1. Git checkout branch timer or tag trivia.
2. Run vagrant up --provision
3. Open two or three different browsers, so that sessions are all different (!important)
4. Navigate to localhost:8888
5. Create 2 or 3 different accounts using the sign-up feature (any name and password will do)
6. The user name should show up on the profile page, with all numbers being 0 and no game history. Lobby should have no game.
7. Under Friends tab. If both users are logged in, their names should show up under Friends-Online. The friends feature was not fully developed due to time constraint, so it is actually **Users-Online**. Now if one of the users logs out, you will see its name removed from the "friends-online" dropdown list in real-time. This users-online feature is using socket.io middleware for authentication.
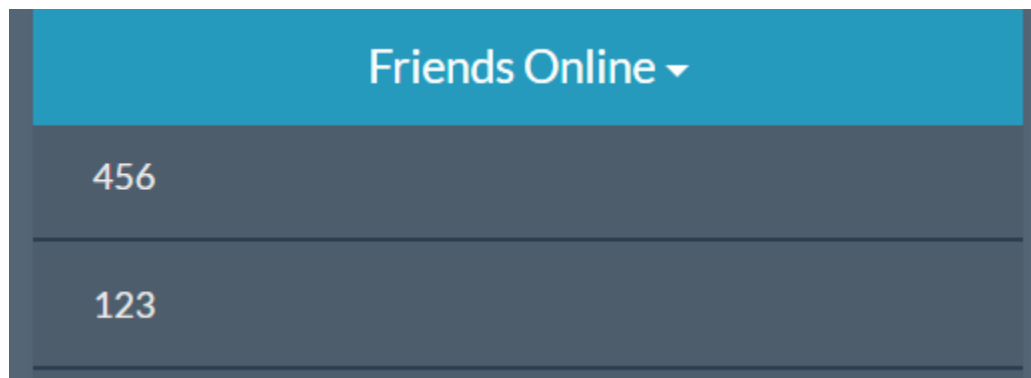

8. Type in some messages using the input box under tab Friends, you should see messages sent to all players in real time. The messages will scroll up and down if there are too many messages. This chat feature is developed by me and Lee. The UI under Friends tab was solely developed by me.
9. If you log out, you should be redirected to login page with users last_logged_in column updated. This can be checked using

```
vagrant ssh

mysql -uroot -phello -h127.0.0.1

use gameDB;

select * from Users;
```

10. Navigate to Lobby tab. Have one player hit the Create Game button. Put in some game name. The friends field can be ignored, as I mentioned it is not fully developed due to time constraint. Now if you click create button, the creator will be redirected to /games

with the game name and participants showing correctly.
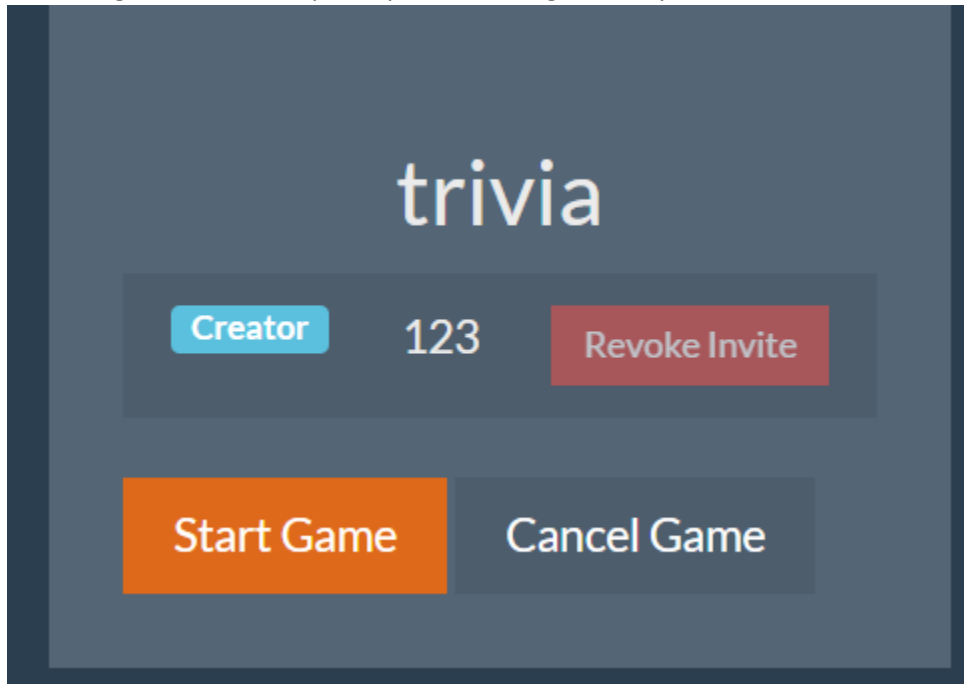
11. The other players can see this game in the lobby in real time with the correct number of players. If someone else joins, you can see the number of players updated in real time as well as in db. Please do try more players and see the number of players updated in realtime.


