Project Part 2

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Title: *Choreganizr*: A Roommate Chore Management Application

Project Summary: An application that allows roommates to delegate, coordinate, and track chores in a household.

Project Requirements:

Business Requirements			
Id	**Requirement**	**Topic Area**	**Priority**
BR-01	Passwords must be 8 alphanumeric characters.	Security	Medium

User Requirements			
Id	**Requirement**	**User**	**Priority**
USR-01	Users can create account with chosen email, username, and password.	All	High
USR-02	Users can recover passwords.	All	Low
USR-03	Users can log in.	All	High
USR-04	Users can create password-protected Households as the Head.	All	High
USR-05	Head users can add users as Housemates to Household.	Head	High
USR-06	Housemates can view Chores and who they are assigned to.	Housemate	Medium
USR-07	Head users can select Chores from a premade list.	Head	Medium
USR-08	Housemates can create new Chores.	Housemate, Head	Medium
USR-09	Head users can manually delegate Chores to Housemates.	Head	Medium
USR-10	Housemates can mark Chores they've been assigned as Completed.	Housemate, Head	High

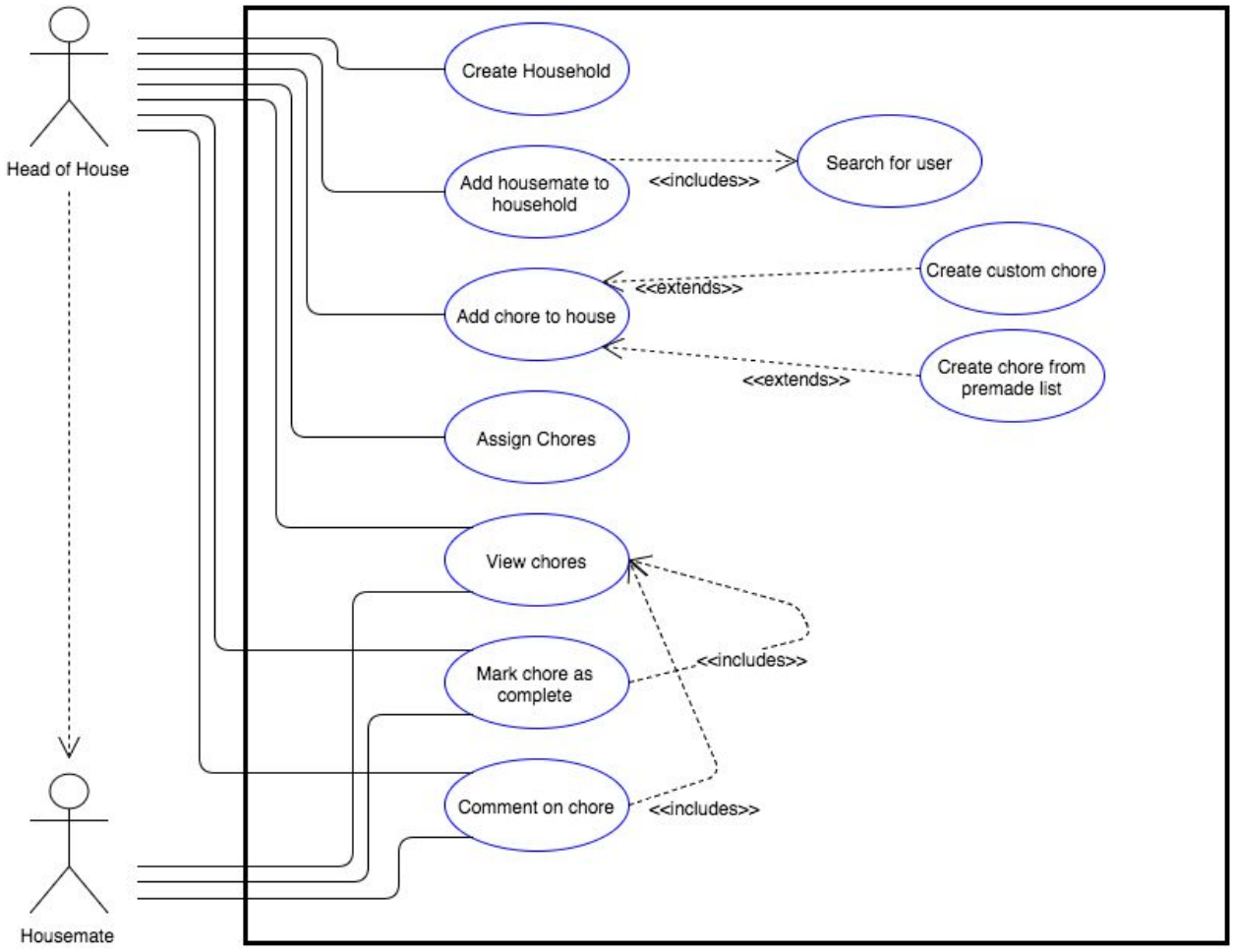
Project Requirements (cont'd):

