

# Clyde's Cougar Excursion

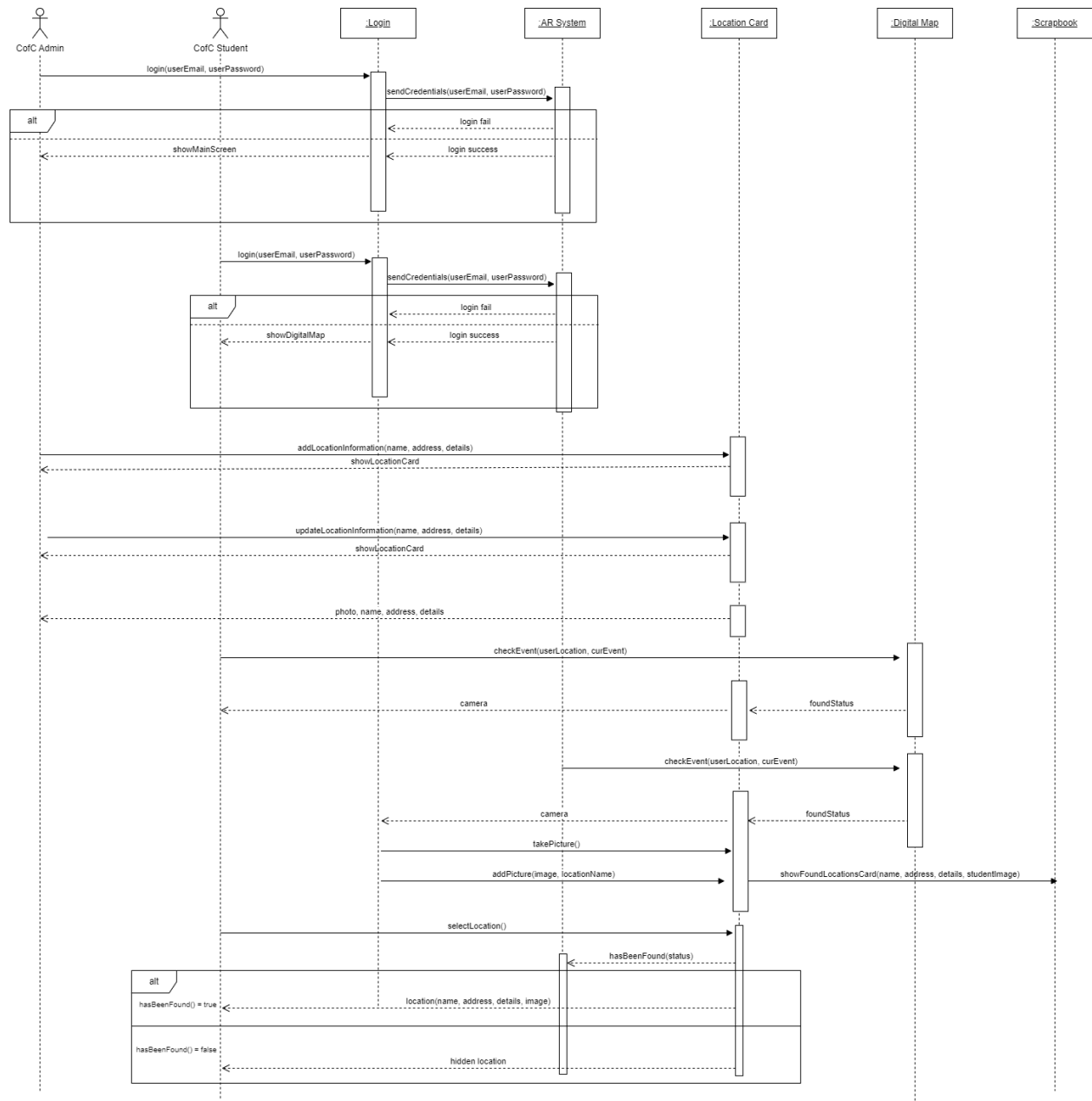
Sequence Diagram and Operation Contracts