12. If other players click on the game, you will see the game info modal with correct
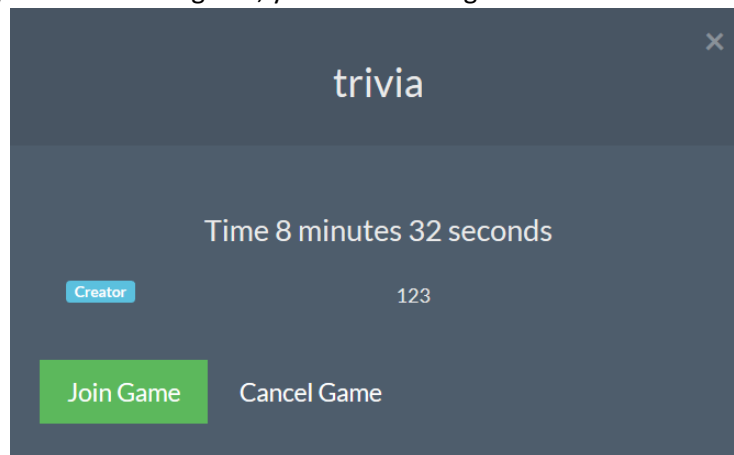
information.

13. Now if this other player (456 the non-creator) joins the game, all players who joined the game as well as the creator should see the game info updated in real time also in db. The neat thing about join game feature is that even the newly added game can be

joined in **REAL TIME!** This is done using angular ng-click in conjunction with socket.io.
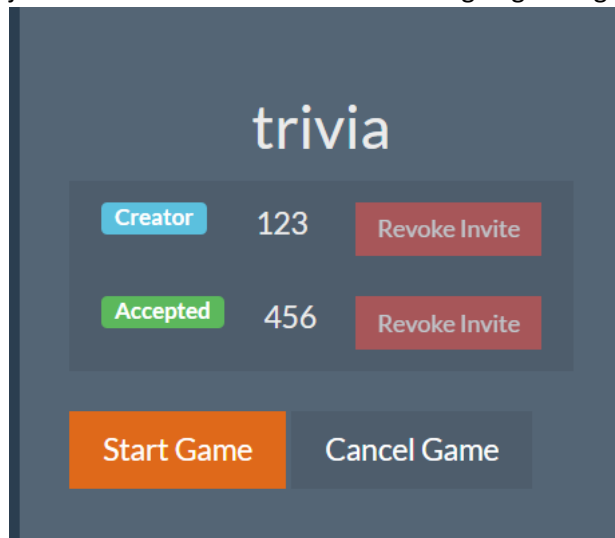


```
mysql> select * from User_Game;
+---------------------+---------------------+---------+---------+
| createdAt           | updatedAt           | game_id | user_id |
+---------------------+---------------------+---------+---------+
| 2017-04-17 01:38:45 | 2017-04-17 01:38:45 |       3 |       1 |
| 2017-04-17 01:43:26 | 2017-04-17 01:43:26 |       3 |       2 |
| 2017-04-17 01:47:20 | 2017-04-17 01:47:20 |       4 |       1 |
| 2017-04-17 01:47:17 | 2017-04-17 01:47:17 |       4 |       2 |
+---------------------+---------------------+---------+---------+
4 rows in set (0.00 sec)
```

14. Now if any player clicked on the cancel game button, all participants will be redirected to lobby, with the game removed in real time on UI and in db. You can check the db using the command shown above and select * from Games;. Only the creator can cancel game from db and UI. Other players canceling the game will remove them from the game redirect them to db. (This cancel game feature is done by Lee, voluntarily taken the suggestion from me). AFTER the creator cancels the game

```
mysql> mysql> select * from Games;
Empty set (0.00 sec)
```

15. Clicking on start game will start the game. In each round, every question is sent to all players in current game in real time. The correct answer will be shuffled up with the 3 wrong answers, so there is no way to predict the correct answer. At this point, you should be able to refresh the page and the question and answers will stay on UI in random order even though the current round question and answers are not kept in db. Every player has only one chance to score though I added some interactivity to see feedback. If you selected the correct answer the first time, all players in game should see the score of that player go up by one in real time. The yellow score in the middle is the current player's lifetime score, and the scores below are round game scores. Note: if you refresh the page, the current round score of the other players will be temporarily lost, but will continue to update the correct score in real time if the other players score again. Also, in case you do not see round scores of non-creators update, refresh the