Functional Requirements		
Id	**Requirement**	**Priority**
RF-01	User passwords are hashed before being stored in the database.	High
RF-02	When a user attempts to create an account, the password is checked to ensure it meets minimum requirements.	High
RF-03	A user should only see chores that apply to their household.	High
RF-04	When a user marks a chore as completed or comments on a chore it should update on all other user's accounts.	High
RF-05	New users should immediately be presented with an option to sign up.	High

Non-Functional Requirements			
Id	**Requirement**	**Topic Area**	**Priority**
NFR-01	After the user enters login information, the time before they are brought to the home page should be no more than .5 seconds	Performance	High
NFR-02	Searching for a user should not take more than .5 seconds.	Performance	High
NFR-03	The system should perform the same on mac, pc, and linux.	Platform Constraints	High

Users and Tasks:

Use Case Diagram:



Users and Tasks (cont'd):

Use Case Documents:

Use Case ID:	UC-01		
Use Case Name:	Create Household		
Description:	A user creates a household and becomes the head of the house.		
Actors:	Head of House		
Pre-Conditions:	The user must be logged in.		
Post-Conditions:	The user is the head of an empty house (only member is themselves).		
Frequency of Use:	Once (until house dissolves via moving, roommate changes, etc…)		
Flow of Events:		**Actor Action**	**System Response**
	1.	User clicks "Create Household"	An input field appears to allow the user to name the house
	2.	The user inputs a name and clicks "submit".	A new house is created.
Variations:			
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-02		
Use Case Name:	Add Housemate to Household		
Description:	The head of house searches for their housemates and adds them to the house		
Actors:	Head of House		
Pre-Conditions:	Head of House must be logged in, the housemates must have accounts.		
Post-Conditions:	A new house has been created.		
Frequency of Use:	Once by the head of house		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on "Manage House".	Displays manage house page which includes input box to search for users to add to house.
	2.	Enter housemates' usernames.	Return if that is a valid username.

	3.	Click “Add User”	Adds the user to the house.
Variations:	If the Head attempts to add an invalid username, “Invalid username” will be displayed under the input box.		
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-03		
Use Case Name:	Create a Custom Chore		
Description:	Heads can create new Chores with a chosen name, description, and due date.		
Actors:	Heads		
Pre-Conditions:	User has logged into the application and is on the homescreen as the Head of their Household.		
Post-Conditions:	Household has one more unassigned Chore, and user is at the View Chores screen.		
Frequency of Use:	Occasionally by Heads of a Household.		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on “Add Custom Chore”.	Display page with Name, Description, and Due Date fields to create a new Chore.
	2.	Enter Name, Description (optional), and Due Date (optional). Click “Create Chore”.	Creates a new Chore (belonging to the Household) in the database. Display the View Chores screen.
Variations:	2. User leaves the Name field blank and clicks “Create Chore”. System stays on page and notifies user to name their chore.		
Notes and Issues:	Multiple chores should be able to have the same Name.		
Developer Notes:			

Use Case ID:	UC-04
Use Case Name:	Create Chore(s) from Premade List
Description:	User has logged into application and is on the homescreen of their Household.

