

## CSE 134B - Homework 1

January 18, 2017

In this document we will outline a web application for keeping track of users' favorite board games, which will be implemented for the class CSE 134B taught by Professor Thomas Powell.

### Executive Overview

There are thousands and thousands of board games in the world -- more than we can even count. How can the average board game-player keep track of them all? Our web application "BoardGameDex" will help to solve this problem.

#### Problems:

1. **You want to pick out a game for a party or for a group of friends.** Out of all the games there are, it can be hard to remember which ones you've played before, which ones you like, which ones can be played with how many people, and so on.
2. **You want to try a new game you've never played before.** Since there's thousands of games that exist in the world, it could take hours of random Googling to find a game that will be well suited for you.
3. **You heard of a game you wanted to try.** But what was it called? "Panopoly"? "Candy...opolis"? If only you'd noted it down somewhere...
4. **You're have a group of friends over and want to pick out a board game to play.** But it's been a while since you last did this, and you can't remember which ones you liked, or which ones you have enough people to play.
5. **You really didn't like that game, and never want to play it again.** But you forgot how bad it was the last time, and now you're an hour into it again and, well, it's too late to turn back.
6. **You want to get some people together to try that new game you bought.** That means flipping between email, Facebook, WhatsApp, that new messenger that only that one friend uses -- *and* you have to re-explain the game each time. If only there were a simpler, more organized way to schedule these.

#### Features:

- A database of games that users can look through, tracking the following information:
  - Game name and pictures
  - Player counts (eg. "2-4 players")
  - Estimated game length
  - Difficulty level (good games for *beginner*, *intermediate*, or *advanced* players)
  - Genres (building games, card games, war games, party games, social deduction...)

- Short summaries and game rules
  - Official site, Amazon / shopping links to purchase the game
- Users can tag games with other, similar games / recommendations: “if you like this game, you might also like...”
- Users can browse through a full list of games in the database, filtering by criteria like player counts, game lengths, and genres, to find what they’re looking for at any moment.
- Since there are so many games out there -- some of which only a few people may have heard of -- users can add their own games that are missing from the database, and edit other entries to add missing or new information.
- Additionally, each user can keep track of, for each game:
  - Whether they’ve played it before
  - Whether they plan on playing it
  - Whether they own the game
  - Whether they plan to buy the game
  - A personal rating for the game (1-10)
- Users can schedule a “play session” for a game and invite their friends via email. They will receive notifications when each person accepts or declines the invitation.

#### Solutions:

1. **You want to pick out a game for a party or for a group of friends.** BoardGameDex’s database of organized, structured game information will help users quickly browse through and find games for any particular occasion, narrowing down by, for example, whether the game supports enough players for your group’s size.
2. **You want to try a new game you’ve never played before.** Hop onto BoardGameDex’s comprehensive list and filter by player counts, game lengths, genres, and so on. Or pull up the pages for some games you’ve liked in the past and see what other users have tagged as similar / recommended games.
3. **You heard of a game you wanted to try.** Mark that game as “plan to play” in your BoardGameDex account and you won’t have to worry about forgetting.
4. **You’re have a group of friends over and want to pick out a board game to play.** Scroll through your personal “collection” page on BoardGameDex. Sort by your personal rating and filter by player counts and estimated play time based on the current situation.
5. **You really didn’t like that game, and never want to play it again.** Assign it a personal rating of “1/10” and you’ll see that the next time you pull up the game page.
6. **You want to get some people together to try that new game you bought.** Use BoardGameDex’s invitations feature to schedule a meetup with friends.

## **User Personas**

-Demographic profile: Any age, most likely age 18-30

-Geographic: cities that have easier access to board games, suburban areas that have fewer activities to do

