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What Do You Meme 2.01  
Documentation**

## **Deployment Documentation**

### **Environment Set up**

#### **---Front-End( React-Native)**

1. Download Xcode and the command line tools
2. Download Node.js
3. Install Watchman
4. If installation is successful, you can then run the app either on your phone or using an iOS/Android simulator.
5. To run the app on your phone, download Expo (<https://expo.io>) on your mobile phone (iOS or Android). Then, on your computer, run the command `npm start`
6. To run the app on a simulator:
  - a. Cd into the project directory
  - b. Run `npm run ios/android`
7. In your terminal, type in the following commands:
  - a. `npm install --save react-navigation`
  - b. `npm i react-native-router-flux`
  - c. `npm install react-native-image-picker --save`

#### **---Back-End(Java)**

1. To deploy this application in Eclipse, you must download the most recent Tomcat server
2. Download MySQL Driver and add it to the external jar files.
3. Download the GSON/ JSON API jar file and add them to the external jar files.
4. Run the SignIn and StartingGame servlets before starting the mobile app.

### **File Download**

1. Download the WhatDoYouMeme.zip file
2. The WDYM folder contains all the back-end files which you will deploy in eclipse
3. The main folder contains the front-end files which you will deploy in sublime/ xcode.

Previous Documentation  
**Testing Document and Testing Code**

Testing login and guest functionality:

- 1) Input: Login with correct username and password

Output: No pop-ups, player is redirected to main menu page and can access appropriate deck

- 2) Input: Login with incorrect username and password

Output: “Incorrect login” pop-up, prompts user to re-enter username and password without reloading the page or advancing to main menu

- 3) Input: Sign up with appropriate username and password

Output: User is redirected to main menu and able to log out and log in again with the same username and password

- 4) Input: Sign up with existing username

Output: “Username Taken” pop-up, prompts user to re-enter a new username and password

- 5) Input: Password and Confirm password fields at Sign Up don’t match

Output: “Incorrect Password” pop-up, prompts user to re-enter the password

- 6) Input: User wanting to join game enters incorrect game code

Output: “Game doesn’t exist” pop-up, prompts user to enter another code.

- 7) Input: User wanting to join game enters correct game code

Output: User directed to the game room

- 8) Input: User wants to make a new game

Output: Directed to a new game room, with a unique game code displayed on the top

- 9) Input: Game admin invites friends

Output: Pop-up with options: invite through message, email, etc..

10) Input: Admin tries to start a game with more than 3 people

Output: Game starts.

11) Input: Admin tries to start game with less than three people

Output: “Game needs at least 3 players” pop-up. Wait for more players to connect.

12) Input: User who logged in successfully

Output: “Add a meme” button shows up on main page

13) Input: logged in user who clicked on “add a meme” button

Output: allows user to access camera roll/ camera to make personalized meme

#### Testing game logic:

1) Input: Player picks a card

Output: Card is shown to everybody after timer ends

2) Input: Player does not pick a card in time

Output: One less card is shown to the judge

3) Input: No players pick a card in time

Output: “No cards played!” pops up and turn is skipped

4) Input: Player tries to pick a card after they have already picked one.

Output: Replace with current card or show message “You have already selected a card”

5) Input: Player tries to pick a card after timer has ended

Output: “Time-up” message pop-up.

6) Input: Judge quits during turn

Output: “Judge has quit!” pops up and turn is skipped

7) Input: Player quits during “Pick a card” phase

Output: Player is removed from game and redirected to the “Stats” pop-up then menu

8) Input: Player quits during first “Waiting for judge” (judge picking mem) phase

Output: Player is removed from game and redirected to the “Stats” pop-up then menu

9) Input: Player quits during the second “Waiting for judge” (judge picking winner) phase

Output: Player’s card is removed from Judge’s screen, removed from game

10) Input: Player quits during transition to judge/between turns

Output: Player is removed from game- if transitioning from judge then turn is skipped

11) Input: Judge’s “My Memes” deck is empty

Output: “No Memes” is written on deck and judge cannot click on “My Memes”- judge must select the game deck

12) Input: User plays a card in current round.

Output: User gets a new card in round 2.

13) Input: Player quits at the end of the game

Output: Correctly display their ranking and score

14) Input: Less than three players left in game

Output: Game ends.

#### Testing GUI and User Interface:

1) Input: Player has too many memes in deck to fit on screen when they are judge

Output: Screen should implement a scrollbar in this case to show all memes

2) Input: Player’s uploaded meme does not fit the shape of the “Meme card” dimensions

Output: Uploaded meme should be cropped to fit the dimensions

3) Input: Player does not pick a card for one turn

Output: Cards should not be drawn the next round

4) Input: Player gets “winner” one round before they become Judge

Output: Instead of taking player to the “next turn/waiting for judge screen” from the winner screen, player should be redirected straight to the “You Are the Judge” screen

5) Input: Player’s username does not fit in the space provided for printing username

