

SPRINT 2

A. Requirements Engineering

Non Functional Requirements

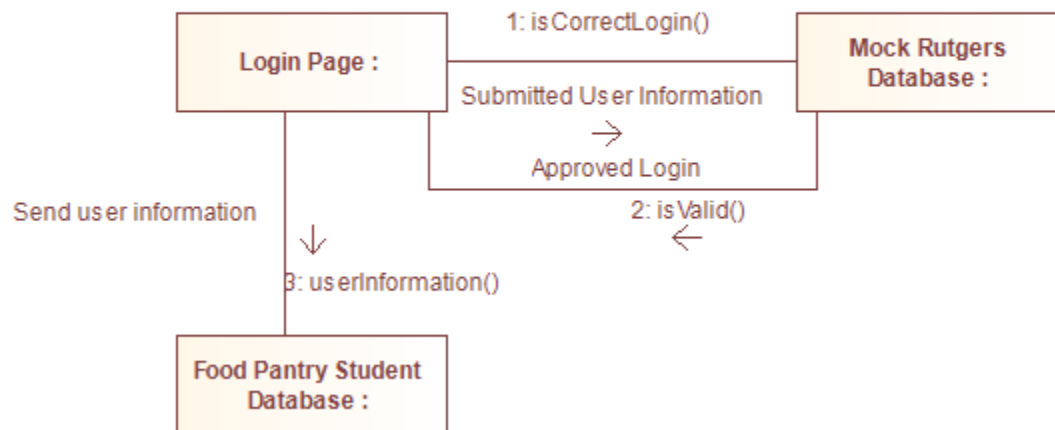
- Have high availability (> 99.999% of the time)
- Open and process information quickly
- Allow any student to access login form
- Create and use mock Rutgers student database
- In the case that the webpage fails, the user should be able to leave and return to it.

Functional Requirements

- Deny website access to non-authorized users
- Implement using HTML
- Use PHP in implementation
- Upon successful sign up, credentials are entered into the database
- When login is attempted, database is scanned resulting in one of two actions:
 - Deny access if credentials are not matched anywhere in the database. Display message "Not a valid netID or Password. Please try again."
 - Allow access if credentials are matched somewhere in the database and transition to the next page.
- Write databases in SQL
- Generate RUID for student whenever one is registered