Actors:	Heads		
Pre-Conditions:	User has logged into the application, and is on the homescreen as the Head of their household.		
Post-Conditions:	Household has more unassigned Chores, and user is at the View Chores screen.		
Frequency of Use:	Rarely		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on “Add Chore from List”	Displays a list of premade Chores, with checkboxes and a “Create Chores” button.
	2.	Check the desired template Chores to add to the Household. Click “Create Chores”.	Creates Chores with the Names and Descriptions of the selected chores from the list. Return the user to the View Chores screen.
Variations:	2. User selects no chores and clicks “Create Chores.” System remains on the screen and notifies the user to select at least 1 chore to add.		
Notes and Issues:	The list of pre-made Chores will always be the same list (even if Chores have been created from the list before). Each chore from this list will have a default Name and Description.		
Developer Notes:			

Use Case ID:	UC-05		
Use Case Name:	View Chores		
Description:	User can view chores that the Household has chosen.		
Actors:	Heads, Housemates		
Pre-Conditions:	User has logged in. User is a member of a Household.		
Post-Conditions:	User is on View Chores screen.		
Frequency of Use:	Frequently.		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on “View Chores” from the home screen.	Display list of Household chores.
Variations:	1. Household has no chores to view.		
Notes and Issues:			

Developer Notes:	Screen should list a Housemate's assigned chores before unassigned chores or chores assigned to other Housemates.

Use Case ID:	UC-06		
Use Case Name:	Assign Chores		
Description:	Heads of Household can delegate chores to Housemates.		
Actors:	Heads of Household		
Pre-Conditions:	User has logged in. User is the Head of a Household.		
Post-Conditions:	Chore is assigned to a User.		
Frequency of Use:	Rarely		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on "Assign Chores" from the home screen.	Display "Select Chores" page with the list of Household Chores.
	2.	Select Chore(s) to assign from list of Household Chores and click on "Assign Selected Chores".	Display "Select Housemate" page with list of Household Housemates.
	3.	Select Housemate to assign Chore to from list of his/her Housemates and click on "Assign to Selected Housemate".	Display screen indicating successful assignment of Chore(s) with options to return to home screen or assign another Chore.
Variations:	2. The Household has not created a list of Household Chores.		
Notes and Issues:			
Developer Notes:			

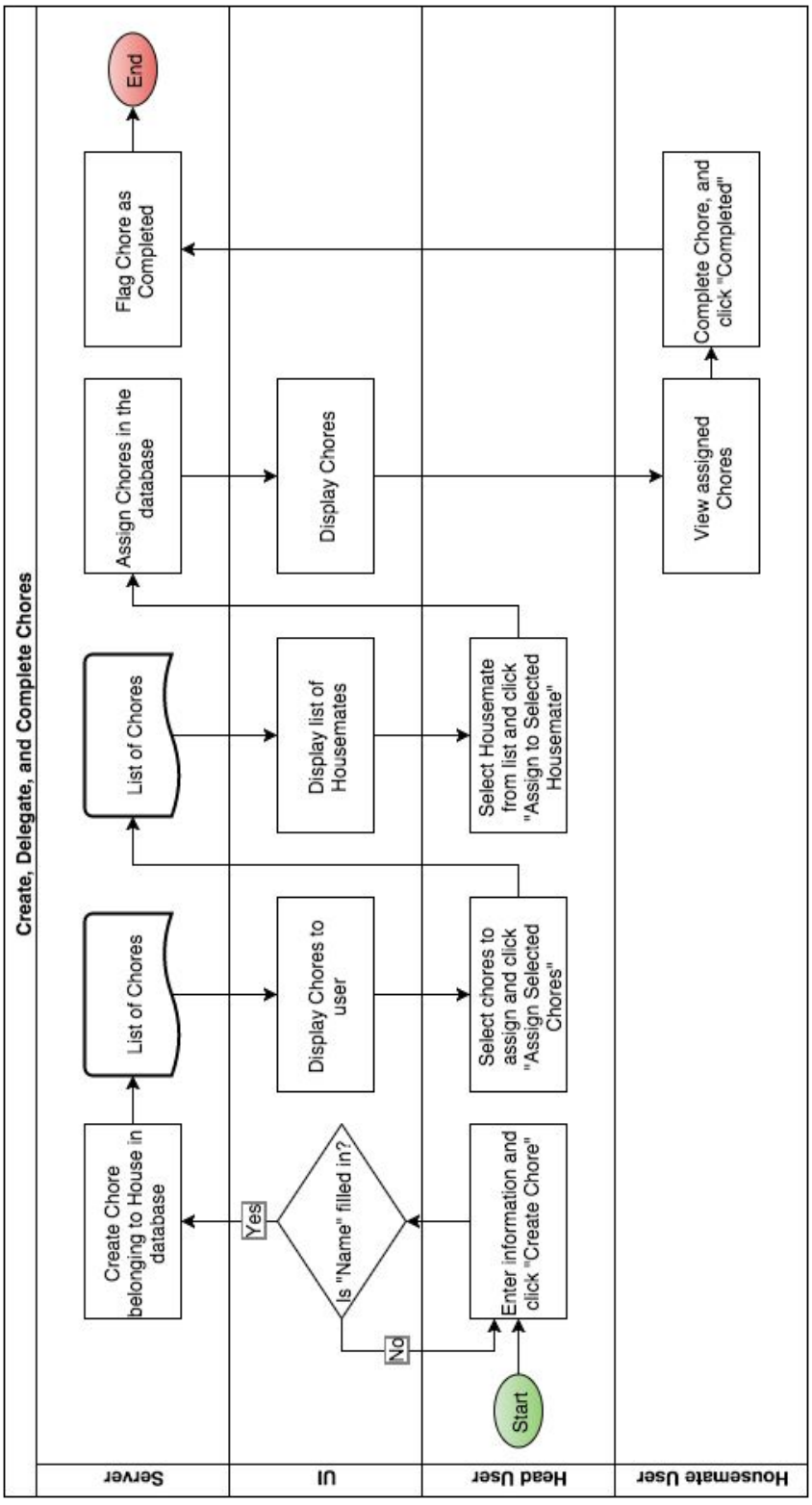
Use Case ID:	UC-07
Use Case Name:	Mark Chores as Complete
Description:	A user can mark a chore assigned to him/her as complete.
Actors:	Users
Pre-Conditions:	User must be logged in and have assigned chores.