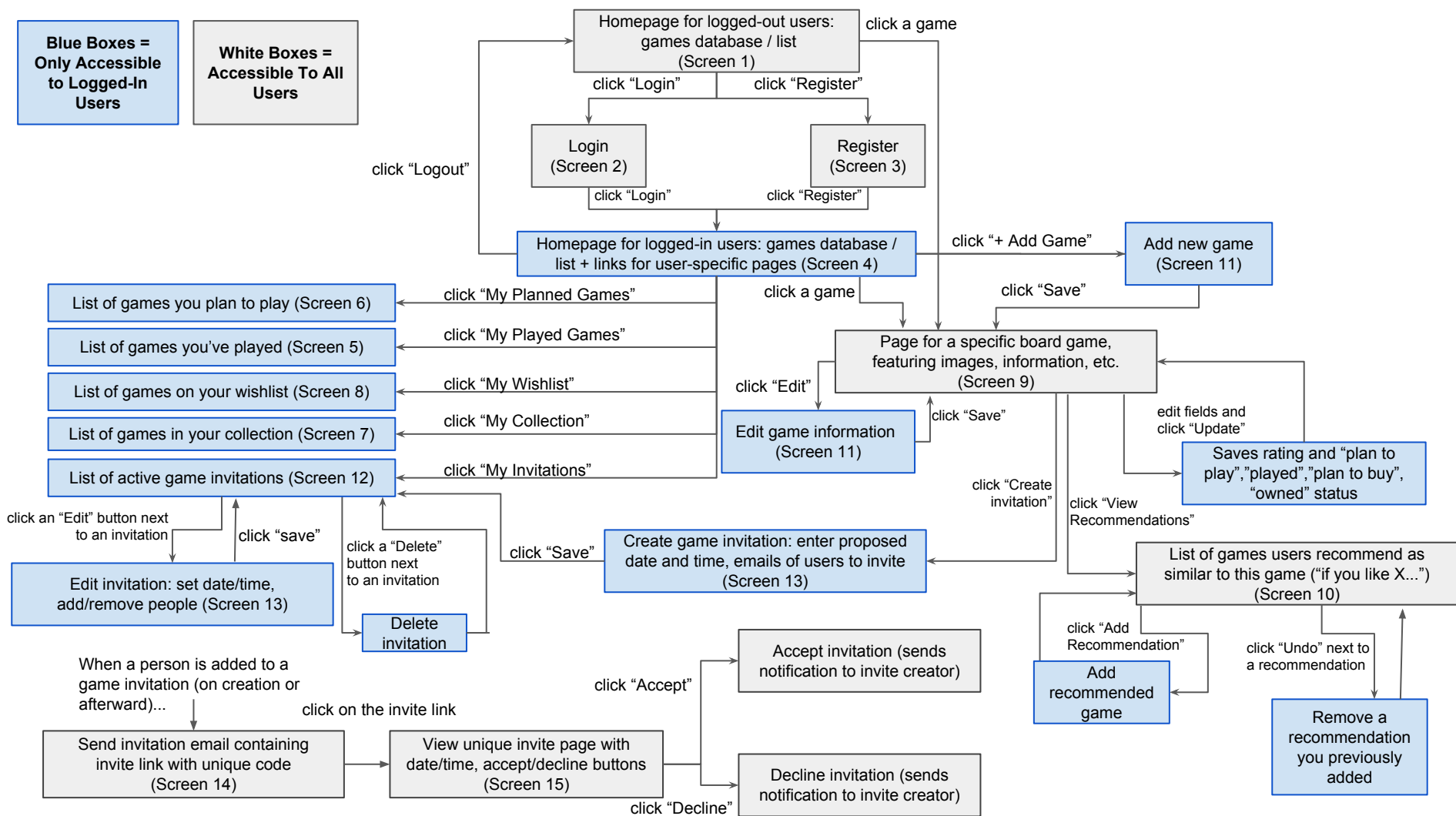
-Lifestyle: Prefer indoor activities, people who like to social and hang out with friends

-Motivation, needs, desires, goals:

- **Average Users:** These type of users will likely make up the majority of our user base. They are the ones who are casual about board games and will be trying to find a board game for a family game night, a gathering of friends, social event, etc. However, with the hundreds of board games that are out there, it's hard to find one that could provide entertainment for the amount and type of people present and at times can be overwhelming. With our app, users will be able to filter out the type of games they can narrow down their search on and be provided with short summaries of each game. They will also be able to see the player count and average length of each game to determine if it will be well suited for their social gathering.
- **People who actively play board games:** These people are the most active users and are constantly searching for games to play. They also contribute greatly to the ratings and recommendation features of the website. Playing board games may be their habit or weekend activity with friends and family and the website is a perfect channel for them to search for more games. This group of people have played a fair amount of games and can give feedback to a variety of games.
- **Collectors:** Collectors looking for new games to collect can browse through the large variety of games in the website and explore. The website also provides the features that allow users to track the board game they've played or planned to play, so collectors will not miss out on any board games that they're interested in or collect duplicate board games. If they prefer to collect certain type of board games, the filtering feature will allow them to sort. The recommendation feature also helps them to find board games based on the board game they like.