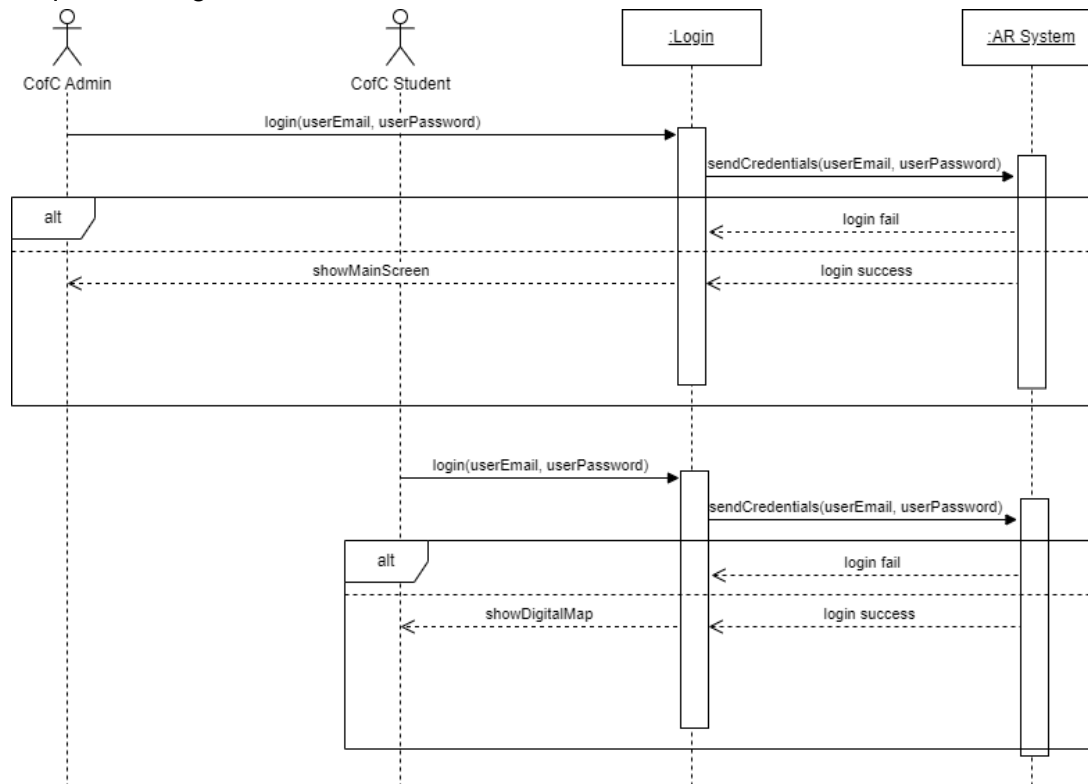
Software Architecture, Security, and Testing Project, Fall 2024

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## System Sequence Diagram



## Sequence Diagram Contract CO1



Contract CO1:

### 1. Login/Registration

**Operation:** Login(email, password)

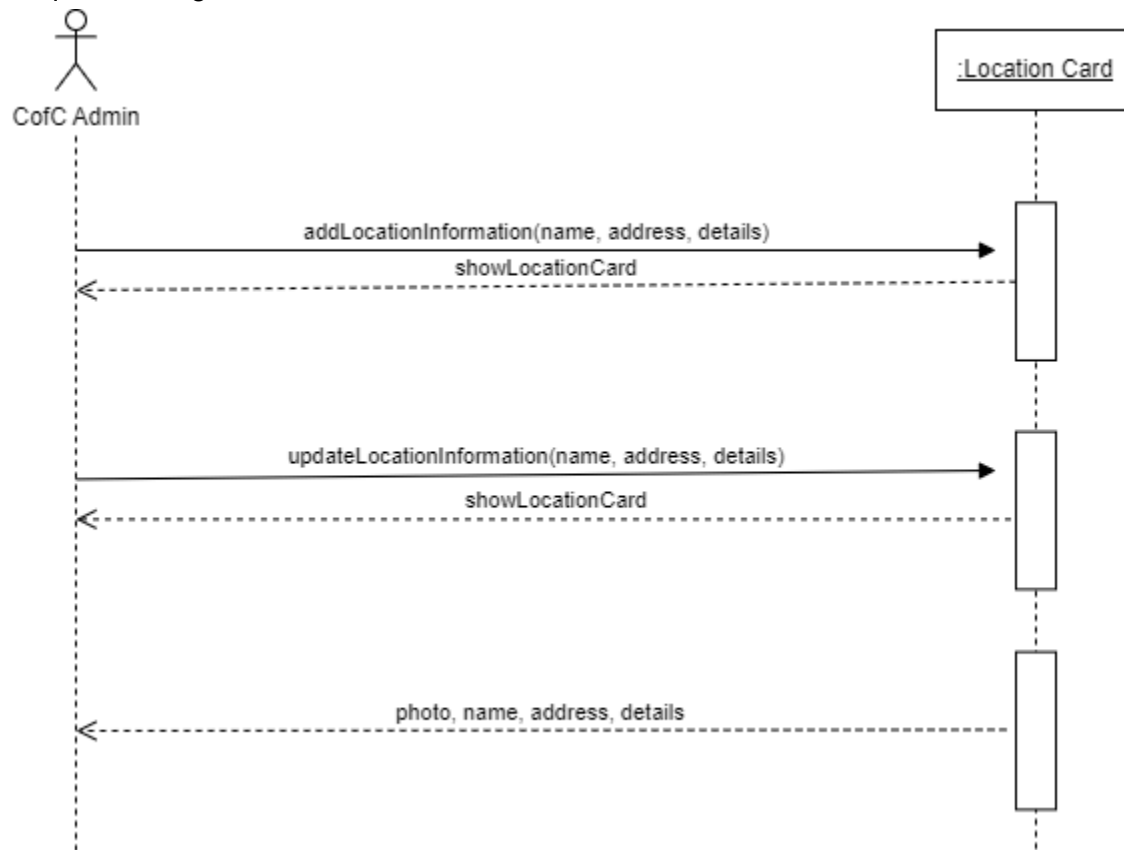
**Cross References:** Use Case: *User Login and Registration*

**Preconditions:** A User has already registered an account and has navigated to the “Login” page of the app

**Postconditions:**

- A User’s login information has been successfully verified.
- The System has accessed a User’s account information and updated local variables accordingly.
- The System has navigated the User to the “Homepage” of the app.

## Sequence Diagram Contract CO2



Contract CO2:

2. Admin functionality to add, edit and remove locations and hints for locations

**Operation:** AddLocation(Name, longitude, latitude, description)

**Cross References:** Use Case: *User Login and Registration*

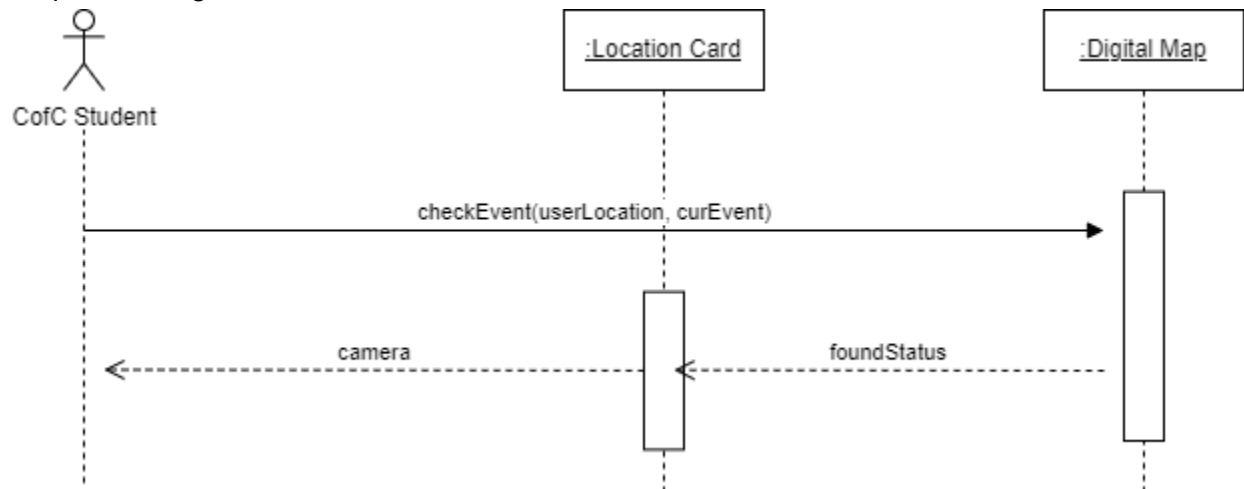
**Preconditions:**

- The User has successfully registered and logged into an account as an Admin.
- The User has successfully entered the "Map Editor" page of the app,

**Postconditions:**

- The User has created a new location with a name, location, and description.
- The System has added the new location to the Location Catalog.
- The System will now have the location appear during Gameplay for non-Admin Users.

### Sequence Diagram Contract CO3



Contract CO3:

3. Students looking for location(s)

**Operation:** CheckEvent(userLocation, curEvent)

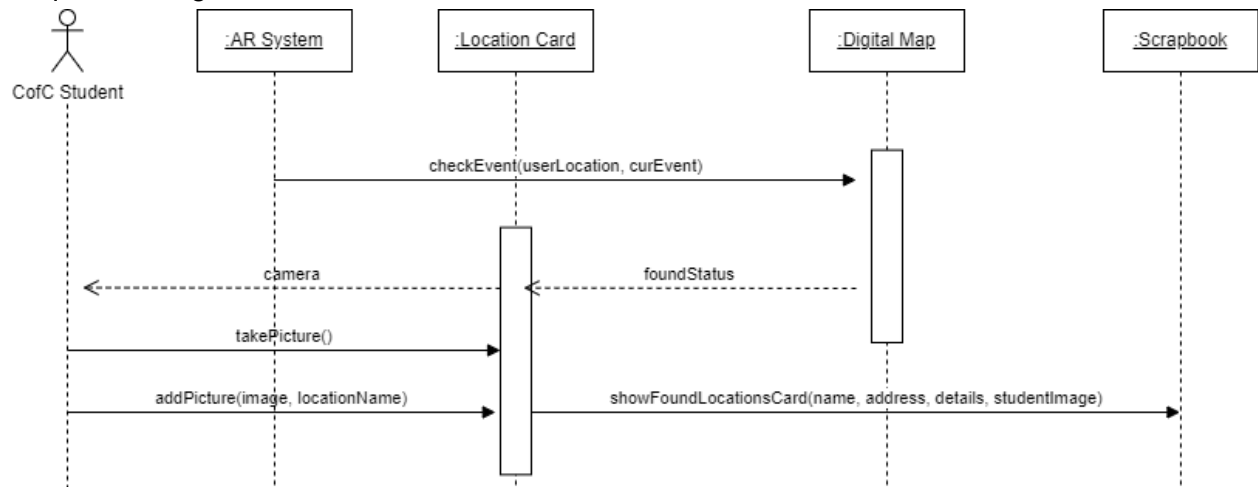
**Cross References:** Use Case: *Student Takes Picture*

**Preconditions:** A User has already registered an account and has navigated to the “Home” page of the app.

**Postconditions:**

- A sonar animation increases in both opacity and speed as the User becomes closer to the event.
- Once a User is within a predetermined range the “TakePicture()” operation will begin.
- The Event will now be visible on the Users map for the rest of the game's duration in the form of the “Event Icon.”