Post-Conditions:	Chore is marked as complete in the system.		
Frequency of Use:	Frequently.		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on “View Chores”.	Displays list of chores.
	2.	Click on chore to mark complete.	Displays “Edit Chore” screen for the relevant chore.
	3.	Check the “Mark Complete” checkbox and click “Save Chore”.	Displays View Chores screen.
Variations:	2. The chore is already complete		
Notes and Issues:			
Developer Notes:			

Use Case ID:	UC-09		
Use Case Name:	Comment on Chore		
Description:	A user posts a comment on a chore.		
Actors:	All		
Pre-Conditions:	The user must be logged in.		
Post-Conditions:	All house members can view the comment the user left on a specific chore.		
Frequency of Use:	Often		
Flow of Events:		**Actor Action**	**System Response**
	1.	Click on “View Chores”.	Display the View Chores screen.
	2.	Click on the relevant chore (the chore you wish to comment).	Display the Edit Chore screen.
	3.	Edit comment field and click “Save Chore”.	Display the View Chores screen.
Variations:			
Notes and Issues:			
Developer Notes:	We may want to automatically timestamp the message and automatically include the user that posted the comment.		

Activity Diagram:

UC-3, UC-6, UC-7



Data Storage:

A MySQL database will store all of the persistent data. We will use a singleton class called DatabaseManager to interact with the database.

Within this class, there will be several main methods to allow all of the interaction which we need. First an addUser method. This will insert a user into the “user” table with attributes: useremail, username, password, usertype, and houseID (currently null). There will be a getUser method which will return a user object with appropriate fields populated from the corresponding database entry. There will be a validateLogin method to validate a login attempt as a certain user (check the hashed password against the stored hash for that user’s password). Next, there will be an addHouse method. This will add an entry to the “house” table with all relevant information. There will be a getHouse method which will return a house object with appropriate fields populated from the corresponding database entry. Finally, there will be a deleteHouse method to remove a house entry from the table. More methods may be added if there is a need.

UI Mockups:

The next seven pages in this PDF will be UI mockups.

Login Screen

CHOREGANIZR

Log In:

User Name:

Password:

New user? Sign up!

Home Screen with no Household
Create Household 1/2

CHOREGANIZR

Welcome!

Create Household

No Household

Create Household 2/2

CHOREGANIZR

Create Household

Enter Household Name:

Home Screen with Household Created
Add Housemate to Household 1/2
Click "Manage Household"

CHOREGANIZR

Welcome!

Manage Household

Add Custom Chore

View Chores

Add Chore from List

Assign Chores

Your Household is <house name>

Add Housemate to Household 2/2

CHOREGANIZR

Manage Household

Add Housemate:

rtabler

Add User

Remove Housemate:

- [ ] tbussell
- [ ] apodoplelova

Remove User

Create Chore from List 1/2
Click "Add Chore from List"

CHOREGANIZR

Welcome!