**Blue Boxes =  
Only Accessible  
to Logged-In  
Users**

**White Boxes =  
Accessible To All  
Users**



## Wireframes

### Screen 1 - Homepage for logged-out users

**BoardGameDex**

Log InRegister

▼ Filter

Keyword

Player Count to

Player Time to

Genres

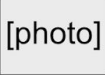
Family

Thematic

Card-based

Combat

Social Deduction

Game	Genre	Avg Rating ▼	Player Count	Est Play Time
 Monopoly	Family	2.5/10	2-8	100 hours

Logged-out users can browse the games database in read-only mode. They also have option to log in or create an account. Clicking a game brings you to the game's page (Screen 10).

## Screen 2 - Login

*BoardGameDex*

Username

Password

☐

Remember me

Log In

## Screen 3 - Register

*BoardGameDex*

Username

Password

Confirm Password

Register

#### Screen 4 - Homepage for logged-in users

BoardGameDex

▼ Filter

Keyword

Player Count  to

Player Time  to

Genres

Family

Thematic

Card-based

Combat

Social Deduction

Welcome back, **AverageUser9018**

**Browse All Games**

[My Played Games](#)

[My Planned Games](#)


[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

+ Add Game

Game	Genre	Your Rating	Avg Rating ▼	Player Count	Est Play Time
 Monopoly	Family	10/10	2.5/10	2-8	100 hours

After logging in, various navigation links appear in the top-right corner as well as an “Add Game” button for adding games to the database (Screen #).

## Screen 5 - My Played Games

**BoardGameDex**

*Welcome back, **AverageUser9018***

▼ *Filter*

Keyword

Player Count  to

Player Time  to

Genres

Family

Thematic

Card-based

Combat

Social Deduction

[Browse All Games](#)

**[My Played Games](#)**

[My Planned Games](#)

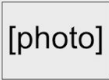
[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

+ Add Game

Game	Genre	Your Rating	Avg Rating ▼	Player Count	Est Play Time
 Monopoly	Family	10/10	2.5/10	2-8	100 hours

This screen shows a list of games you have marked as previously played. The same filtering options are available here.



## Screen 6 - My Planned Games

**BoardGameDex**

▼ *Filter*

Keyword

Player Count  to

Player Time  to

Genres

Family

Thematic

Card-based

Combat

Social Deduction

Welcome back, **AverageUser9018**

[Browse All Games](#)

[My Played Games](#)

**[My Planned Games](#)**

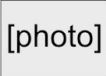
[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

+ Add Game

Game	Genre	Your Rating	Avg Rating ▼	Player Count	Est Play Time
 Candyland	Combat	--	3.6/10	2-5	2 hours

This screen shows a list of games you have marked as “plan to play”. The same filtering options are available here.

## Screen 7 - My Collection

**BoardGameDex**

Welcome back, **AverageUser9018**

▼ *Filter*

Keyword

Player Count  to

Player Time  to

Genres

Family

Thematic

Card-based

Combat

Social Deduction

[Browse All Games](#)

[My Played Games](#)

[My Planned Games](#)

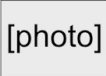
**[My Collection](#)**

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

+ Add Game

Game	Genre	Your Rating	Avg Rating ▼	Player Count	Est Play Time
 Candyland	Combat	--	3.6/10	2-5	2 hours

This screen shows a list of games you have marked as “owned”. The same filtering options are available here.

## Screen 8 - My Wishlist

**BoardGameDex**

Welcome back, **AverageUser9018**

▼ *Filter*

Keyword

Player Count  to

Player Time  to

Genres

Family

Thematic

Card-based

Combat

Social Deduction

[Browse All Games](#)

[My Played Games](#)

[My Planned Games](#)

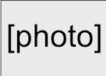
[My Collection](#)

**[My Wishlist](#)**

[My Invitations](#)

[Logout](#)

+ Add Game

Game	Genre	Your Rating	Avg Rating ▼	Player Count	Est Play Time
 Risk	Family	--	4.2/10	3-6	3 hours

This screen shows a list of games you have added to your wishlist. The same filtering options are available here.