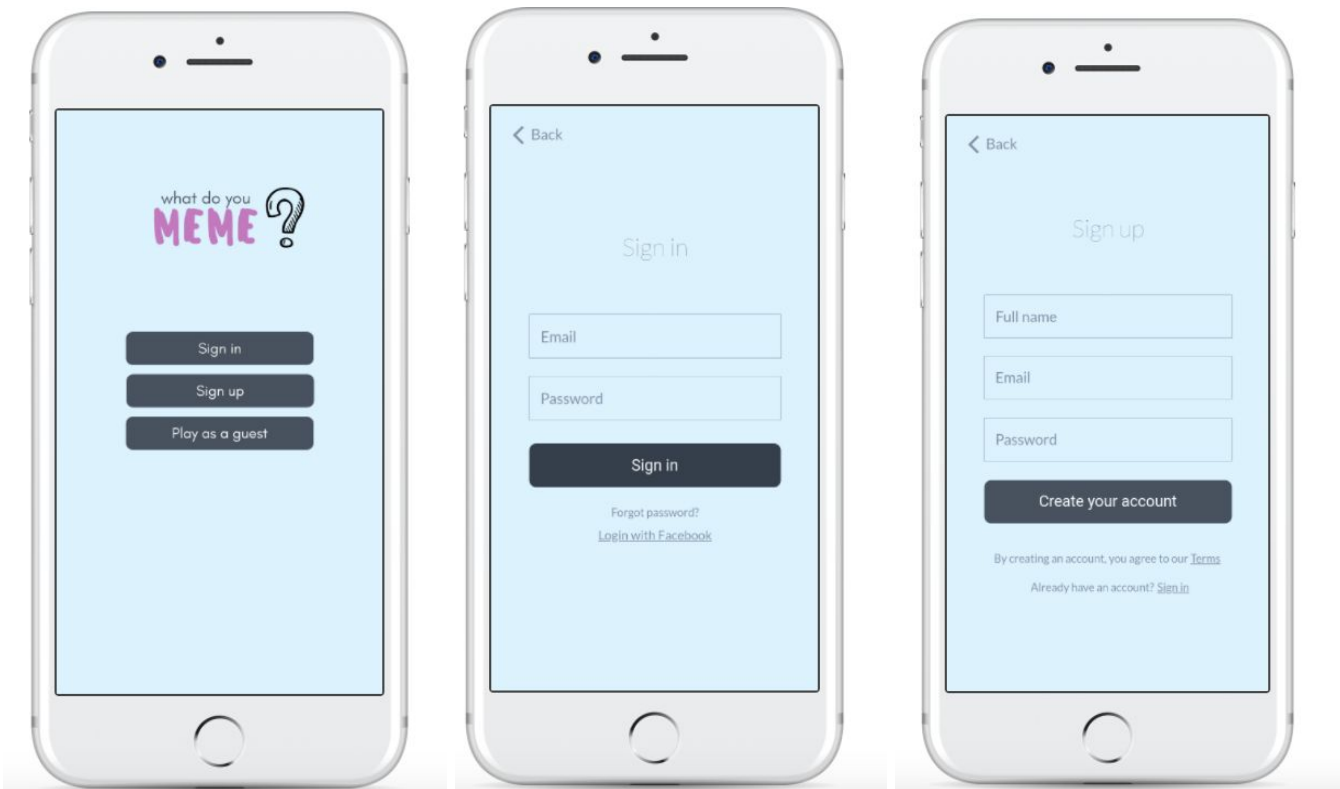
Output: Only display the letters that do fit - does not write “null” or leave blank

## PREVIOUS DOCUMENTATION

Changes marked with strikethroughs

### Detailed Design Document

#### GUI Mockup



#### **Home Screen**

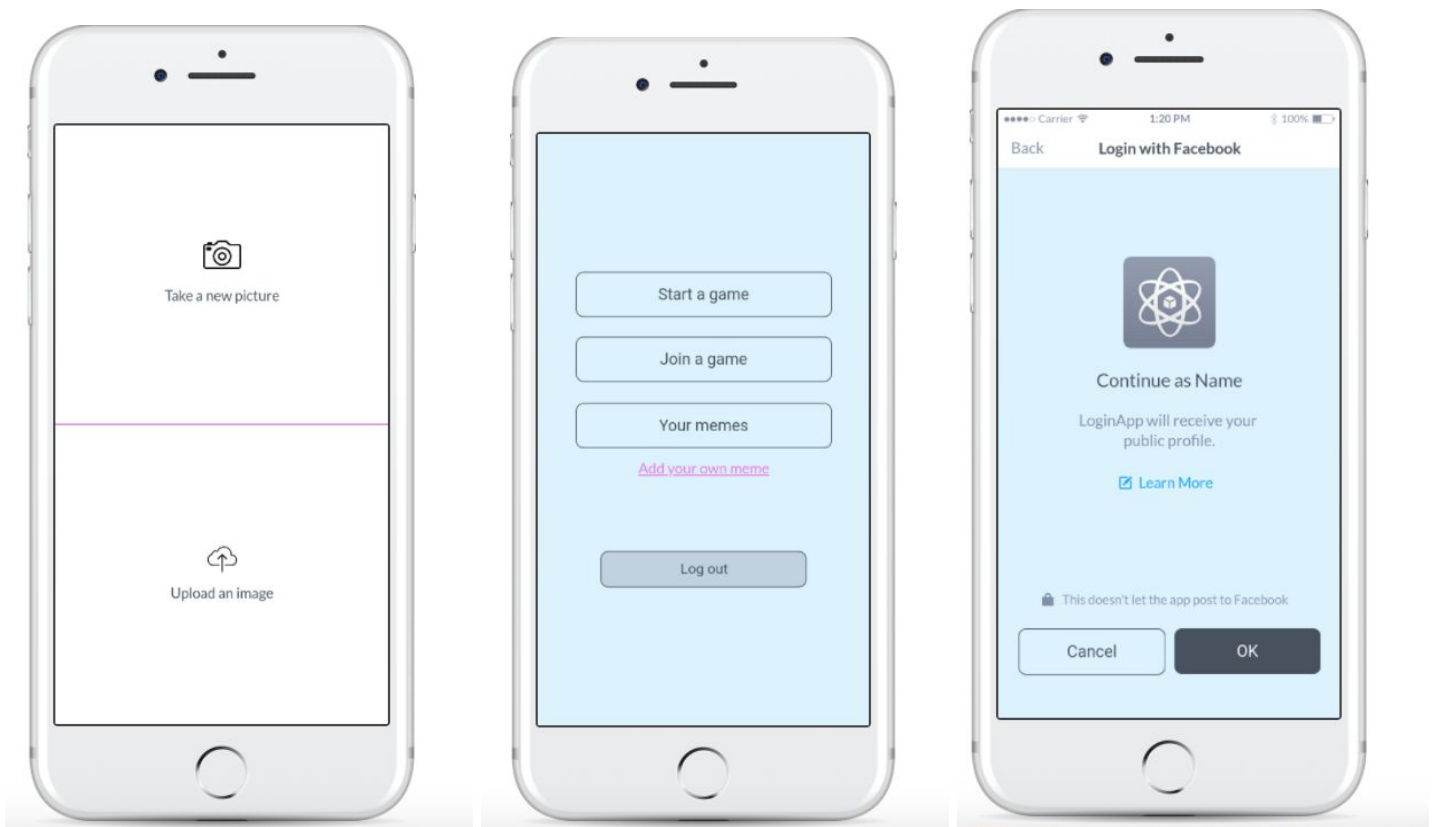
Home screen prompting users to log in, sign up, or play as guest. Sign in takes users to the sign in page, log in takes users to the login page, and Play As Guest takes users to the Join a Game page.