Manage Household

Add Custom Chore

View Chores

Add Chore from List

Assign Chores

Your Household is <house name>

Create Chore from List 2/2

CHOREGANIZR

Add Chore from List

☐ Clean Microwave	☐ Dust	☐ Clean Microwave
☐ Water Grass	☐ Clean Microwave	☐ Clean Microwave
☐ Walk Dog	☐ Vacuum	☐ Clean Microwave

Create Chores

Create Custom Chore 1/2
Click "Add Custom Chore"

CHOREGANIZR

Welcome!

Manage Household
Add Custom Chore
View Chores
Add Chore from List
Assign Chores

Your Household is <house name>

Create Custom Chore 2/2
When user clicks "Create Chore", he is taken to the View Chores screen

CHOREGANIZR

Add Custom Chore

Name: Clean bathroom

Due Date: 2015-11-03

Description: Wipe counters, clean sink, refill soap if needed

Create Chore

View Chores Screen
Clicking on chore takes User to Edit Chore page

CHOREGANIZR

View Chores

My Chores:

- Wash dishes
- Mow lawn
- Sweep kitchen floor

Others' Chores:

- Clean bathroom

Unassigned Chores:

- Vacuum
- Water Plants

Edit Chore Screen

CHOREGANIZR

Edit Chore

Name: Clean bathroom

Due Date: 2015-11-03

Description: Wipe counters, clean sink

Comments: apodoplelova: Cleaning the sink sucks.

Mark Complete: ☐

Save Chore

Assign Chore 1/3

Check chores to assign and click "Assign Selected Chores"

CHOREGANIZR

Assign Chores

Select Chores:

☑ Wash dishes	☐ Sweep kitchen	☐ Mow lawn
☐ Do laundry	☑ Sweep bathroom	☐ Water plants
☐ Vacuum	☐ Clean bathroom	☐ Dust

Assign Selected Chores

Assign Chore 2/3

Check whom to assign chore(s) to

Click "Assign to Selected Housemate"

CHOREGANIZR

Assign Chores

Select Housemate:

- [x] apodoplelova
- [ ] psevery
- [ ] rtabler

Assign to Selected Housemate

Assign Chore 3/3

CHOREGANIZR

Assign Chores

Chore(s) Assigned!

