Team 12 – Agile Puppers

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Brainstorming:

Use Cases

- Register account - *Nathan*
- ~~Log in user~~
- ~~Log out user~~
- View water availability
- Delete account - *Jeremy*
- Delete report
- ~~Ban account~~
- Disable account
- Unblock account
- View security log
- Report water availability - *Ridoy*
- Report water purity - *Gabor*
- ~~View graph of past reports~~
- View historical reports - *Cal*

Nathan Lai

Register Account

Primary Actor: User

Stakeholders and Interests:

- User, Managers, Administrators: User expects to be able to register a new account with no problems. Managers and Administrators want to be able to see a list of all the accounts.

Precondition: User has opened application and is on the login screen.

Postcondition: User is brought back to the login screen after successful account creation or cancelation.

Main Success Scenario:

1. User clicks on register and is brought to the registration screen and successfully creates a new account with unique username and a password that they re-confirm. The new user is brought back to the login screen after completion and can now use their account to login to the application.

Alternative Flows:

1. User enters a non-unique username.
a. System prompts the user to enter a new username.
2. User password and confirmation password do not match.
a. System prompts the user to re-enter matching passwords.
3. User chooses to cancel the registration process.
a. System exits back to the login screen.

Frequency: Happens fairly frequently whenever a new user has to register a new account.

Open Issues: User enters symbols that are not supported or recognized by the system for their username and/or password.

Ridoy Majumdar
Report Water Availability

Primary Actor: User
Stakeholders and Interests:
- *Users, Workers, Managers, Administrators:* Want to update clean water availability system with a new location

Preconditions: User has knowledge of a location where water is available.

Main Success Scenario:
1. User opens Report Water Availability interface
2. User uses interface to either create a new water location entry or update an existing entry.
3. User saves entry: system updates information in the data store.
4. System indicates success and user is presented with option of either closing the interface or providing an additional entry.

Alternative Flows:
1a. Entry already exists for location that user intended to add
1. System presents existing information about location.
2. User may update this existing information and continue with the application as normal.

2a. Invalid location error
1. System notifies user that input location is invalid and prompts user to try again.

Special requirements: Map for location input interface
Frequency: Reporting and viewing water ability is the core use case of our application. We expect this use case to happen very frequently.
Open issues: Date connectivity in parts of the world where this application will be used? How should location data be standardized if GPS networks are not very well developed in developing countries?

Gabor Siffel
Report water purity

Primary Actor: Worker
Stakeholders and Interests:
- User: Wants to be able to view the water purity levels that have been reported.
- Worker: Wants to easily report the water purity levels at a specific location.
- Manager: Wants to also be able to report water purity levels.
- Administrator: Wants to also be able to report on water purity levels.

Preconditions: Worker is authenticated and is able to reach the water purity level reporting option.
Postconditions: Purity report is saved and "uploaded" to the central server and is made available to view by all users.

Main Success Scenario:
1. Worker (or higher ranked user) logs in successfully with their username and password.
2. From the opening screen they navigate the map to a location they want to report on.
3. Worker chooses a location and chooses the option to report on water purity.
4. Worker creates the report by choosing all the options made available.
5. Worker submits the report, which is "uploaded" to the servera and made public and available to everyone.
(At this point, the user may choose to repeat steps 2-5 or do other activities their ranking allows them.)
6. Worker logs out.

Alternative Scenarios:
*a) The application fails or encounters an exception.
i) If the application can recover, recover to the home screen.
ii) If the application can not recover, exit the close the application (which will then require the user to log back in to continue).
3a) The user does not have the authentication to report water purity levels. In this case, the application will not display the option to report on water purity levels.
4a) There is not water at the location selected for the water purity report. In this case, the application will proceed with the water purity report but will also require the user to enter the type of water available and the condition of the water as it would if the user were doing a water source report. Then the system will generate a water source report AND a water purity report at the same time when the user submits.

Special Requirements:
- Must not allow, or must catch, any false, invalid, or unparseable data entered by the user.

Technology and Data Variations List:
3a. The user may choose a location in multiple ways, either by navigating to it on the map or by typing in the location manually.

Frequency of Occurrence: May occur many times in a row.

Open Issues:
- How will the application display the options the user has to decide? (This will differ depending on whether there is a water source report on the specified location already.)

Cal Stephens
View Historical Reports

Primary Actor: Manager
Stakeholders and Interests:
- *Manager:* Wants to see a accurate and comprehensive high-level overview of the data that's been collected.
- *Workers:* Wants to have their individual reports contribute to the overall graph.
- *Organization:* Wants this data to allow for managers and administrators to make appropriate long-term decisions.

Preconditions: User is logged in to the system.
Postconditions: None. This subsystem does not mutate state.

Main Success Scenario:
1. User opens the Historical Report screen
2. User enters a location, a virus or contaminant, and a year.
3. The system displays a graph where the X axis is the month and Y is the PPM of the selected virus or contaminant.

User may repeat steps 2 and 3 until they are done looking at the reports.

4. User navigates to a different part of the application.

Alternative Flows:
1a. User does not have an Authorization Level of Manager or Administrator
1. The system states that the user does not have permission to view the reports.
2. The user must navigate to a different part of the application.

2a. The location entered is invalid
3. System signals error and requests a different location

3a. There is no data at the location for the contaminant or virus in the selected year
4. The system shows an empty graph that says there is no data.
5. The system shows a button to input data

a. If the user clicks the button, they are redirected to the Purity Report form

6. The user may enter a different contaminant, virus, or year

3b. There is more than one data point for a month
7. The system averages all of the values for that month and uses that number.

Special Requirements: Must display data as line graph.
Technology and Data Variations List: An individual virus or contaminant could have multiple names.
Frequency of Occurrence: Arbitrarily often. Could be many times in a row.
Open Issues: How will a user enter a location an a efficient and error-averse manner?