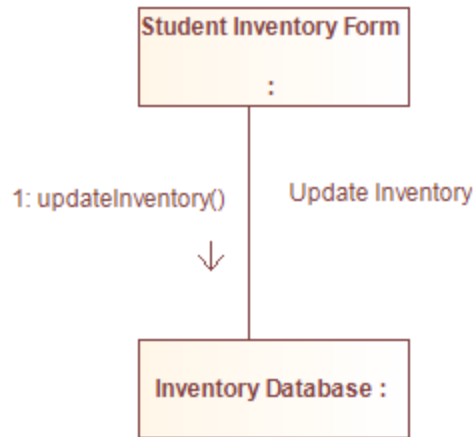
B. System Modeling

Student Login



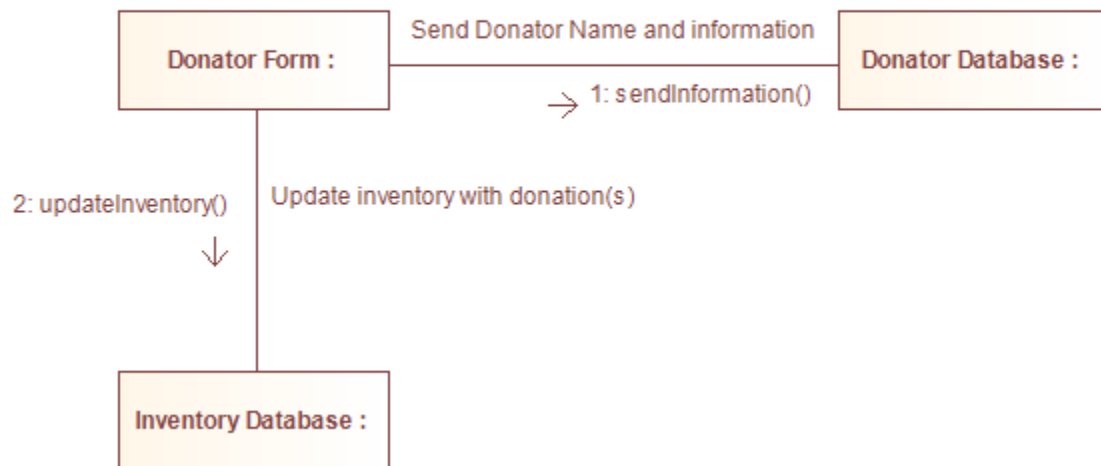
Student Login Behavioural Diagram

Student Inventory Update



Student Inventory Updating Behavioral Diagram

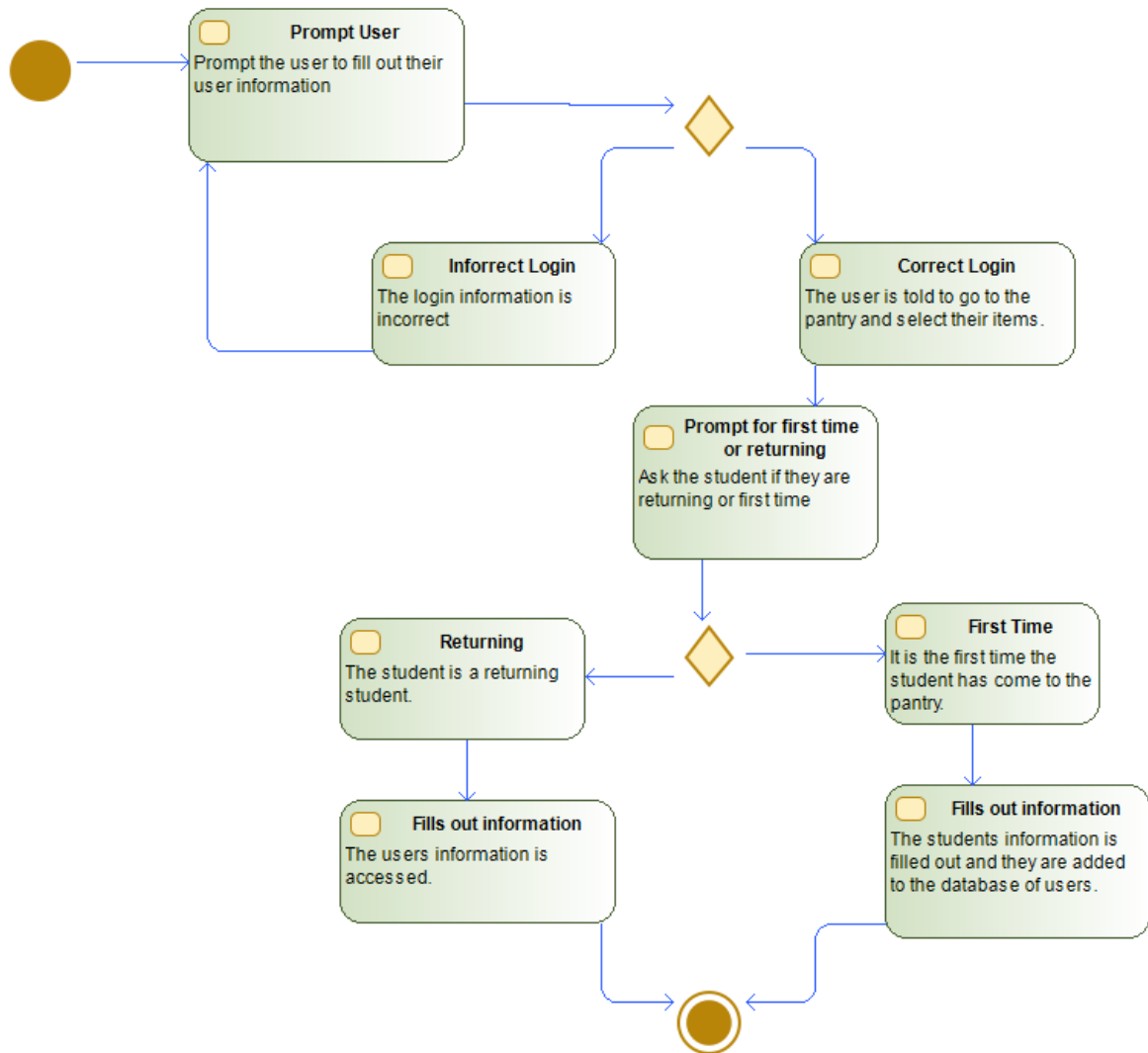
Donator



Donator Behavioral Diagram

C. Architectural Design

Login Form for picking up food



Login form for student picking up food activity diagram

D. Design and Implementation

The MVP decided upon for sprint 2 allows the user to sign up and log in to the food pantry website. The website was developed using HTML, a markup language, and PHP to help put the HTML values into the corresponding database. The website values are able to update the database through the local server XAMPP (cross-platform web server) and thus have to be run locally. The database will be a mock representation of the Rutgers student database on a

smaller scale suitable for the purposes of this software. It will have the capability to store, manage, and search for students that are created using the sign up form.