## Sequence Diagram Contract CO4



Contract CO4:

### 4. Scrapbook

**Operation:** `addPicture(image, locationName)`

**Cross References:** Use Case: *Student Takes Picture*

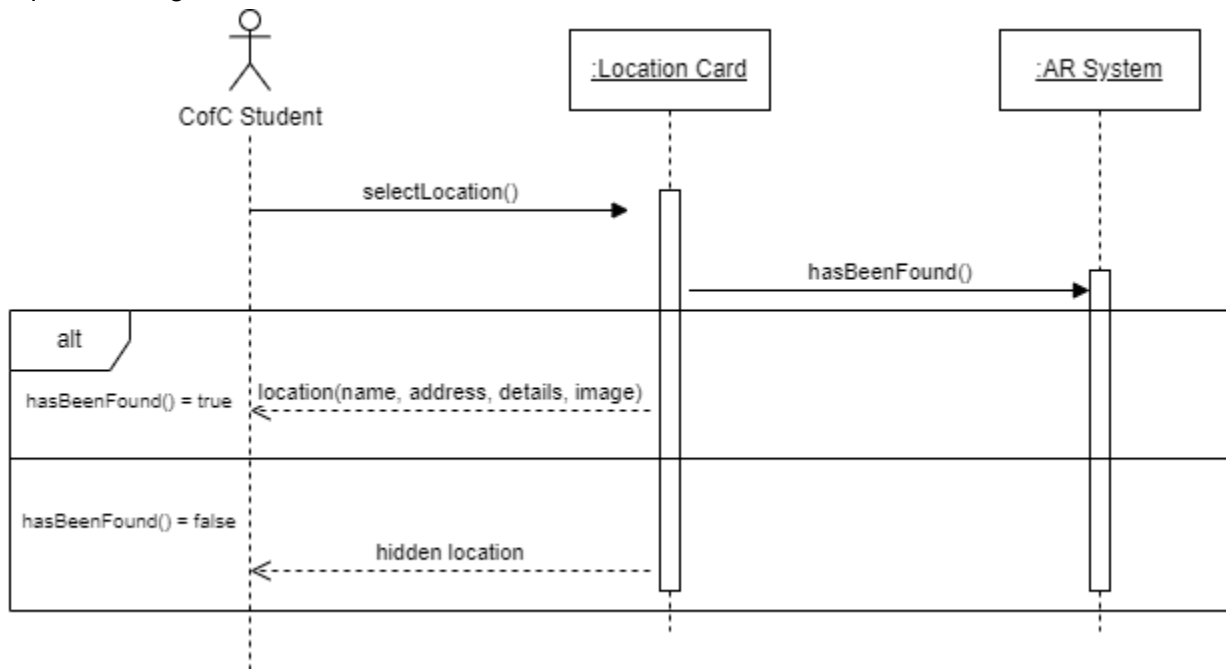
#### Preconditions:

- A User has already registered an account and has completed the "TakePicture()" function.
- They have selected to keep the current picture.

#### Postconditions:

- The current picture is added to the User's scrapbook data under the corresponding location name.
- When a User visits the scrapbook page, they can now see the image as well as location name, and click the location to see the location description provided by the admin.

## Sequence Diagram Contract CO5



### Contract CO5:

5. Card details of locations found vs not found

**Operation:** `getLocations()`

**Cross References:** Use Case: *Student Takes Picture*

#### Preconditions:

- A User has already registered an account and has completed the "TakePicture()" function for at least one location.
- The User has navigated to the "Scrapbook" page

#### Postconditions:

- The system creates a clickable UI object for every Location in the Location Catalog.
- If the location's variable "hasBeenFound" is true, then the UI object will contain the User's selected picture, the name of the location, and upon being clicked it will display the location's description.
- If the location's variable "hasBeenFound" is false, the UI object will not be clickable, the image will be a grayed out hint symbol provided by the admin, and the title will be set to "????????????".