#### **Sign In**

The Sign In page has a form with two text fields for the user's email and password. If correct, then on submit the user will be directed to the main menu page.

#### **Sign Up**

The Sign Up page has a form with three text fields to prompt users for name, email and password. Pressing the sign in submit button takes users to the Set Profile Picture page



### **Set Profile Picture**

New users have the option of taking or uploading a photo to be used as their profile picture. After this, users will be redirected to the Main Menu. No longer including- we have one less member

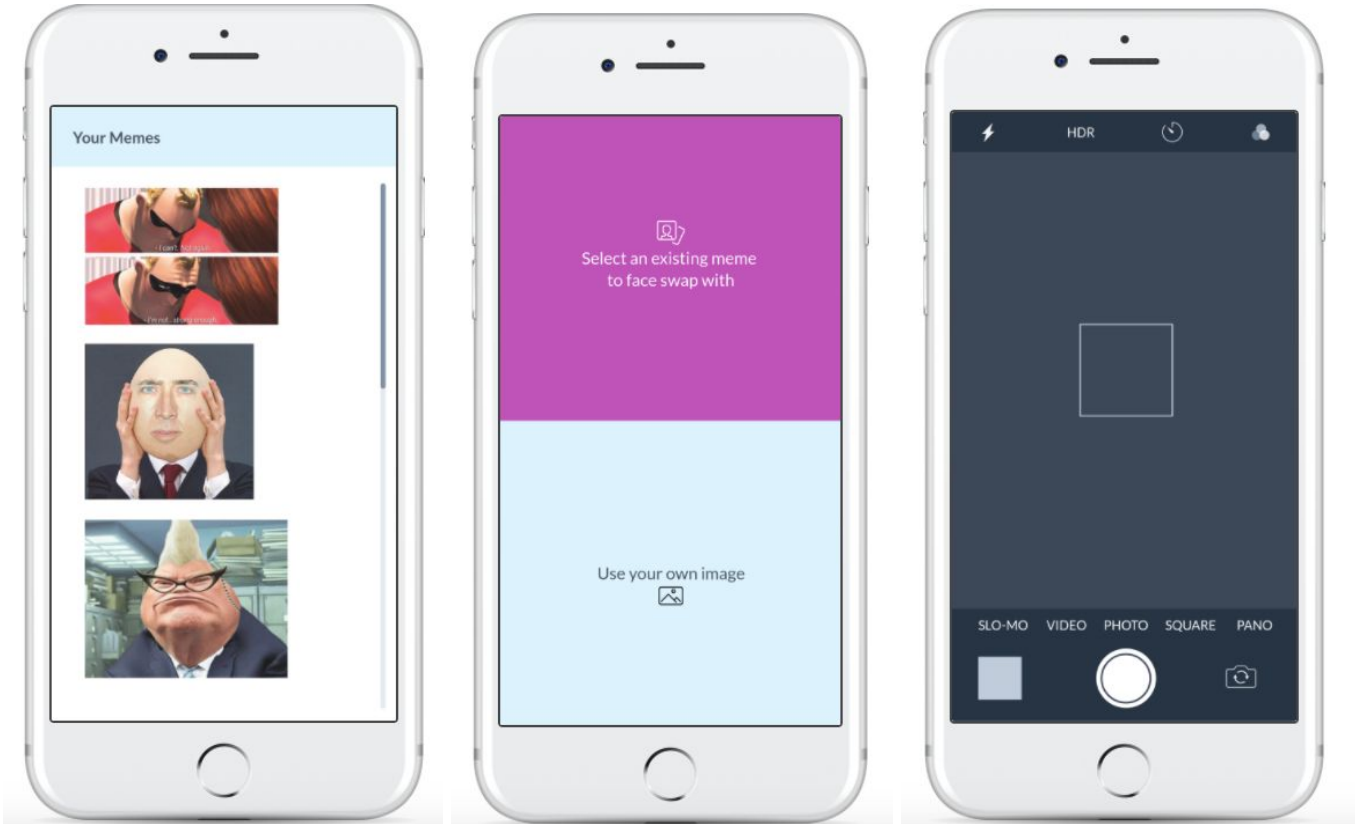
### **Main Menu**

The main menu page gives logged in users the options of Starting a Game, Joining a Game, view Your Memes, or Add a Meme.