The user of the software has the option of filling out a signup form if they have the authority to or a login page. The sign up form takes as inputs the name, netid, and password of the user which then gets written into the corresponding database. This mimics the process of creating a new student registered with the food pantry.

If the user instead decides to log in to the website, the user's netid and password are taken as inputs at which point the database will be scanned to check if a student with matching credentials exists. If not, it will treat the user as a non-rutgers student trying to access the food pantry and deny them entry. However, if the database does find a matching user, they will be successfully logged into the website

Preceding the design of this sprint's MVP, we made the decision to decommission the use of the qualtrics form which was implemented in the last sprint. We made this decision because although the qualtrics form was a convenient way of registering users, the time and effort cost to make it compatible with the database being implemented for the inventory was ultimately too great. The qualtrics form would export the data onto an excel sheet in an unreadable format.

Sign-up Form:

Signup

Name:

NetID:

Password:

Ensure proper security — keep your password a secret

Signup

For security reasons, please log out and exit your web browser when you are done accessing services that require authentication!

The signup form was used by the team to input into the “Mock Rutgers Database” students that are attending the university. This was so that we could collect a bunch of student test cases that would be used to login to the Rutgers Food Pantry system. The

Rutgers Food Pantry is only offered to Rutgers students and so we had to make sure that anybody signing into the system was a Rutgers student. It would work by us writing a name, netID, and password and then this would be sent to the login_info database. A random RUID would be generated which is implemented inside the signup.php file. An example would be: “Nick Lluen”, “nl403”, “cheese” as the name, netID, and password respectively. This would be stored into the database in order to verify the login information, which is explained in the next section.

+ Options

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<input type="checkbox"/>	<div><div><div><div></div></div><div>Edit</div></div><div><div><div><div></div></div><div>Copy</div></div><div><div><div></div></div><div>Delete</div></div></div></div>	4	48145629	rgj204	coffee101	2022-05-02 13:34:46	Rohan Gorajia	
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Login Form:

NetID Login

NetID:

Password:

Ensure proper security — keep your password a secret

Login

For security reasons, please log out and exit your web browser when you are done accessing services that require authentication!

The login form will compare the information posted into the login_info database with the information that the user has typed into the “NetID” and “Password” sections. If the

information does not match that of the database then it will not allow the user to login and will prompt them with a text that tells them to retry with valid information. If the information does match then the user will be prompted to the index page discussed in the next sprint.

E. Software Testing (all levels)

Software testing for Signup form

	1	2	3	4	5	6	7
Name	Mary Allen		Justin Long	Lewis Greene	Alice Farr	\$12	Bart King
netID	ma23	ju993	jal221		aaf45	npp32	bk443
Password	starfish	peanut2	123pears	purp1e		ruiz13	23burger32
Expected output	Submission Accepted	Denied	Submission Accepted	Denied	Denied	Denied	Submission Accepted
Actual output	Submission Accepted	Denied	Submission Accepted	Denied	Denied	Denied	Submission Accepted

***Note: for the login form testing we will be assuming that the valid entries in the SignUp form testing are part of the testing database so any login inputs other than those will be invalid.*

Software testing for login form

	1	2	3	4	5	6	7
netID	Mary Allen	ma23		Lewis Greene	bk443	aaf45	npp32
Password	starfish	starfish	purp1e	ruiz14	23burger32		ruiz14
Expected	Denied	Successful login	Denied	Denied	Successful login	Denied	Denied
Actual	Denied	Successful login	Denied	Denied	Successful login	Denied	Denied

F. Evaluation

We verified this program by testing it against inputs that would tell us whether the program performed its specifications. If at any point it did not meet any of the requirements we would update the software. To verify the program, we checked to make sure that it was available the majority of the time and executed acceptably fast. We tested opening the sign up and login forms to ensure they were accessible. We also tested to ensure that RUIDs were generated for each student registered.

To validate the signup and login forms we first tested the signup forms using invalid inputs such as non-alphanumeric entries for name, or empty entries for any of the fields. Any such inputs should not allow the user to complete registration, otherwise their submission will be successful. We tested the login form, which takes netID and password as inputs by using two specific input cases: where the netID and/or password fields are empty, and where the netID and/or password are not registered in the database. In either case the login should be unsuccessful and display the corresponding message. Otherwise, the login is successful.