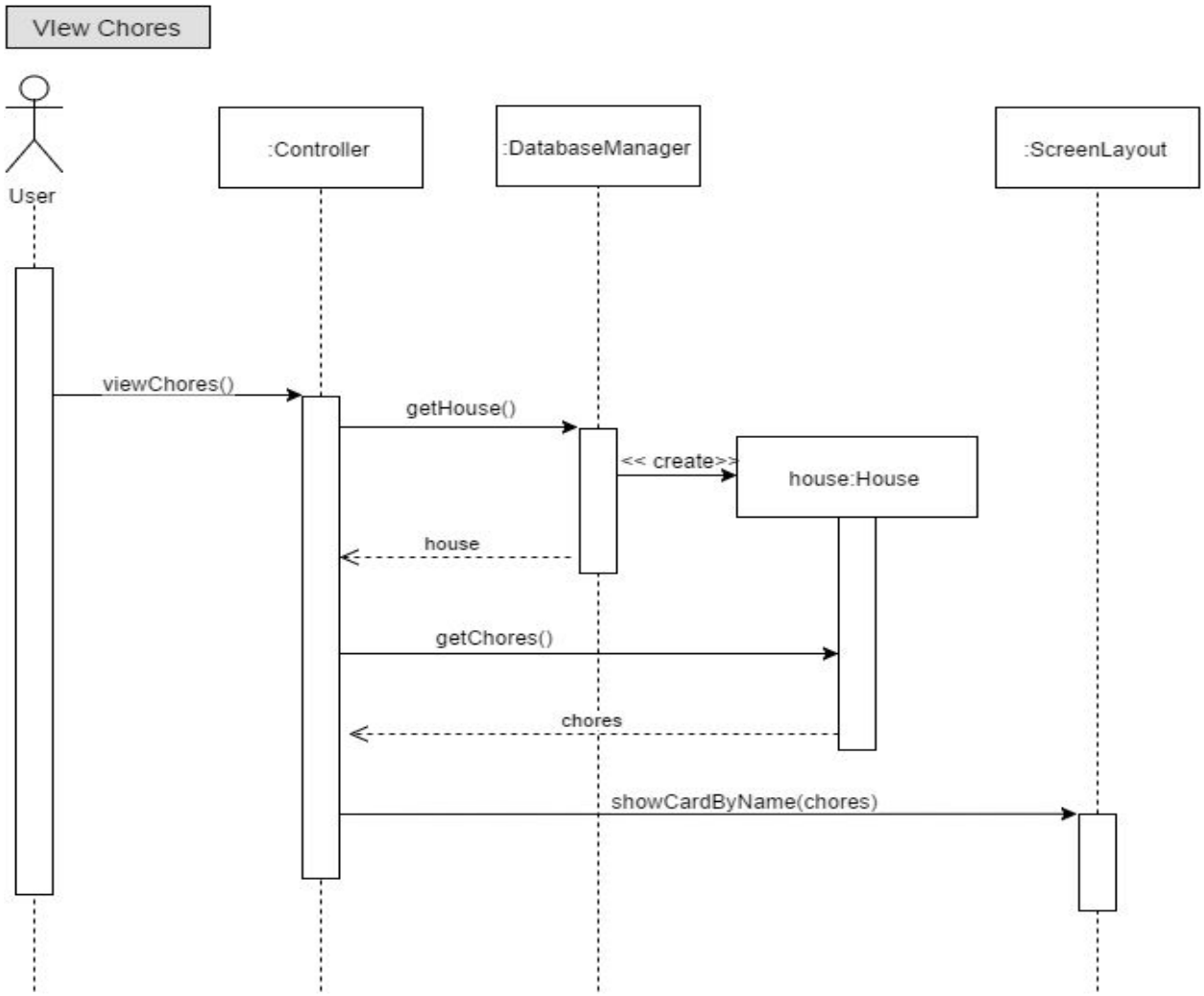
Home

Assign Another Chore

User Interactions:

View Chores

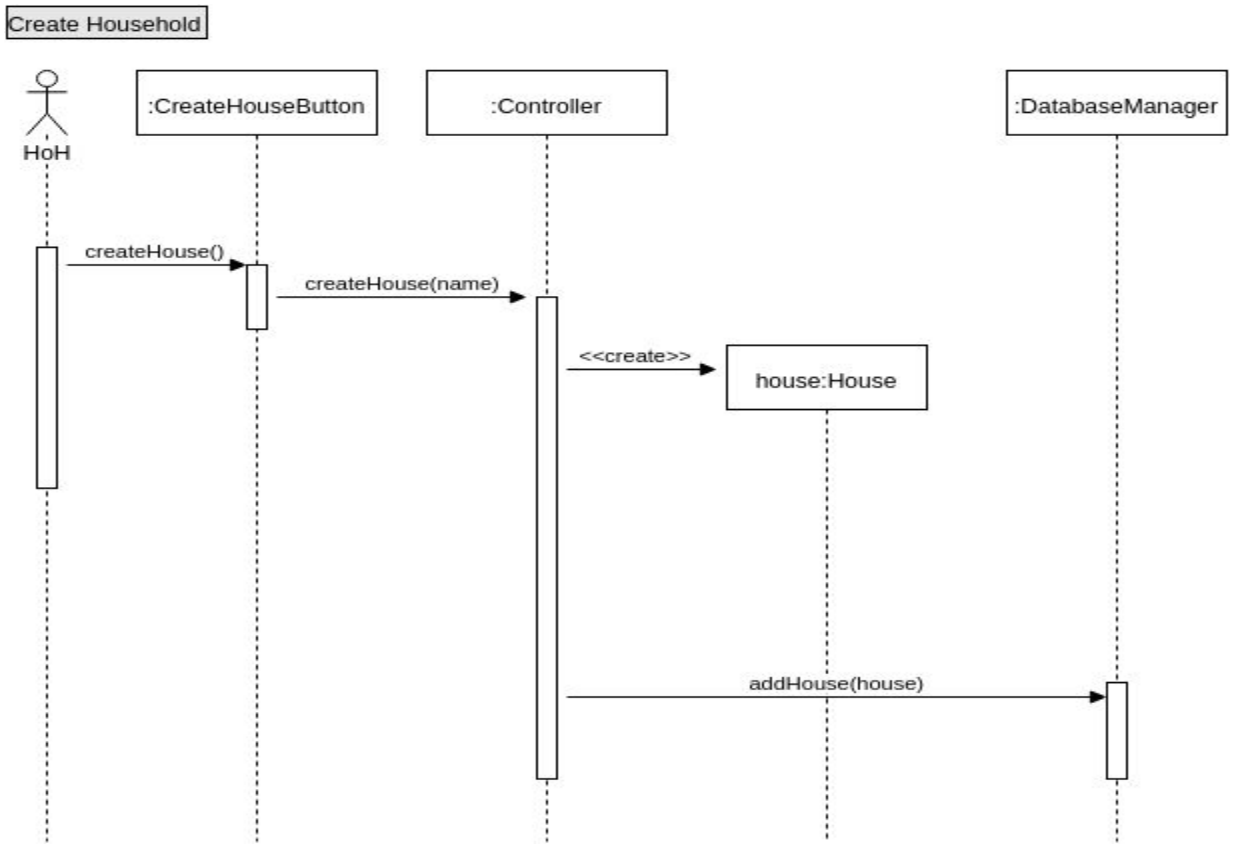
When a user logs in, the application will request information from the database, create the House and Chore objects, then display the list of Chores.



