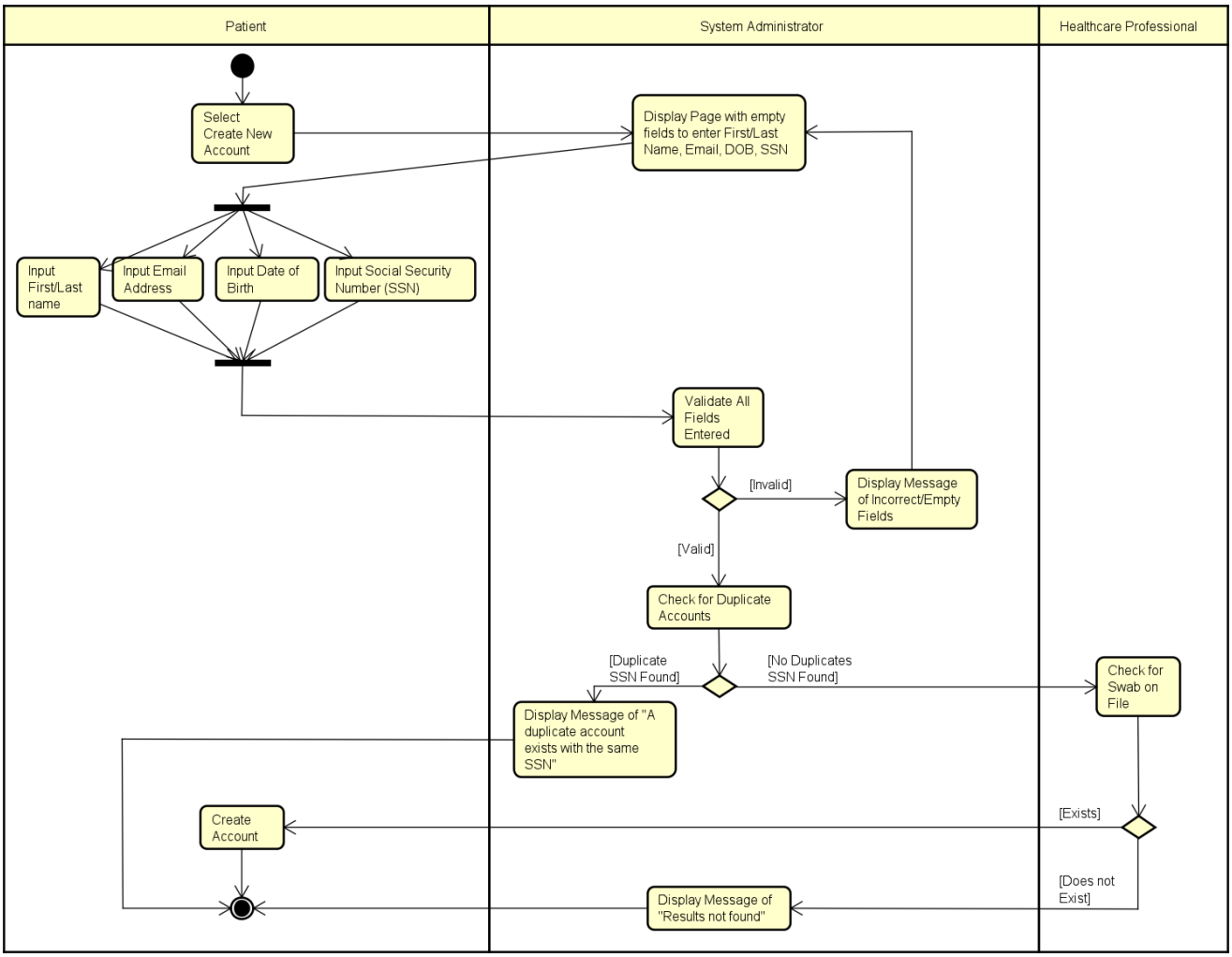
Activity Diagrams – Health Protect

Use Case 1: Register



MAIN SUCCESS SCENARIO (UPDATED)

1. Patient selects “Create New Account” functionality from the User Interface.
2. System Administrator displays page with empty fields to enter First/Last Name, Email Address, Date of Birth, Social Security Number.
3. a. Patient inputs First/Last name in empty fields.
   b. Patient inputs Email Address in empty fields.
   c. Patient inputs Date of Birth (DOB) in empty fields.
   d. Patient inputs Social Security (SSN) in empty fields.
4. System Administrator validates all necessary information entered.
5. System Administrator checks for duplicate accounts (if Step 4 is valid).
6. Healthcare Professional checks for swab on file (if Step 5 determines there are no found duplicate accounts).
7. Account is created (if Step 6 determines a swab on file exists).