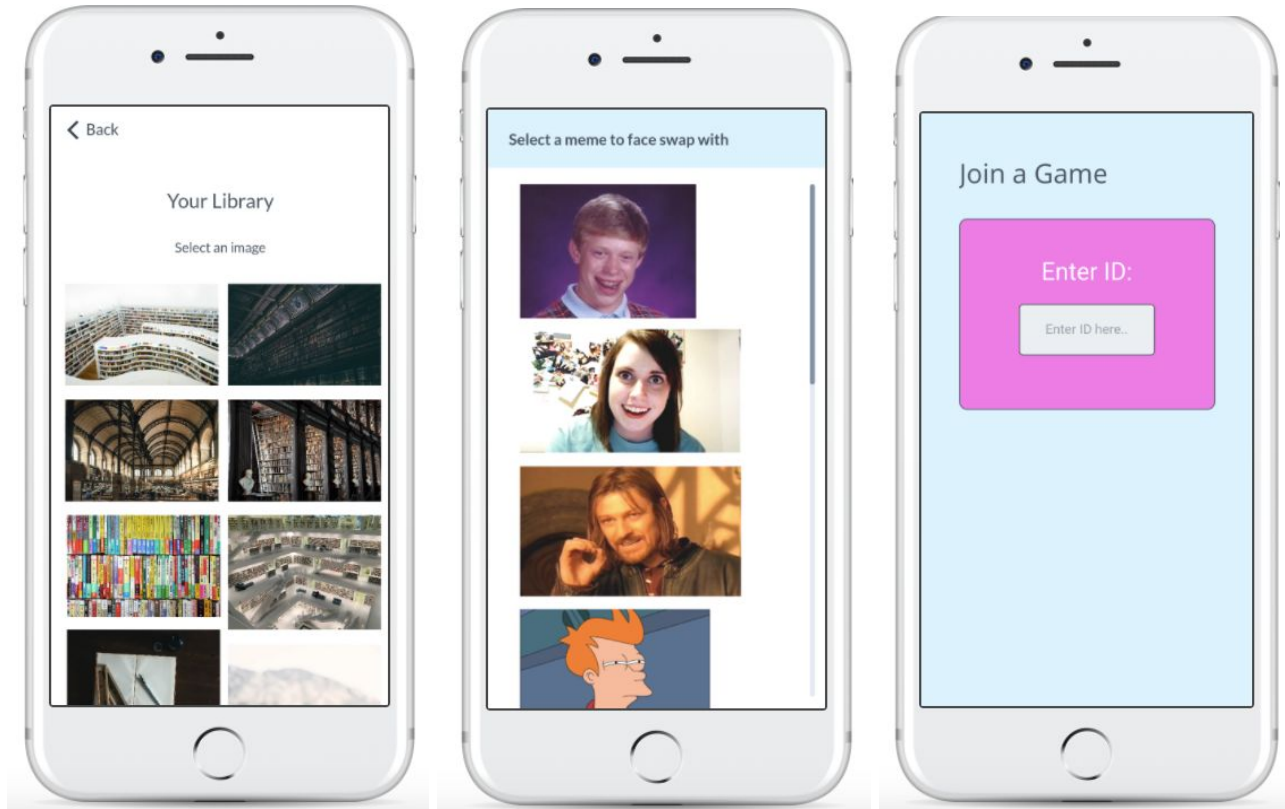
### **Log In with Facebook**

Lets users log in to their Facebook to extract their email, profile picture, and name. After log in, users will be redirected to the main menu.