User Interactions (cont'd):

Create House

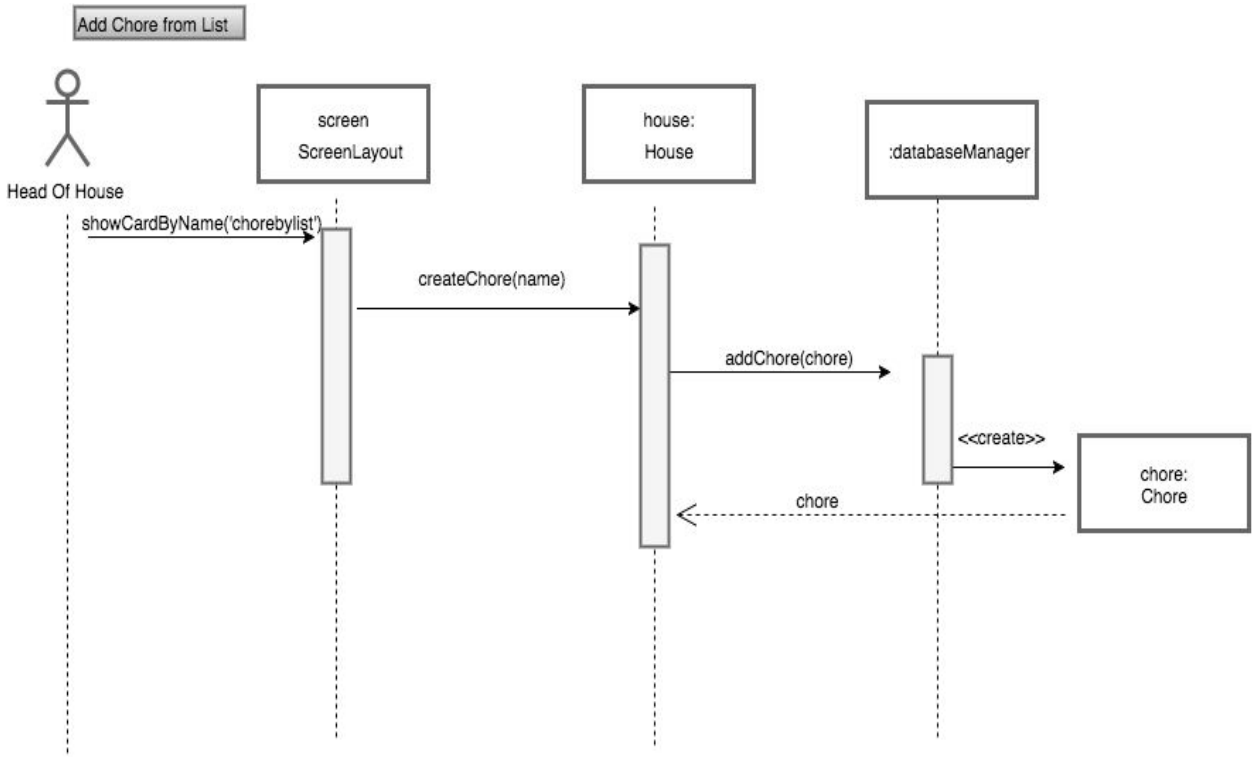
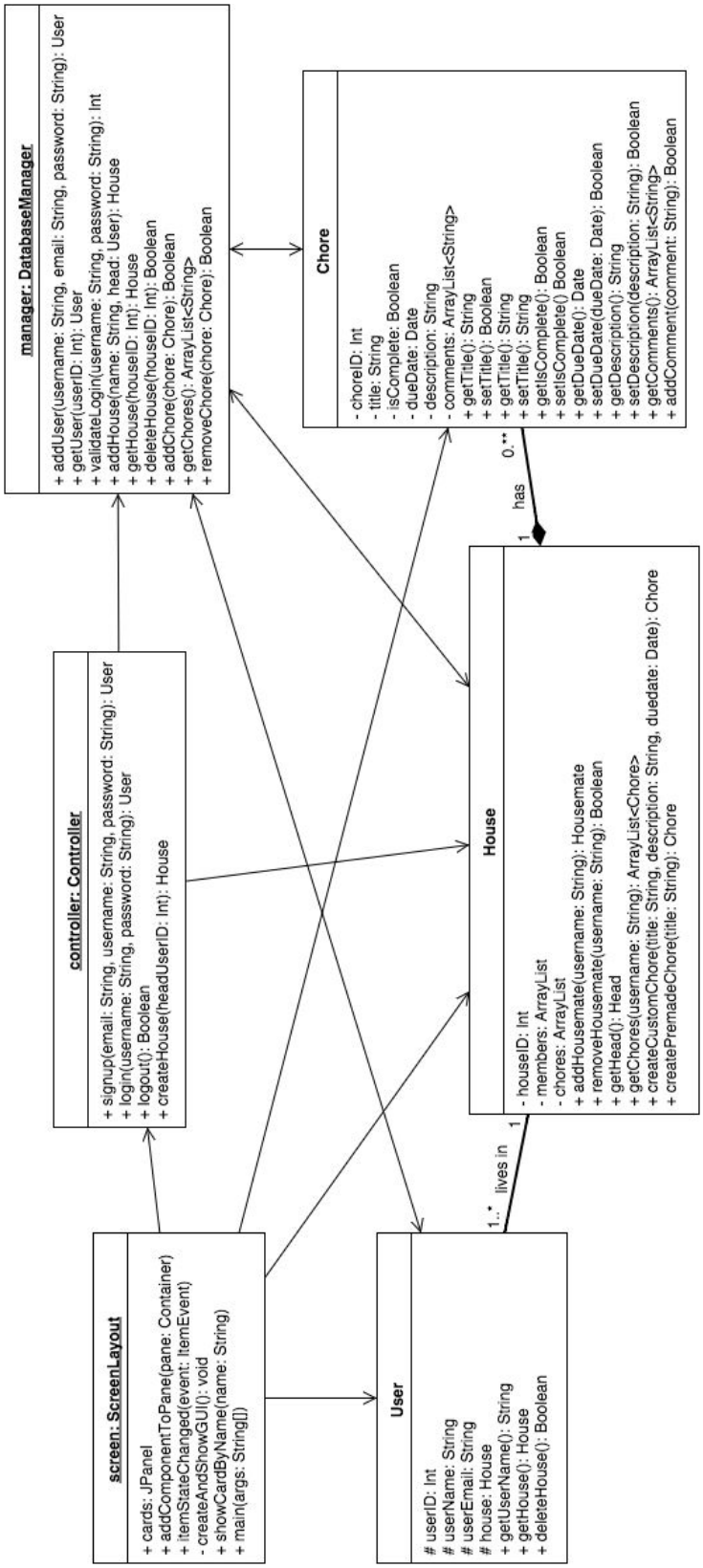
After the user first creates an account, they will have the option to create a House with a chosen name. When they do so, the application will create a new House in the database.



User Interactions (cont'd):

Add Chore from List

When a user is logged in as the Head of their house, they can choose to see a list of sample chores. They can select from this list to create that Chore in their house. The DatabaseManager will add the Chore to the database and return the Chore object.



Class Diagram