FAILURE SCENARIO (UPDATED)

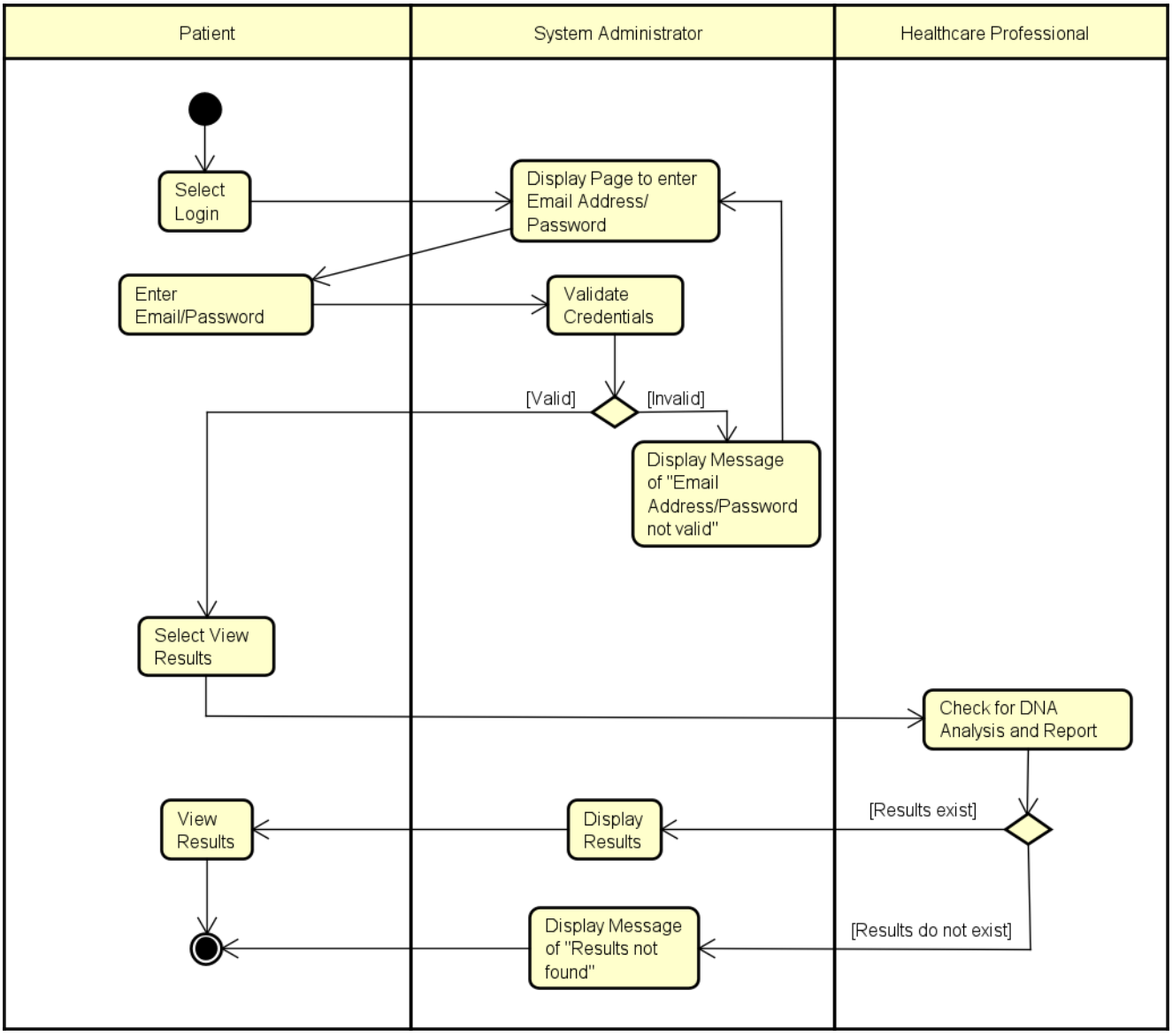
1. Patient enters invalid/missing information for First/Last Name, Email, DOB, or SSN in Step 3.
    a. If Patient enters an invalid Name/Email/DOB/SSN, System Administrator displays a message indicating the fields are not valid.
    b. Patient is automatically returned to “Display Page with empty fields to enter First/Last Name, Email, DOB, SSN”.
2. Duplicate account exists in the System with the same SSN.
    a. If a duplicate account already exists in the mobile application, the System Administrator will display message of “A duplicate account exists with the same SSN” and the use case ends.
3. Swab does not exist
    a. If a swab on file relating to the Patient does not exist (swab has not been received; swab has yet to be tested) when the Healthcare Professional checks for swab, the System Administrator displays message indicating “results are not found” and the use case ends.

