

Senior Project Final Presentation

Fall 2023

Customization of NextCloud iOS App

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Product Owner(s): Masoud Sadjadi

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Problem definition

Whole Project:

- There is no way to change the theme from iPhones
- There are a couple of theme options that a user can change on the desktop application but not yet on the mobile app including the following:

- ❖ Background Color
- ❖ Background Image
- ❖ App Logo
- ❖ App Slogan

-These theme options can't be changed through the database because they can conflict with an organization's server theme.

We were prompted to bring a solution to make Nextcloud a customizable app for all

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Project Management

Task	Start Date	End Date	Duration
Project Initiation	08/28/2023	09/11/2023	2 weeks
Requirements Gathering	09/11/2023	09/18/2023	1 week
System Design	09/18/2023	10/02/2023	2 weeks
Implementation	10/02/2023	10/30/2023	4 weeks
Performance Testing	10/30/2023	11/13/2023	2 weeks

Methodology

1st Sprint	• Meet with product owner • Set -up development environment • Learn required technologies • Create github repo
2nd Sprint	• Discuss possible solutions to presented problem • Finish setting up development environment.
3rd Sprint	• Began development , focused on the backend logic of app • Created file bridge between Objective-C and Swift files
4th Sprint	• Continue working on development for both front-end and backend • Created testing branches
5th Sprint	• Finalized UI/front-end design after meeting with other teams
6th Sprint	• Code testing and debugging
7th Sprint	• Worked on final deliverable documentation (videos,poster,presentation)

Requirements: User Stories

User Story #1:

- As a developer, I want to conduct research that is vital for the development of this project and set-up my development environment.

User Story #2:

- As a developer , I want to make a button on the login screen for users/non-users to be able to click on and be redirected to another screen where customization of the login screen is achieved .

User Story #3:

- As a user, I want to be able to customize the background color of the login screen of my app.

User Story #4:

- As a user, I want to be able to customize the background of the login screen of my app with a picture from my personal device.

User Story #5:

- As a user, I want to be able to customize the logo of the login screen of my app.

User Story #6:

- As a user, I want to be able to customize the slogan of the login screen of my app.

User Story #7:

- As a developer , I want to make sure my code is clean and the app behaves as expected and all features work good together.

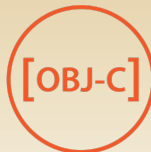
Software & Hardware

The software and hardware we used to create and design this project were:

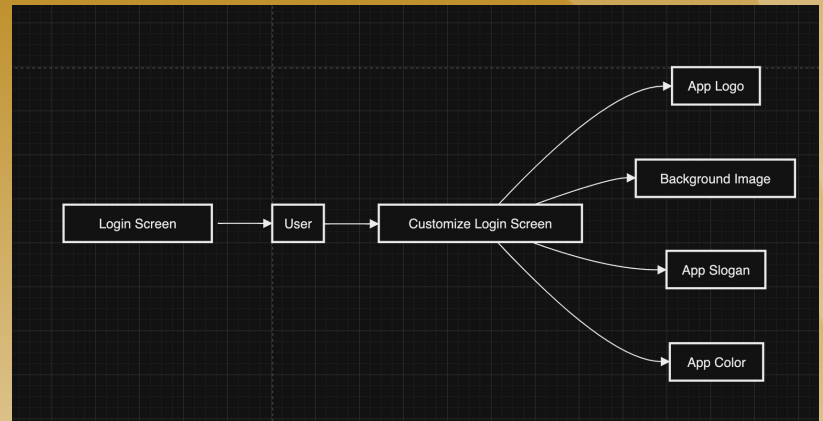
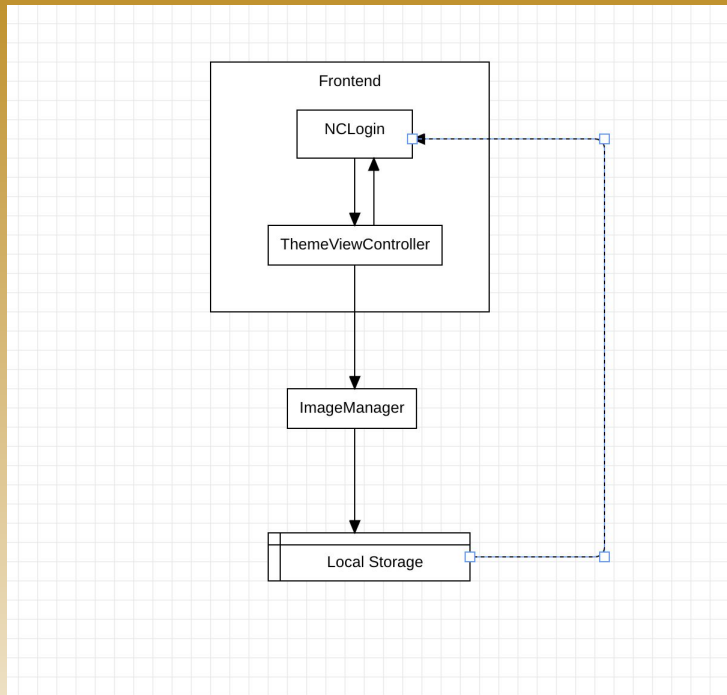
- ❖ Xcode to write our code for our application.
- ❖ Github to create a github repo, pull and push code and merge branches.
- ❖ Mac terminal to handle dependencies (carthage & ios-platform xs-framework)
- ❖ Languages used throughout the app are Swift & Objective-C



