App 1 = blue App 2 = red Recap/comparison = purple

Visibility of system status

- It's hard to figure out how many humans and zombies there are right from the map screen—you'd either have to count the dots, or click "more." (2)
- The map is great because it allows you to see where people are in real time. But, what if a user wants to play HVZ but doesn't want to be staring at their phone all the time. The app should give them a notification of when they're within x feet of a zombie (if they're a human) or vice versa, so they know when to pay attention to their phone. Otherwise this app could really compromise their productivity. (3)
- It's also unclear from the home screen if you're a human or a zombie in each game you're participating in. Perhaps games could be color coded or marked with a symbol that denoted your "human" or "zombie" status (2)
- The "Game Over only 1 human remaining!" message displayed when the game is over doesn't seem like the best way to inform users—a clearer message might be something like "Game over you WON!" or "Game over—Bob won!". (1)
- Besides the small H & Z symbols, it's hard to distinguish humans and zombies on the map. It's also hard to distinguish where the safe-zone is (2).
- The popup dialogues for this app are very informative—they give good information about who bit you, and your status as a human or zombie. (awesome!!)
- Both maps have a similar map interface, so they share the same visibility problem—it is hard to immediately distinguish human symbols and zombie symbols. Perhaps this could be solved with better color coding and different shapes
- Messages about getting attacked and attacking were clear for both prototypes, but the winning message wasn't particularly clear—I would suggest telling players which human one.

Match between system and the real world

- "How to play" seems a lot like "help", but it's labeled "how to play" (1)
- I would eliminate the "or" buttons from the home screen. (1)
- It's not clear what the arrow in the top right of the home screen does (3)
- In this app, the "Help" menu is called "how to play", but you have to click "help" then "how to play" to get to it. It might be better to have a searchable glossary that appears when a person presses help. (2) However, I think this app's help is easier to find than the first app's help.
- Both apps have one page of help, that feels rather hidden (although it feels less hidden on the second app). I would suggest smaller (?) popups at the bottom of each page that the user could click when they need page specific help, or a searchable help menu.

User control and freedom

- Currently, there's no way to leave a game. (3) (But you can do this in app 2!!)
- There's also no way to remove a user from a game that's already started (1)
- There's no way to remove a user from a list of users you're building for a game (3)
- App 2 does have a way for an individual to leave a game.
 Awesome!
- There's not a way for a person to cancel an entire game, or rename a game once they've created it. (1)
- Users don't have a way to edit their own user account on either app. The user has a little more opportunity to leave a game in App 2. If both apps were to become real, this would be very important to implement.

Consistency and standards

- Back buttons are in variable locations (1)
- Forward buttons also vary in location and label. (2)
- On the interface to create a game, it's not clear what the difference between the two back buttons is. (1)
- On the interface to create a game, perhaps instead of having a check mark to save the name there should be an arrow that says "add players" (1)
- Players are marked as "humans" or "zombies" in the list of players of a game with "h" or "z". Human/zombie designation should be consistent—perhaps a consistent color or shape between this list and the map? (1)
- Back buttons are sometimes marked with an arrow and sometimes marked with an arrow and the word "back". I would increase consistency by standardizing. (1)
- Overall, there needs to be more consistency in the way buttons are labeled, across both apps. The second app especially could use more standardized labels of humans and zombies.

Error prevention

- We're currently not addressing the error condition when a user tries to create a game with too few players. One way to do this would be to disable the done button until enough players have been selected. (2)
- With the second app, there needs to be a way to ensure that a minimum number of players have been met before the person can finalize the game (2)
- Neither app really does much error checking.

Recognition rather than recall

- There are a few things on the map that might make things harder—the dots are hard to distinguish, especially at first, despite the use of color. Perhaps the group could use more distinct colors (like "green" for humans and "red" for zombies, playing off the well-known pattern with traffic lights), and/or also vary shape. (2)
- Instructions for being a "human" or a "zombie" should be more retrievable when notifications come up that you're now a "human" or a

- zombie. Right now, you have to go back to the map then click "How To Play" to access help. (2)
- When you're building a list of players for a new game, the only way you
 can see who has been added is by scrolling through and looking for
 "Added" instead of "Add" by a person's name. Perhaps also display a
 list of people who have been added, and remove them from the list of
 people who could possibly be added. (2)

Aesthetic and minimalist design

- There is a "rename" option off of "Create Game." I think it would be simpler to have the user give a game name to start, the make the name field editable in the "Create Game" view. (1)
- When you go to the detailed view of a game, you see two buttons that
 let you see lists of players, one for humans and one for zombies. It
 would make more sense and would simplify the design if you
 automatically saw a list of players (that also showed their
 human/zombie status) when you clicked the "more" link. (1)
- Users have to be added individually by clicking the "Add Player" button. It would make more sense to show a list of players, then let you select as many from the list as you wanted. (2)

Help users recognize, diagnose, and recover from errors

- Error messages have not yet been implemented for this first prototype.
 Here are some examples of errors that might need to be handled: what
 if, for example, a user tries to enter a game that's been going on for too
 long? Should they still be allowed to join? What error message should
 they see? (2)
- What if enough people leave a game that it's no longer a valid game anymore? (2)
- In the interface where you add users to the game, there's no way to remove a user if you made a mistake. (2)
- There's also no way to remove a user if you don't want them playing the game anymore. (1)
- There's no way to go back from "create account" if the user accidentally pushes it from the login page (3)

 Many of the problems here seem to suggest that both apps should support some sort of "game administrator" function—whoever creates the game should be able to terminate the game if they wish or remove players.

Help and documentation

- Help is just a block of text. It may be more helpful to have a list of discrete help topics for the user to filter by instead. (2)
- Again, help is just a block of text called "how to play", and it's relatively hard to access. I would consider making it accessible from every interface. (2)
- Both these apps need a streamlined help system—perhaps a searchable index of frequent help topics or (maybe in addition) a little question mark at the bottom corner of the screen that the user can select to view more help for a specific page.

Other

- In app 2, there's not a way to search for an existing game. You can join a game you're invited to, but you can't search for games in your area. You can do this search in App 1—a feature to include! (2)
- It's unclear what the instructions for the "attack" button are—how close do you need to get to the person you're attacking? Can humans attack zombies? Can zombies attack humans? (1) App 1 simply lacks this functionality.

The core functionality of this app is a map of humans and zombies. Both the apps' maps look very similar, except one has more functionality options at the top (attack, settings, or resign) and there are slight differences in the way humans and zombies are labeled. I would suggest using this second map, but with one change: instead of marking humans with the letter h and zombies with the letter z, I would use color/shape system: humans are one color/shape set, zombies are another set. I also think the second app's Facebook connect system is a great idea. This is a well recognized system and would incorporate more users. I also like how in App #2, you can challenge other people to your game. I would adopt App #1's "search for a game" functionality. Next, when

viewing the individuals playing the game, I would list humans and zombies together, just use color or location to denote which group a person is on. Finally, I would improve the help menu (making it more searchable), and standardize the forward/back buttons.