Explanation

I stayed loyal with the preconditions from the previous submission. Patients cannot have duplicate accounts with the same Social Security Number and must have a swab on file to create account.

I introduced two new failure scenarios. One, the System Administrator now validates the Patient inputs entered are correct and all fields have been fulfilled. If this determined invalid, a message would display of invalid fields and user will be directed to the previous page to enter fields again. The second added scenario is the swab not existing in the System, which is now completed by a Healthcare Professional (has qualifications to work with samples/swabs). Confirmation of an existing swab will create the account.

Use Case 2: View Results



MAIN SCENARIO (UPDATED)

1. Patient selects “Login” functionality from the User Interface.
2. System Administrator displays page to enter Email Address/Password with empty fields.
3. Patient enters Email Address/Password in the empty fields.
4. System Administrator validates the credentials of entered fields.
5. Patient selects “View Results” functionality from the User Interface (if Step 4 is valid).
6. Healthcare Professional checks for DNA Analysis and Report (results from the swab).
7. System Administrator displays results for DNA Analysis and Report (if Step 5 determines results exist).
8. Patient views results.

FAILURE SCENARIO (UPDATED)

1. Patient enters invalid Email Address and/or Password in Step 3.
    c. If Patient enters an invalid Email Address and/or Password, System Administrator displays a message indicating the "Email Address/Password not valid".
    d. Patient automatically returned to "Display Page to enter Email Address/Password".
2. DNA Analysis and Report does not exist
    b. If swab results do not exist (swab has not been received; swab has yet to be tested) when Healthcare Professional checks for DNA Analysis and Report, System Administrator displays a message indicating "results are not found" and the use case ends.

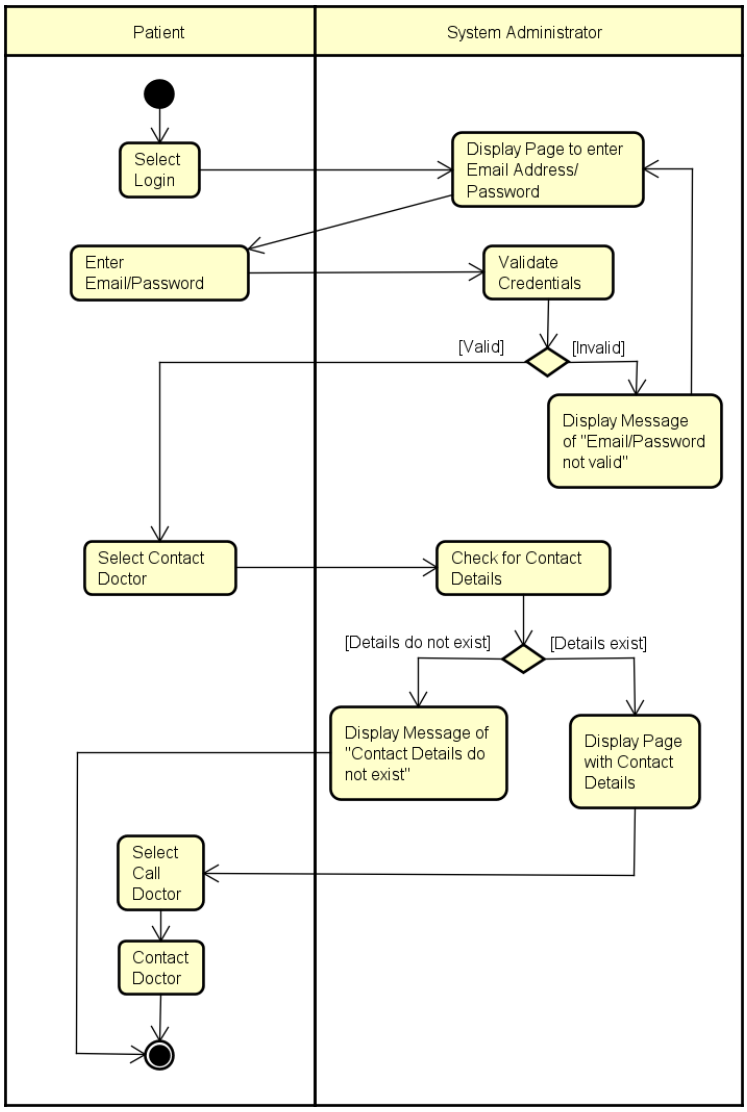
Explanation

Similar to the Register Use Case, I stayed loyal with the preconditions from the previous submission. Verifying Patient login information (having an active account) must be performed to interact within the application, and DNA Analysis and Report (having a swab on file) must exist to display results to the user.