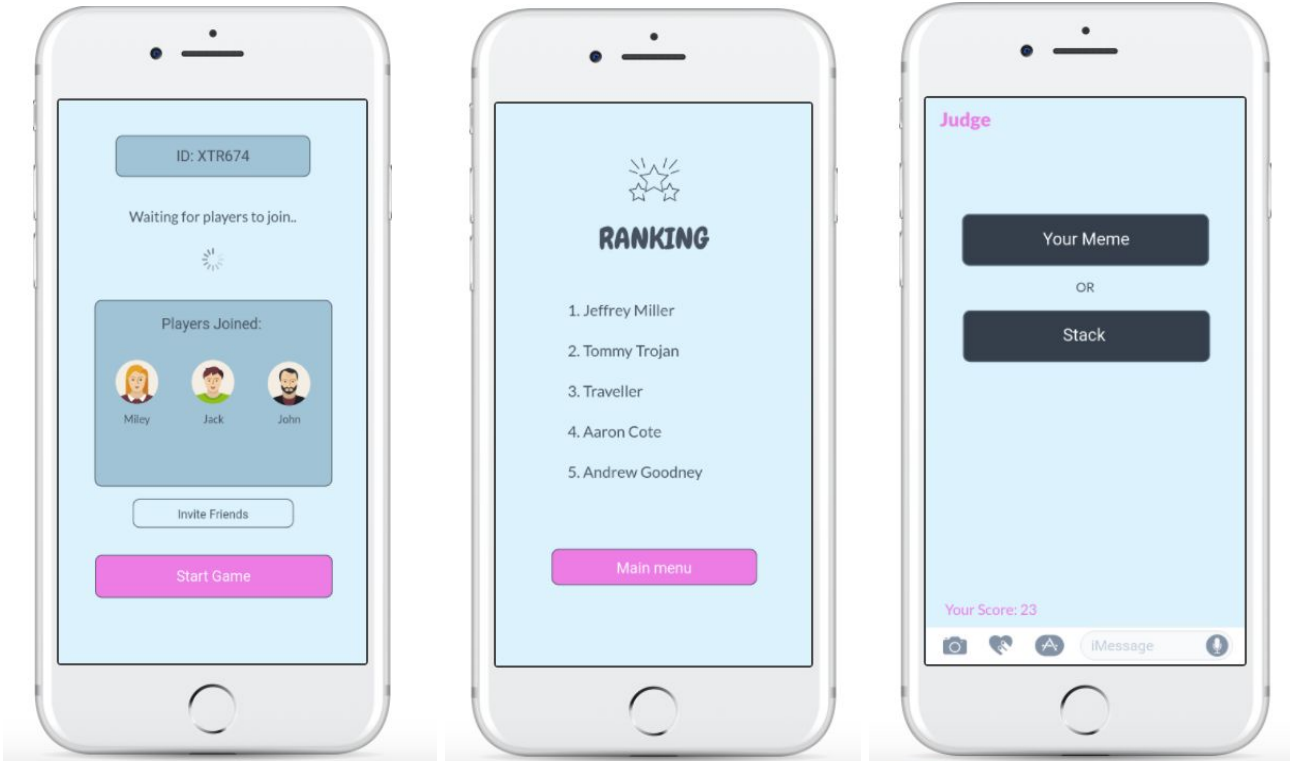




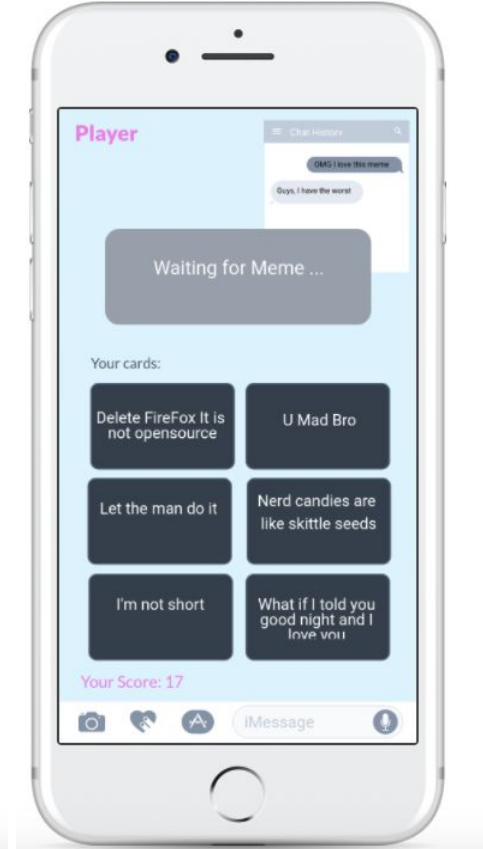
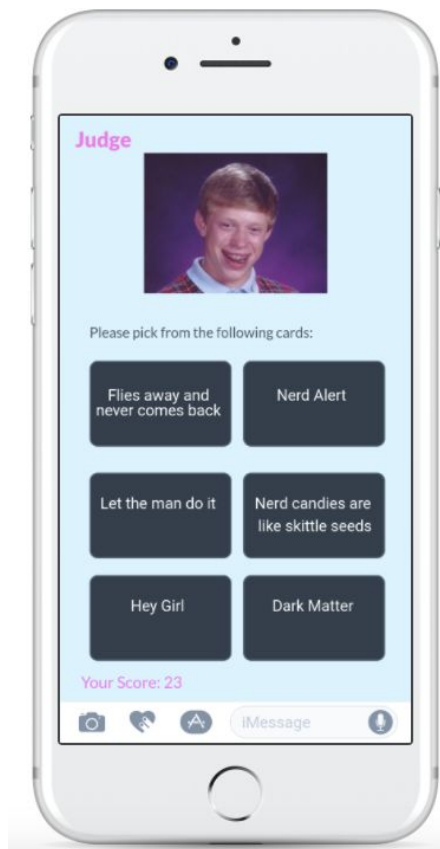
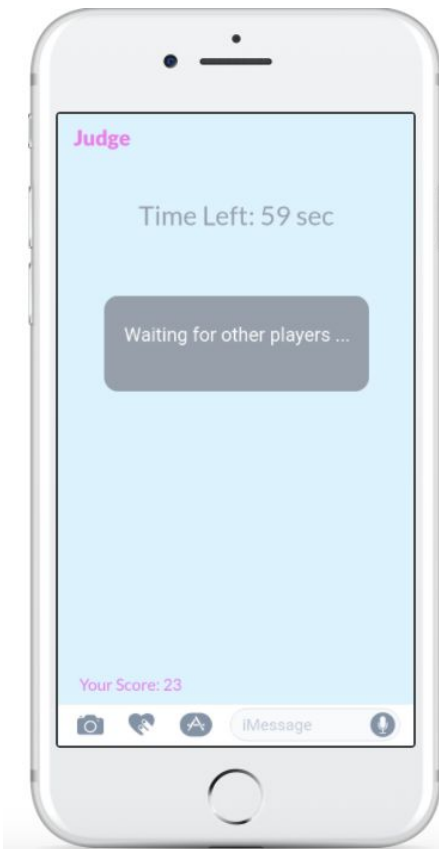
|  |   |   |
|--|---|---|
| <p><b>Your Memes</b></p> <p>Lets logged in users view all the memes that they have uploaded.</p> | <p><b>Add a Meme</b></p> <p>Lets users access their camera roll <del>or camera</del> in order to add a meme to their own meme deck.</p> | <p><b>Camera</b></p> <p>The camera of their phone is used to take a photo of their face to use the face swap API to swap their face with one of the existing memes.</p> |
|--|---|---|



|   |  |  |
|---|--|--|
| <p><b>Your Library</b></p> <p>The users camera roll ( if they allow access)</p> | <p><b>Select A Meme</b></p> <p><del>Before accessing the face swap API, users can select one of the memes that we add to the app to swap their face with.</del></p> <p>No longer including this functionality- one less member</p> | <p><b>Join A Game</b></p> <p>Prompts users for a game code. If they enter an active code, then users are redirected to the waiting page.</p> |
|---|--|--|



|  |   |  |
|--|---|--|
| <p><b>Wait Room</b></p> <p>After starting a game, all users are led to the wait room in order to wait for other players to join the game. In the wait room, users are allowed to invite other players and the judge will be presented a “start a game” to start the game whenever they’re ready.</p> | <p><b>Result</b></p> <p>This is the end page of each game. The app will display all the players with their accumulated score in descending order showing their ranking throughout the game.</p> | <p><b>Judge_1</b></p> <p>After starting the game, the judge is allowed to decide whether they want to play with their personalized meme card or the default meme stack we provide. Moreover, the personalized meme deck will only be allowed if the user is logged in.</p> |
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### **Judge\_2**

