

# Notifi Messenger

(CS-441 -Software Engineering)

Midterm Report

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# Project Description

Notifi Messenger is an iOS app which allows user to send pre-defined messages to a group of people/contacts.

## My Contribution

My journey with the team started with introductions and project proposals. Each of us were from different background and it is obvious that we came up with a different project proposal and had lengthy discussions on each of them including the tools and languages that needs to be used in developing the project. However, we have come to common conclusion and finalized the Notifi Messenger (iOS App) as our project. Once the project is finalized, then the discussions about roles and responsibilities started. We have decided to follow the agile process and decided to have 2-week sprints so that we could review our work periodically every 2 weeks. I proposed to create the SRS document and took ownership of the SRS Document. I also owned design and development of few UI Screens.

I have started learning the tools like Xamarin & Unity along with learning C# language. Xamarin and Unity tools were easy to install and use on Mac machines. It was quite tough to install and use them on my Windows laptop. Since we have decided to work on this app and these tools, I did not have a choice other than going through this hardship. I installed Unity and my hands on with the tool started with the hello world app. I have relied on “YouTube”, “Udemy”, “Unity”, “coursera” and “stackoverflow” to learn these new tools and languages. They helped me to get my hands dirty with the tools and code.

Tools Download Location:

<https://unity3d.com/get-unity/download>  
<https://dotnet.microsoft.com/apps/xamarin>

Learning Links:

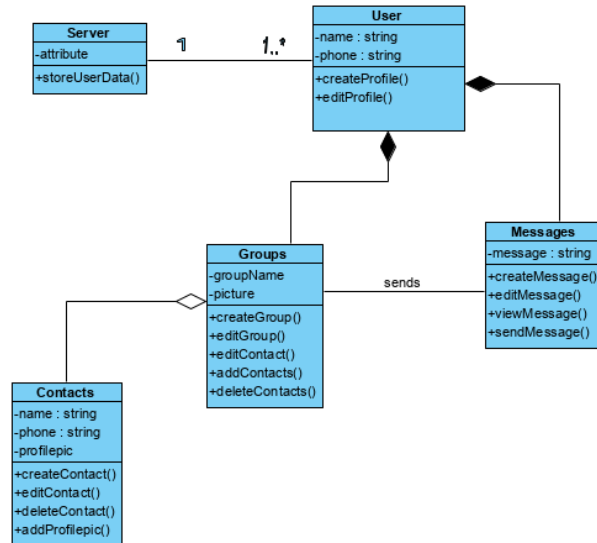
<https://www.udemy.com/course/appnimi-unity-hello-world/learn/lecture/10349016#overview>  
<https://stackoverflow.com/questions>  
<https://www.coursera.org/learn/introduction-programming-unity> (C# Basics)  
<https://docs.unity3d.com/ScriptReference/>

I have continued this learning until my initial SRS document was completed (10/28/2019) which has Scope, Requirements, Use Cases, Class Diagram and Sequence Diagram.

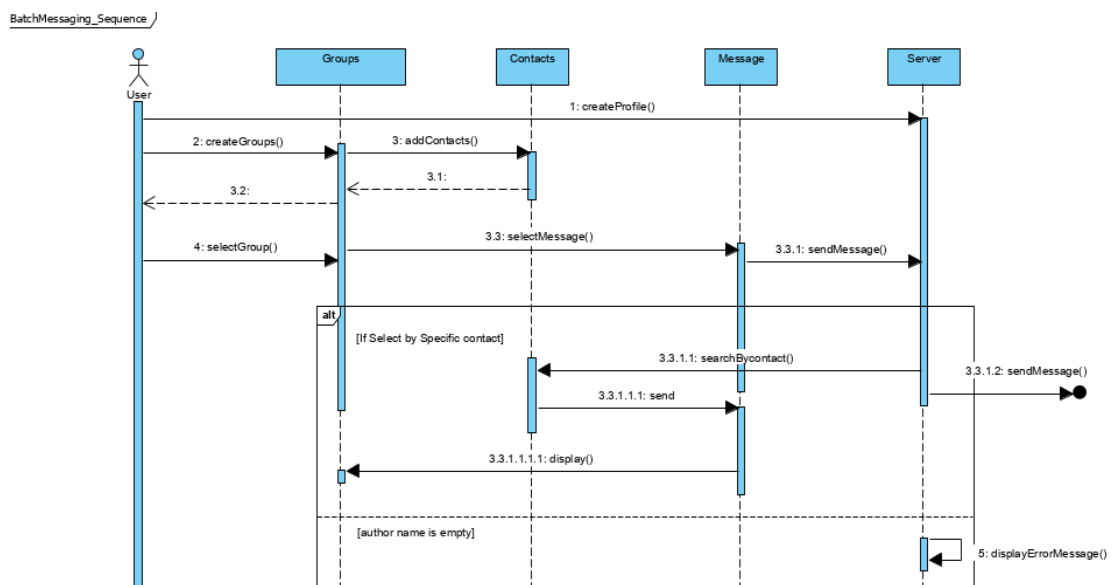
Link for SRS:

[https://docs.google.com/document/d/1Gpkszzw3veW2-tt\\_56Bg\\_BkHnECShh2yaRpKcEL\\_O3w/edit](https://docs.google.com/document/d/1Gpkszzw3veW2-tt_56Bg_BkHnECShh2yaRpKcEL_O3w/edit)

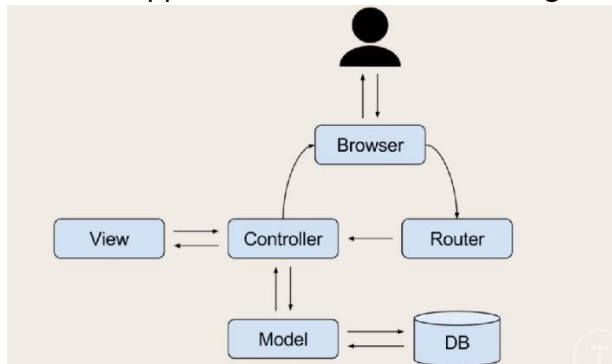
Below is the snapshot of initial Class Diagram:



Below is the snapshot of initial Sequence Diagram:



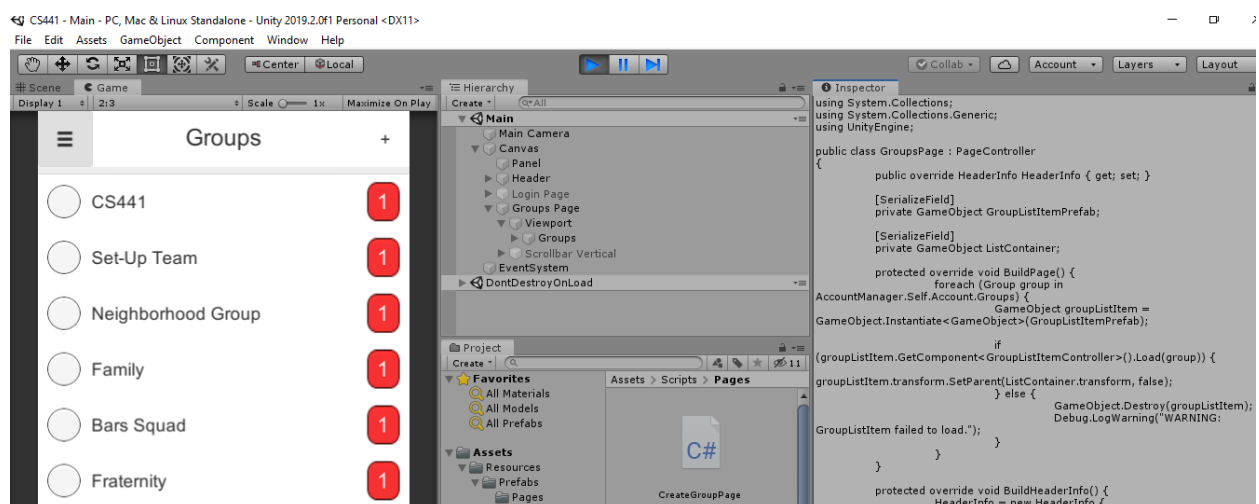
We have decided to use MVC (Model-View Controller) pattern as this pattern was the best suite to our app. The reason behind selecting this pattern is:

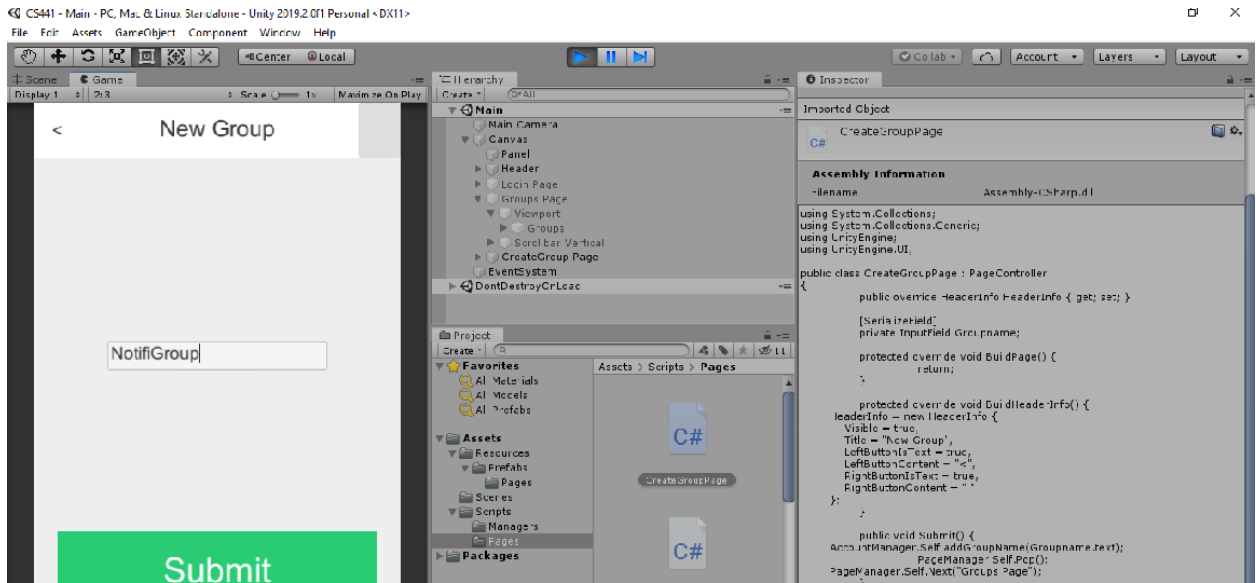
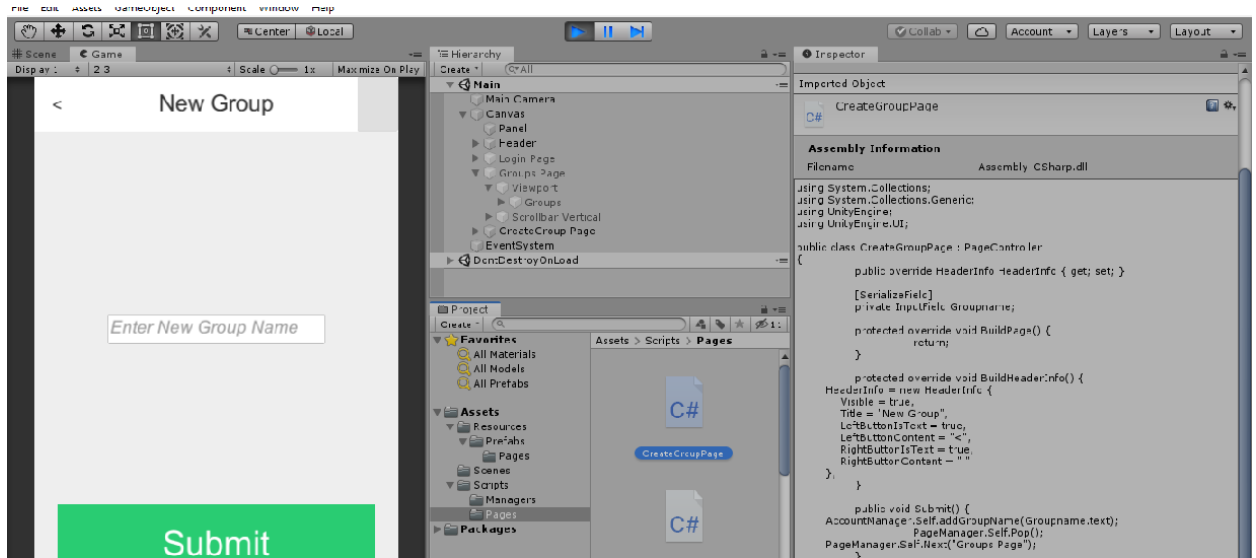