I removed "Return to Home" and "Return to Login" from the prior submission because I felt this additional functionality was not vital to the performance of use case. It may be recommended having a way of automatically logging the user out of their account after an inactivity of a certain amount of time. "Export Results" was also removed from the system entirely as we agreed downloading/sharing results with vulnerable confidential information can prove to be unsafe for the user.

The Activity diagram was straightforward since it basically checks for results in the System and displays them. However, the software presentation to view results would be a high priority to how it is displayed to the user. The product's purpose and the main reason Patients would gain value from using Health Protect will rely on how those results are displayed.

Use Case 3: Contact Doctor



MAIN SCENARIO (UPDATED)

1. Patient selects “Login” functionality from the User Interface.
2. System Administrator displays page to enter Email Address/Password with empty fields.
3. Patient enters their Email Address/Password in the empty fields.
4. System Administrator validates the credentials of entered fields.
5. Patient selects “Contact Doctor” functionality from the User Interface (if Step 4 is valid).
6. System Administrator checks for contact details.
7. System Administrator displays page with contact details (if Step 6 determines details exist).
8. Patient selects “Call Doctor” functionality from the User Interface.
9. Patient contacts Doctor.

Note: Contacting the Doctor function transfers Patient to Phone application with contact details already input. Patient must confirm send on phone to accept outgoing call.

FAILURE SCENARIO (UPDATED)

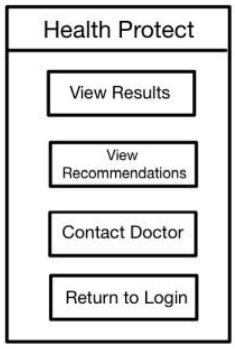
1. Patient enters invalid Email Address and/or Password in Step 3.
   a. If Patient enters invalid Email Address and/or Password, System Administrator displays message indicating “Email Address/Password not valid”.
   b. Patient automatically returned to “Display Page to enter Email Address/Password”.
2. Doctor contact details do not exist
   a. If Doctor’s contact details do not exist, System Administrator displays message indicating “Contact Details do not exist” and the use case ends.

Explanation

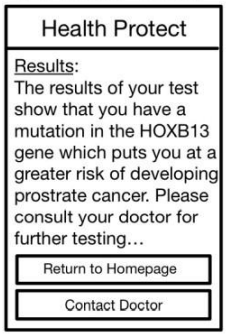
I struggled the most with this use case and ended up making some changes from the previous submission. The precondition of verifying Patient login information remained to interact with the application (as with the View Results use case). However, I chose to remove two preconditions from this use case as well as removed “Return to Home” and “Return to Login” from the prior submission because I felt this additional functionality was not vital to the performance of use case.

I had difficulties deciding to feature a Doctor Actor, but ultimately deemed it unnecessary as the role is receiving a phone call and is not crucial to the diagram for creating a picture of the Patient contacting the Doctor. This can be accomplished between the Patient and System Administrator.

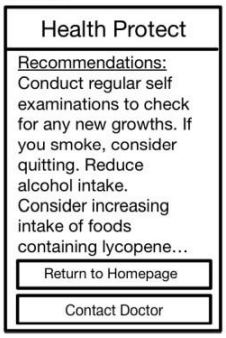
The following images are provided from the Week 2 Producer Submission:



“View Results” screen:



“View Recommendations” screen:



“Contact Doctor” has its own functionality button on the main user interface, but also on the “View Results” and “View Recommendations” menus. The first image (on the left) does not prove results must be viewed to contact a Doctor or Patients must have a swab on file (preconditions from the last submission). The multiple locations for the “Contact Doctor” function confused me into thinking different methods for functionality depending on which screen the user is currently on. For that, I have chosen to remove these preconditions and suggest removing “Contact Doctor” from the functionality of the “View Results” and “View Recommendations” screens. If the Patient wants to contact a Doctor, it must be accomplished on the main user interface.

As a group, we may need to discuss and clarify more on the requirements of these preconditions. The “Contact Doctor” use case for my activity diagram may look entirely different with the functionality of the second and third pictures there.