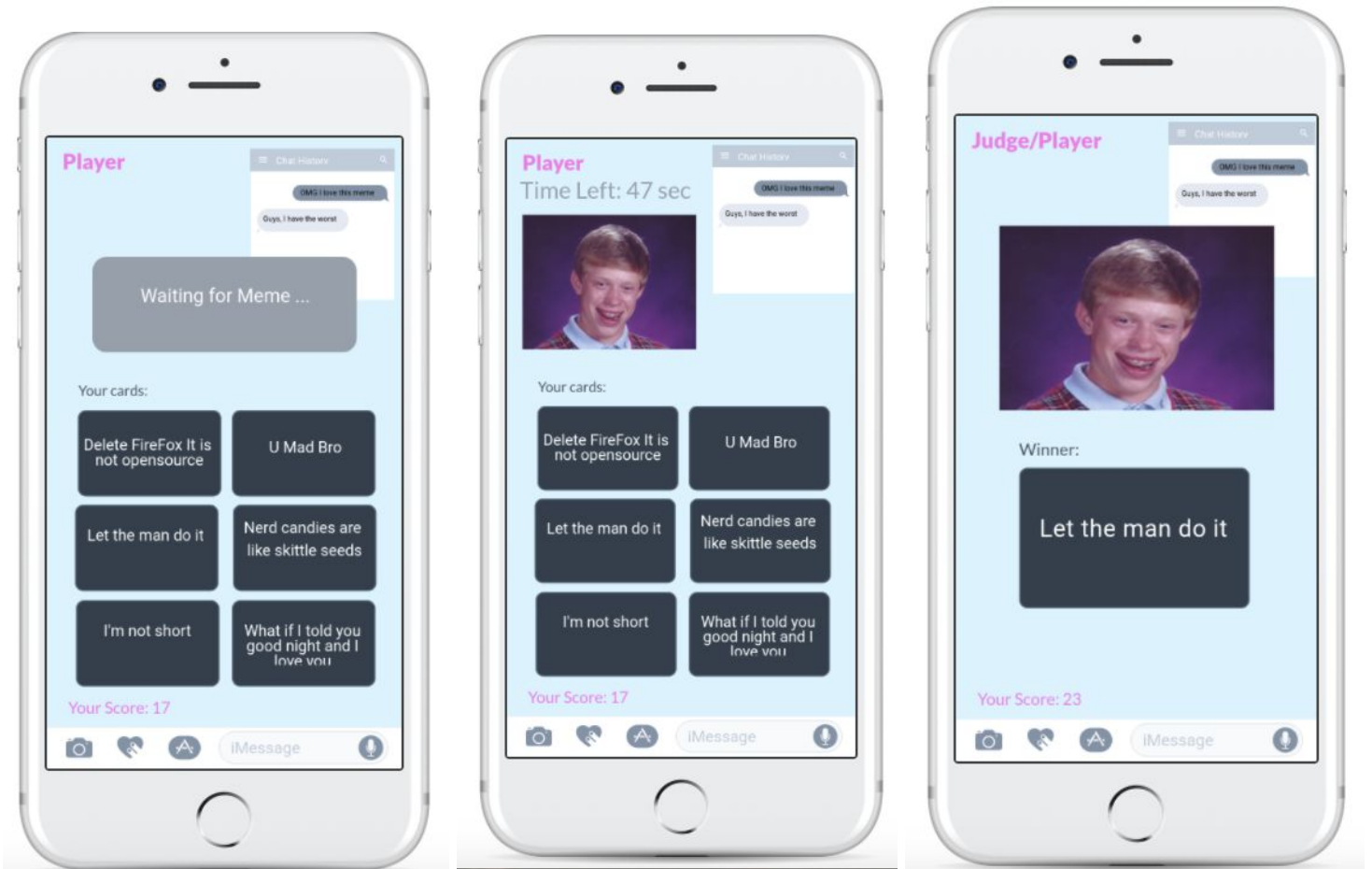
After the meme card has been chosen and displayed, the judge will have to wait for the other players to choose the most appropriate card from their hand. The app will present a timer to notify the judge.

### **Judge\_3**

After all players have chosen a matching description card, the judge will be able to see all the chosen cards (cards will be displayed in rows as shown in the mockup screen for the judge to pick).. He/she will then determine which card suits the meme the best.

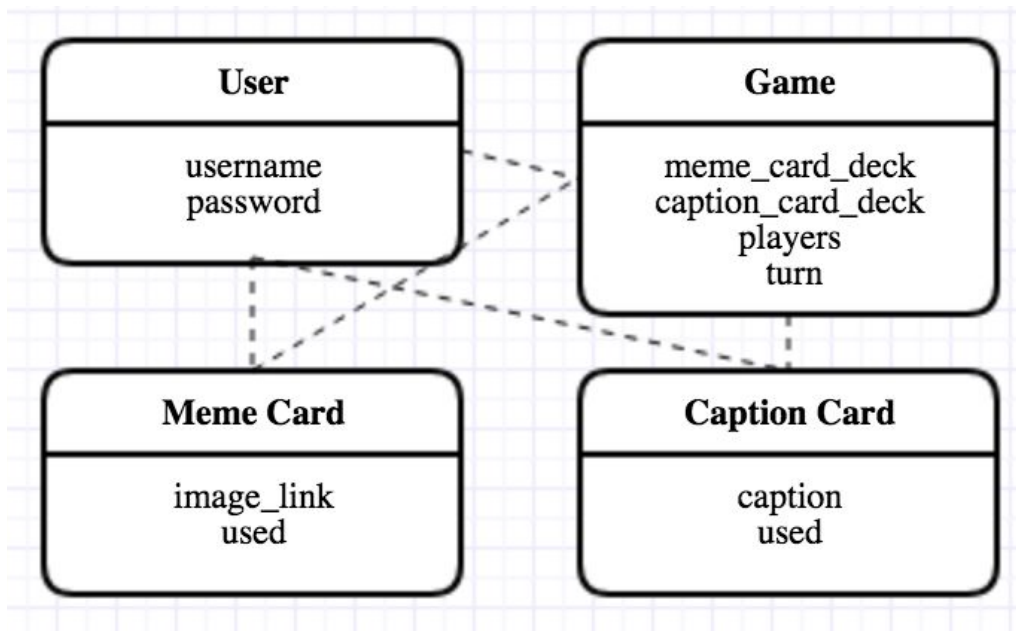
### **Player\_1**

After the game starts, the app will randomly distribute description cards to each player and they will wait for the meme card to be displayed. During the game, all players will be allow to type and chat through chat box on the top right and a message input bar at the bottom. Their score will also be indicated at the left bottom corner for each player to keep track of.