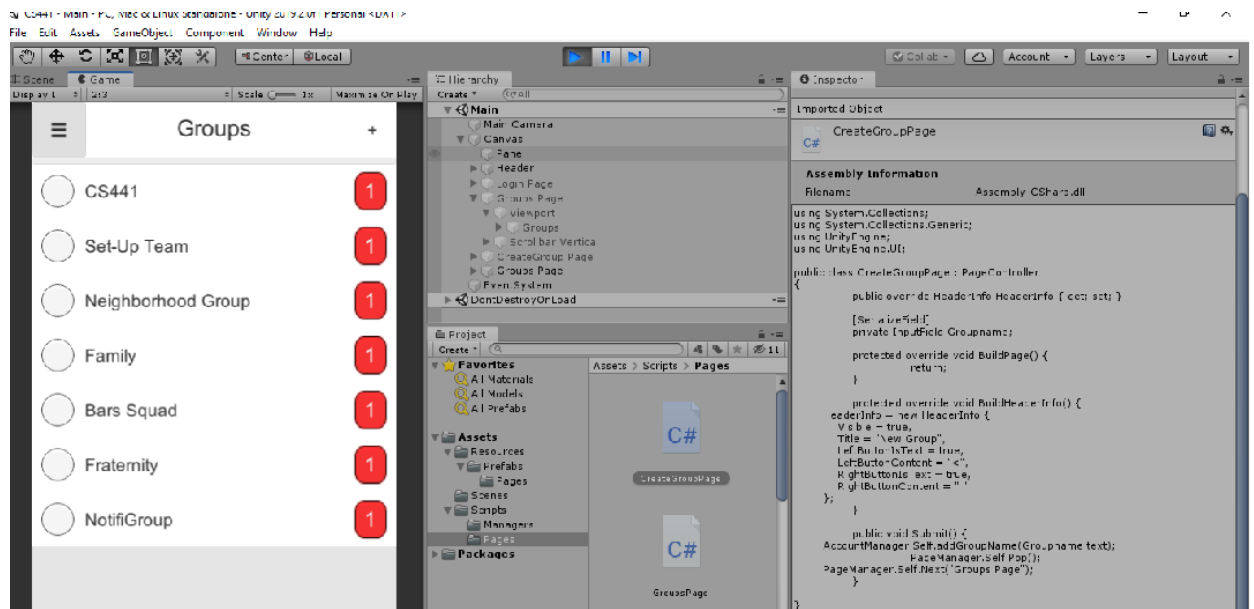
1. Controller receives input from View (UI)
2. Router processes requests like (GET,POST,PUT,DELETE)
3. Controller gets data from Model and passes data to View.
4. Model Interacts with database (SELECT, INSERT,UPDATE,DELETE) and communicates with controller as well.

The API we are using has been developed using Mongo DB and has router that processes above requests. Initially we had a plan of developing user profile as well, which we have limited due to lack of time.

This learning curve was quite challenging in this semester. After concluding the initial documentation, I have started my real hands on into project coding using Unity. I have designed New Group Creation screen of the app. Upon clicking on the “+” button on the “Groups” page, app launches new “Create Group” page (CreateGroupPage.cs) where user can enter the new group name and upon clicking on the “Submit” button, it creates new group and new group instantly gets displayed in the list of Groups on “Groups” page.







Above functionality can be found at <https://github.com/yesenofski/TheMandalorians/tree/Notifi-Messenger>

I have added Login functionality to the login page designed and developed by one of my teammates. Later I have added functionality to the buttons in the header pane so that user can navigate from one page/screen to another. Most of this functionality was coded in C# and some of it was achieved using Unity tool capabilities. I have also created a test case document along with the development work which can be found at

<https://github.com/yesenofski/TheMandalorians/blob/Notifi-Messenger/TestCases.xls>

TestCase #	TestCase Details	Expected Results	Actual Results	Passed / Failed / Not executed / Suspended
Login	1. Launch the app. 2. Provide Username and Password 3. Click on Login button	App should only login when user provides valid credentials		
Groups Page Screen after Login	1. Launch the app. 2. Provide Username and Password 3. Click on Login button	The Groups Page should be displayed with list of existing groups		
Messages View	1. Login to the app 2. Select a Particular Group (EX:CS441)and Press <OK>	App should display a list of predefined messages		
Members Page View	1. Login to the app 2. Select a Particular Group 3. Select a pre-defined message	App should display a list of members who belong to the user selected group		
Header of Groups Page	1. Login to the app			
"+" of Group Page(Adding New Group Functionality)	1. Login to the app 2. Select "+" on the right most corner of Header in Groups Page.	The New Group Page should be displayed, where user should be able to enter New Group name.		
Submit Button New Group Page	1. Login to the app 2. Select "+" on the right most corner of Header in Groups Page 3. Enter New Group Name and click on "Submit" Button.	The New Group should get created and be displayed along with the existing list of Groups.		
Header Page Functionality	1. Login to the app 2. Select a Particular Group 3. Click on Right Button or Left Button of each page	Right Button click should take the user to next screen whereas Left Button click should take the user to previous screen		

# My Learnings

As mentioned before this is huge learning curve for me personally. This learning curve is not just limited to the technical stuff. My major learning comes from adapting to Agile methodology since I have used water fall methodology all these years in my professional life and I believe this will be more useful to me than the technical stuff I have learnt as part of this project.

## **Learnings :**

1. Proper Sprint Planning meetings help define more appropriate goals.
2. Regular Standups help resolve the road blocks and avoid duplication of work.
3. Retrospective meetings help improve our planning.
4. Sprint Demos will motivate the team and also lets the team assess remaining work.

# Future Enhancements

With the limited time left on this project I see a lot of scope to enhance the capabilities of this app. We could add few more features like deleting the existing groups, adding/removing members from the existing groups. Another major enhancement would be to let the user send his own message to the group instead of predefined messages.