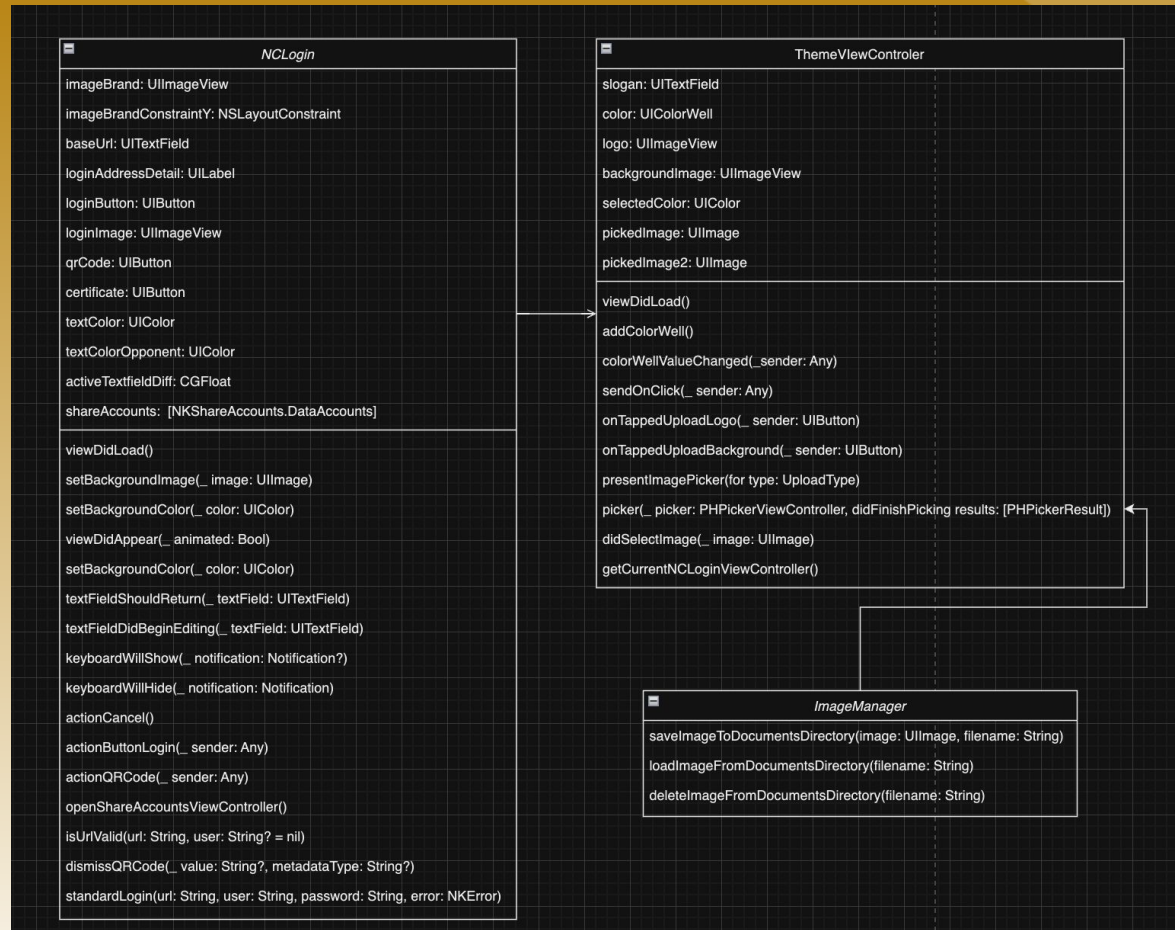
Swift



System Design: Architecture



UML/Class Diagram

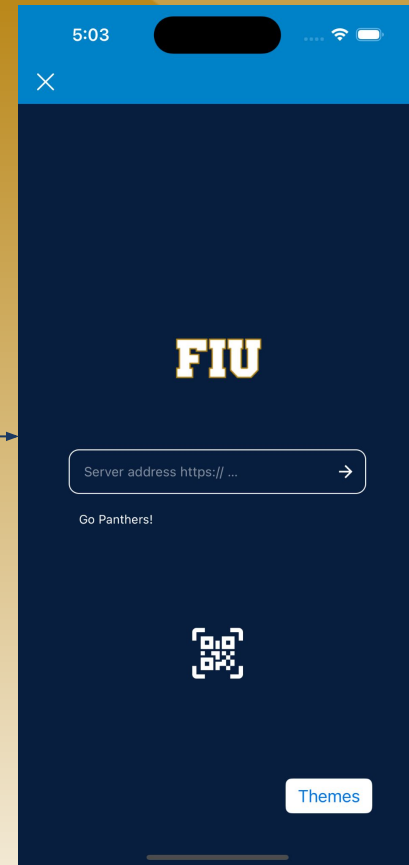
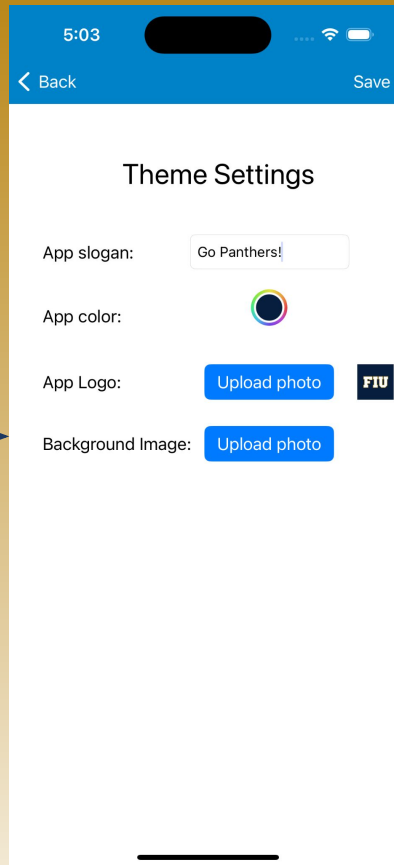
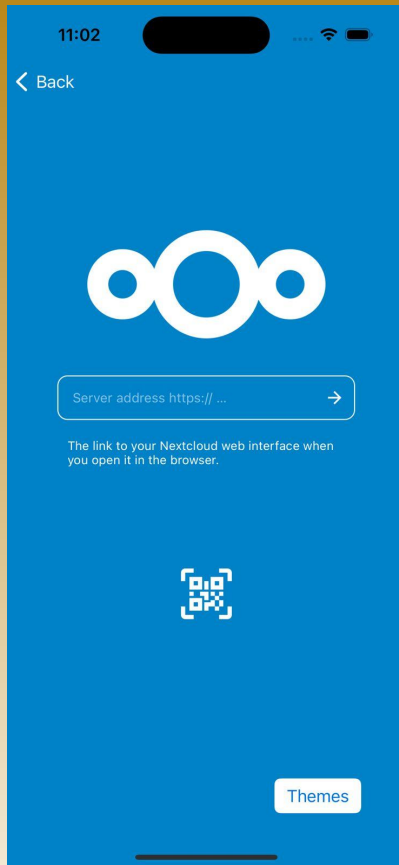


Patterns Used

Design Patterns Used:

- ❖ Observer Pattern: The LoginController observes changes in the ThemingController and it updates UI accordingly
- ❖ Decorator Pattern: Applied a theming decorator to UI components to change their appearance based on customization.
- ❖ Builder Pattern: Applied in constructing instances of Theming with various customization details.

App Screenshots



Summary

-The project represents a significant contribution towards enhancing user experience and personalization within the Nextcloud ecosystem, by providing options like changing the logo, slogan, color, name, and background image in the app.

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- Github repo : <https://github.com/jcuetocalnick/NextCloudIOS.git>

-Thank You!