page to see the round scores. I encountered this problem because the UI and db keep creator and non-creator information separately.
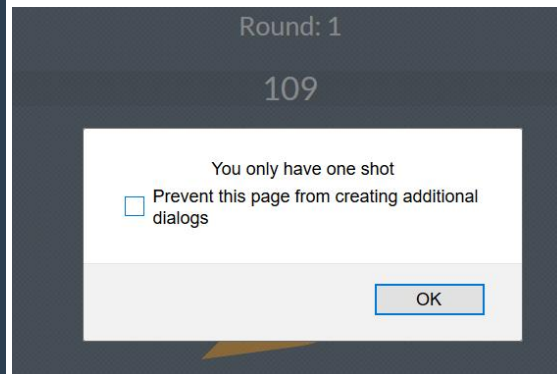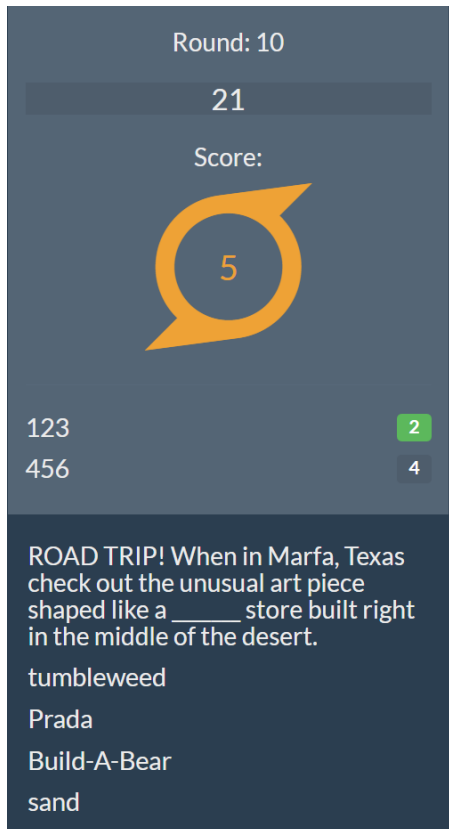
16. When the game ends, all players in the game will be redirected to lobby. The profile page should show number of games played and the lifetime score. The Games won was not fully developed because I did not have enough time.
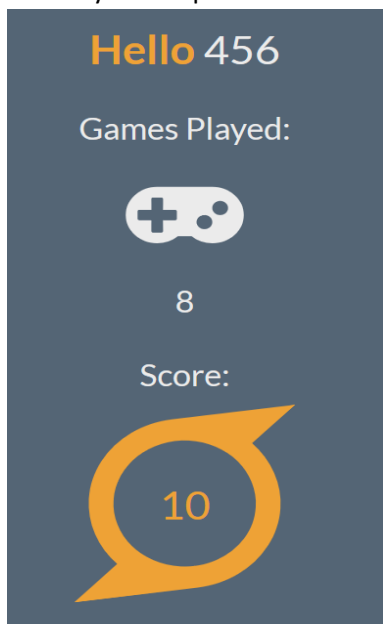

17. Try creating multiple games. Under Game History, If the game is created but not started, it will be in hold state in yellow. If the game is started, it will be in progress state in

green. If the game ended, it will show Game end time in blue. This is done using angular.

Game History

Game Started	Game Ended	Number of Players
2017-04-17T01:38:45.000Z	2017-04-17T01:46:52.000Z	2
2017-04-17T01:47:17.000Z	2017-04-17T01:50:42.000Z	1
2017-04-17T02:05:37.000Z	2017-04-17T02:09:07.000Z	2
2017-04-17T02:14:35.000Z	2017-04-17T02:18:02.000Z	2
2017-04-17T02:23:43.000Z	2017-04-17T02:27:19.000Z	1
2017-04-17T02:31:29.000Z	In Progress	1
2017-04-17T02:31:58.000Z	Waiting	1

18. If a game is in progress, other players clicking on the game cannot join the game and the join button is grayed out. This feature is done by Lee who took the suggestion from me.

trivia game   ×

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Creator   123

Join Game   Cancel Game
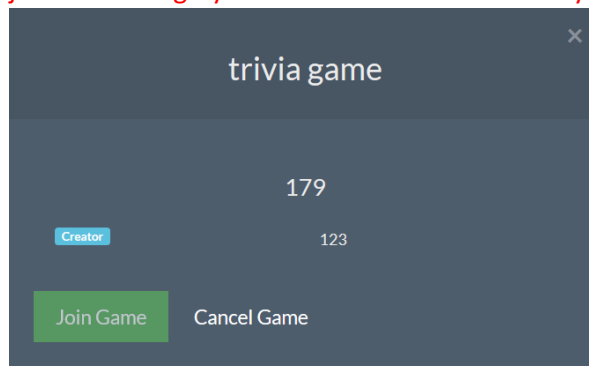
19. All above mentioned, except for 14 the cancel game feature, are solely done by me, so I did not have extra time to iron out the other problems. I basically ensured two things: anything you can do in real time, you can do on refresh. The data is either kept in db retrived through API or kept in local storage. The games in the lobby are games either in progress or on hold, whereas the games under Game History are games participated by the current player.