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| <p><b>Player_2</b></p> <p>After the meme has been displayed, the players will be prompt to pick a card from their hand.</p> | <p><b>Player_3</b></p> <p>While the judge examines all the chosen cards, the other players will also be able to see all the chosen cards from other players. The screen will show a timer on the top left to indicate how much time left till the judge has decided on the best description card.</p> | <p><b>Game End</b></p> <p>The last screen of the game will indicate which card the judge has chosen and therefore the owner of the card will be the winner of the round and their score will be updated.</p> |
|---|---|--|

## Database Schema



## Hardware and Software Requirements

### Hardware Requirements

Windows:

Windows 8 (Desktop)

Windows 7

RAM: 128 MB

Disk Space: Recommended 512 MB

Processor: Minimum Pentium 2 266MHz processor

Mac OS X:

Intel-based Mac running Mac OS X 10.8.3+, 10.9+

Linux:

Oracle Linux 5.5+

Oracle Linux 6.x (32-bit), 6.x (64-bit)

Oracle Linux 7.x (64-bit)

Red Hat Enterprise Linux 5.5+ (32-bit), 6.x (64-bit)

Ubuntu Linux 12.04 LTS, 13.x

Software Requirements:

Java 8

React Native

Swift

Eclipse IDE for Java EE Developers (Luna/Mars)

### Game States (Logic)

State 1: the judge is in **Judge\_1** page and Players in **Player\_1** page.

1 Judge quit, jump to state 4, all players switch to End of Game.

2 Player quit, continue move to state 2

3 Judge does not select a card within waiting time, he/she select the first card display automatically and move to state 2

4 Otherwise, move to state 2.

State 2: the judge is in **Judge\_2** page and Players in **Player\_2** page.

1 Judge quit, Everyone jump to state 4,.

2 Player quit, continue move to state 3

3 Player does not select a card within waiting time, he/she select the first card display automatically and move to state 3

4 Otherwise, move to state 3.

State 3: the judge is in **Judge\_3** page and Players in **Player\_3** page.t

1 Judge quit, Everyone jump to state 4,.

2 Player quit, continue move to state 4

3 Judge does not select a card within waiting time, he/she select the first card display automatically and move to state 4

4 Otherwise, move to state 4.

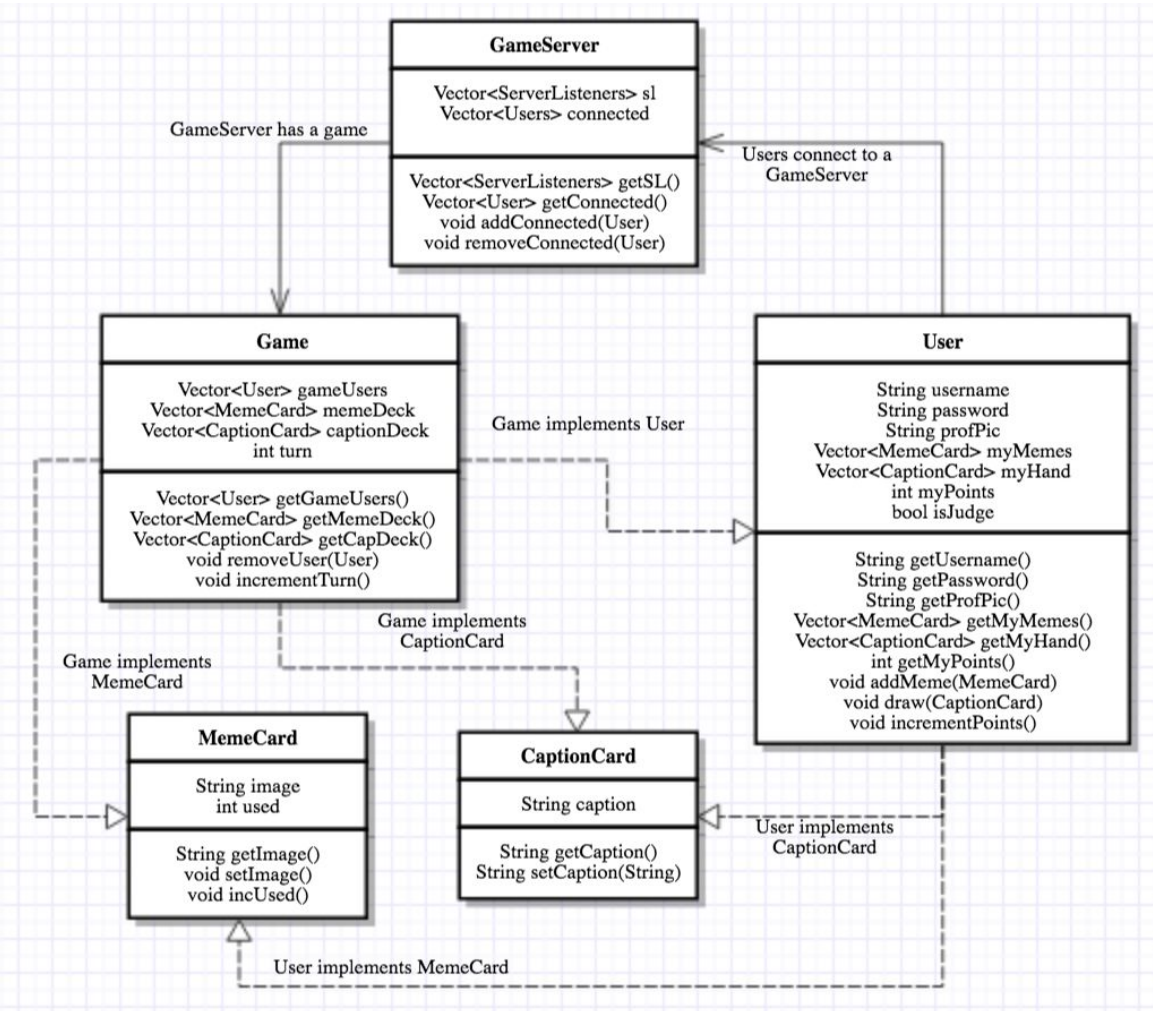
State 4: Judge and Players in **End of Game** page.

