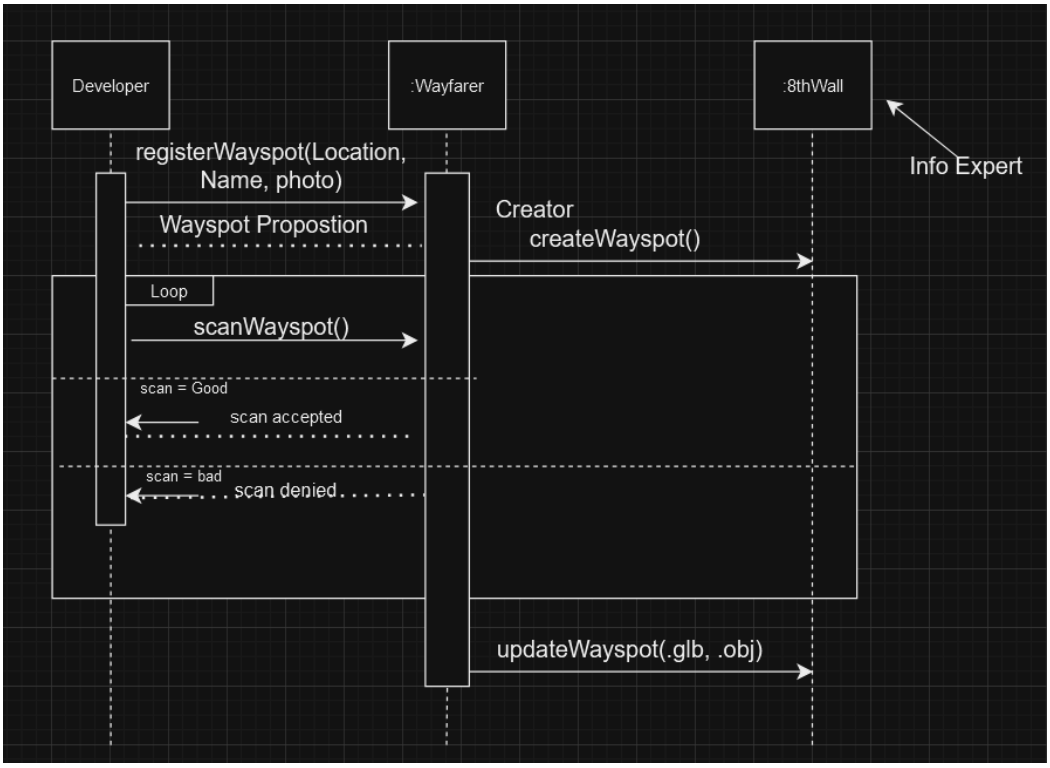
Operation	experienceForWayspot()
Cross Reference	Use Case: Developing AR Experience for Wayspot
GRASP association	Controller
Precondition	• Developer has completed the Wayspot creation process • GLB file associated to Wayspot is linked
Postcondition	AR Experience is now mapped onto the Wayspot

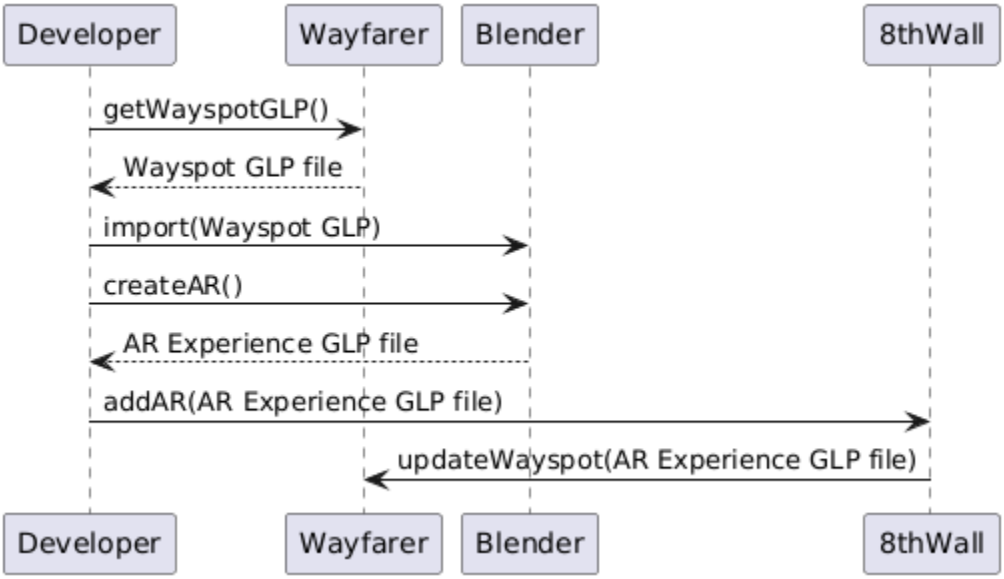
Sharing AR Experience:

Operation	shareExperience()
Cross reference	Use Case: Sharing AR Experience
GRASP association	Info Expert
Precondition	• The AR Experience is open • Experience open on iPhone device
Postcondition	Proof of participation is saved

Sequence Diagrams:

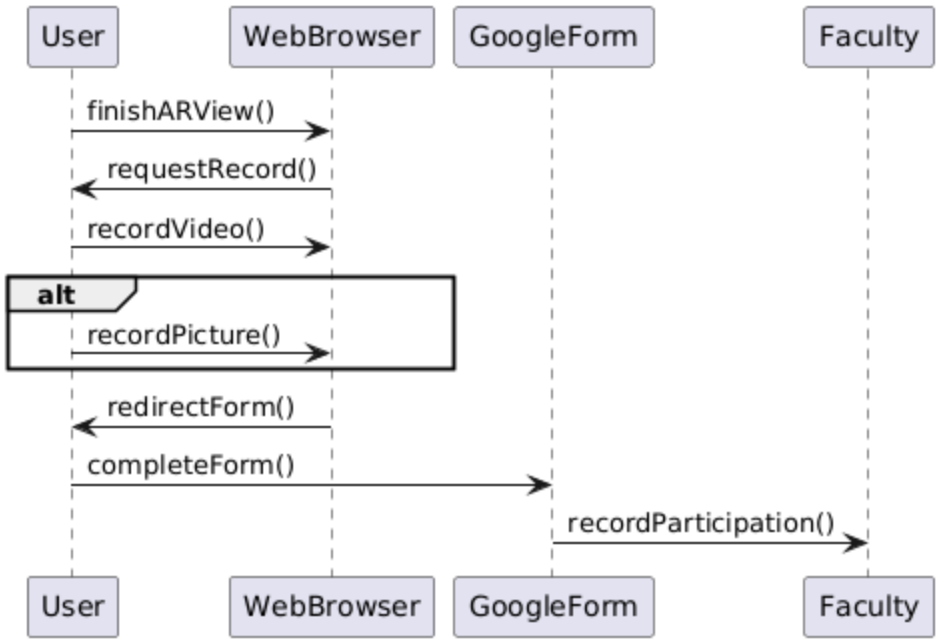






Information Expert: 8th Wall

Coupling: There is coupling between the AR Experience GLP file and the Wayspot GLP file because the developer references and uses the Wayspot GLP file during the creation of the AR Experience GLP file.



Information Expert: Google Form

Controller: Web Browser

Required Objects:

In this section we will discuss the objects of our system (i.e. Wayspot, 8th Wall cloud, 3D objects) and their translation into the final AR experience. Firstly, our system utilizes an app.js class to hold the call to 8th Wall's libraries. By doing so it enables our system to utilize the commands and objects globally.

Primarily, our system will work with the "namedWayspotComponent" to map the AR Experience to the real world. This enables us to create Wayspot objects for our system. Wayspots exist to display and maintain an AR experience for the device. AR experience, however, is a broad name for the culmination of several objects. This includes the Wayspot, 3D object(s), Shaders, and vps-animation.

The previously mentioned 3D objects will extend the play-vps-animation and be created in Body class. The system utilizes a 3D object file (Blender uses .3ds

or .obj) and will extend it as a vps-animation, this allows the system to apply animated shaders to the object and hold the possibility to animate said objects.

Shaders are distinct object within the system, by separating them from the object themselves we achieve lower coupling and more freedom of modification for the appearance of objects. The Shaders class holds a transparency value, opacity value, and polygonOffset for the shadow upon the object.

The Body class serves as a controller for our system, it holds the objects (.obj or .3ds files) and will map them to the Wayspot connected via Niantic Lightship VPS. Niantic's Lightship VPS, henceforth VPS, takes geolocation of a device along with visual data from the devices camera to access an AR Experience. Once the location and orientation are confirmed, the system will take the 3D objects and display them in the real world via the user's device.