1 Judge select Continue playing, move to State 1.

2 Judge select End of Game. Everyone quit the game and jump to **Join A Game** page.



Class Diagram/ Inheritance Hierarchy



Install [Node](#)

Install React Native

~~70 hours implementation plus 20 hour learning mobile app design and test.~~

50 hours implementation plus 20 hour learning mobile app design and test.

- Update because we have one less team member

Pages:

### **Homepage (2 hr)**

- Log In or Sign Up

### **Log In Page (2 hr)**

- Account name and password

### **Sign Up Page (3 hr)**

- Profile Pic (1 hr)
- “Tutorial Page” (1 hr)
- Redirects to Main Page

### **Guest Functionality (1hr)**

- A guest is redirected to Join A Game

### **Main Page (2 hr)**

- Create a game
- Join a game
- Add a meme

### **Add a Meme (8 hours)**

- ~~• Take a normal picture (2 hour)~~
- OR upload from camera roll (2 hour)
- ~~• Using the face recognition API, we can swap our face with an existing meme, or just add it as is (4 hours)~~

### **Create a game Page (8 hours)**

- Pop up with a code (1 hr)
- Redirects to “Waiting for players...”
- ~~• Invite friends options (maybe) (3 hrs)~~
- ~~• (After create a game, we might be adding a customize game page) (4 hrs)~~

### **Join a game Page (4 hours)**

- Pop up asks users to enter a code (4 hours)
- Redirects to “Waiting for players...”

### **Waiting for Players (3 hours)**

- If >3 players, then “Start game” pops up
- Only game creator can select “Start Game”

### **Game Page (27 hours) (Split for steps)**

- State 1 (6 hours)
  - Judge sees the “Pick a meme” page
  - Players see “Waiting” page
- State 2 (4 hours)
  - Judge sees “Waiting” page with 60s timer
  - Players see “Pick a card” page
- State 3 (3 hours)
  - Judge sees everyone’s cards AND can pick
  - Players see everyone’s cards and can NOT pick
- State 4 (2 hours)
  - Everyone sees “winning card” page
- State 5 (4 hours)
  - Increment points for winner, switch judge, Restart state 1
  - Each player gets a new meme card
- A “leave game” button is available at State 1, State 2, State 4, State 5 (8 hours)
  - Players exit game, redirects to “Left Game”
  - Player is removed from list of active players

#### **Left Game (3 hours)**

- Displays every players score in order from highest to lowest
- Has an “Exit to main page” button that redirects to main pag
- If a judge leaves the game, then the players are notified and the turn progresses until there are less than three players left.

#### **~~Members can chat (optional) (8 hours)~~**

- ~~● At the bottom of all the gameplay pages, there will be a chat bar~~
- ~~● Users can type a message for everyone to see at any state of the game~~

## **High Level Requirements**

### **Face recognition API and User account**

When users first use the app. There is a SIGN UP option for user to create their account. Users need to set up basic information including their account number, user name and password. Also, users can set their profile photo as their own selfie. There is face recognition function to recognize users' face and change the rest background of the photos. Then users can use the photo as their profile photo. Once users create their account. They can log in and start to play the game.

### **Play with people around you and Guest Functionality (added!)**

The game will begin with a “login” or “Sign up” screen. A user can also choose to play as a guest. If a user logs in or signs up, the user will then see a menu screen, and can choose one of three options: Start a game, join a game, or take a photo. The guest will only see the “join a game” option. To start a game, the user will be able to select certain customization options for the round, and then receive a code to send to friends to play. If a user has received a code, they will select the join a game option, and enter their code to be added to a game. Once at least 3 but less than 20 people have joined a game, the game starter can choose for everyone to begin playing, at which point no one can join the game by using the code any more. If, at the menu, a user selects to “take a photo,” then they can take a selfie using the face recognition API mentioned above to be added to the “meme card” deck (explained below) for whenever they are the judge in a round.

### **Game Procedure, Judge, and Players**

There will be one judge each round, who will get 12 meme cards, and multiple players that will get 7 description cards. The judge chooses one meme card from his/her deck by clicking

on the card. The chosen meme will then be automatically sent to each player in the game. As soon as the chosen meme is displayed on each player's screen, they get 60 seconds to pick the most matching description card from their hand. After all the players have chosen a card, all the chosen description cards will be sent to the judge anonymously. He/she will then pick one that he/she thinks is the most appropriate or funny, which is the winner card of the round. Lastly, the winner will receive a message on their phone that notifies his/her victory. If a player quits a game, then they are redirected to the rankings of the game. If a judge quits a game, then there is a popup to notify players, and the turn switches to the next judge without changing the points. This continues until there are less than 3 players left.

### **Members can chat**

Members in the same game room can chat with each other. We will be using networking and multi threaded coding to add this feature, so players can socialize with each other even if they are not together. A small message bubble will pop up that will notify all the team members when someone sends a new message.