## Screen 9 - Page for a specific game

**BoardGameDex**

Welcome back, **AverageUser9018**

[Browse All Games](#)

[My Played Games](#)


[My Planned Games](#)

[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

**Monopoly**  
[Official Site](#) | [Amazon.com](#)  
View Recommendations  
Create Invitation

My Rating:  /10

☐ I plan to play this game.

☒ I've played this game.

☐ I own this game.

☐ I want this game.

Update

Genre: Family  
Avg. Rating: 2.5/10  
Invites Accepted: 70%  
Player Count: 2-8  
Est. Play Time: 100 hours  
Difficulty Level: Beginner

**Game Summary:**  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

**Rules Summary:**  
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Edit Info

Each game gets its own page on BoardGameDex, showing various information about the game. The “View Recommendations” button is visible for all users, linking to a list of board games users have recommended as similar to this one (Screen 11). Logged-in users also see a button to “Create Invitation”, “Edit Info” (Screen 13), as well as their personal rating and various boolean flags (played, owned, etc) which can be updated here.

## Screen 10 - Recommended Games List

**BoardGameDex**

Welcome back, **AverageUser9018**

[Browse All Games](#)

[My Played Games](#)

[My Planned Games](#)

[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

If you like

[photo]

**Monopoly**

our users think you might also like:

[photo]

**Candyland**  
(12 users)  
You recommended this. [Undo](#)

[photo]

**Risk**  
(8 users)  
[Endorse Recommendation](#)

[photo]

**Clue**  
(4 users)  
[Endorse Recommendation](#)

**Have your own recommendation?**  
Paste its *BoardGameDex* link here:  
  
[Add Your Recommendation](#)

This list features games users have marked as similar to a particular game. Logged-in users can vouch for other previous recommendations or add their own to the list with the form at the bottom.

## Screen 11 - Add/Edit Game

**BoardGameDex**

Welcome back, **AverageUser9018**

[Browse All Games](#)  
[My Played Games](#)  
[My Planned Games](#)  
[My Collection](#)  
[My Wishlist](#)  
[My Invitations](#)  
[Logout](#)

Name

Photo

[photo]

Browse...

Official Site

Amazon Link

Player Count

 to

Avg Play Time

 hours

Genre

-- ▼

Difficulty Level

-- ▼

Game Summary

Rules Summary

Save

This screen is used to add new games to the database and edit existing ones. All fields except the game name are optional, so less dedicated users can quickly add games to their list while more involved ones can go back and fill in more information.


## Screen 12 - My Invitations

BoardGameDex


Welcome back, **AverageUser9018**

[Browse All Games](#)  
[My Played Games](#)  
[My Planned Games](#)  
[My Collection](#)  
[My Wishlist](#)  
**[My Invitations](#)**  
[Logout](#)

### Invitations You Sent

Game	Date	Time	Invited	Actions
 Candyland	Feb 2, 2017	2:00 PM PST	alice@example.com (✓), bob@example.com (✗)	<a href="#">Edit</a> <a href="#">Delete</a>

### Invitations You Received

Game	Date	Time	Sender	Actions
 Candyland	Feb 2, 2017	2:00 PM PST	AverageUser2837	<a href="#">Accept</a> <a href="#">Decline</a>

This shows two lists: invitations you've created/sent and invitations you've received. For sent invitations, you can see who you invited and whether or not they've accepted/declined the invitation, as well as the option to edit each invitation (Screen #) or delete it. Users need not have an account to be invited to an event, but for those that do, they will see their previously-received invitations under the "invitations you received" list. After going to a game session and coming back, they can use this list to quickly find the game's page (Screen #), mark it as played, give it a rating, etc.

### Screen 13 - Create / Edit Invitation

BoardGameDex

Game

[photo]

Candyland

Date

Time

Invited People

alice@example.com

bob@example.com

enter an email...

Save

Welcome back, **AverageUser9018**

[Browse All Games](#)

[My Played Games](#)

[My Planned Games](#)

[My Collection](#)

[My Wishlist](#)

[My Invitations](#)

[Logout](#)

Invitations have a set date and time as well as a list of email addresses of people to invite. If a person is added to a list of invitees (either during creation or afterward), they are sent an email with a unique link to accept or decline the invitation (Screen 14).



## Screen 14 - Sample Invite Email

Hello alice@example.com,

AverageUser9018 just invited you to a play a board game via BoardGameDex!

Game: Candyland (<https://www.boardgamedex.com/games/1837>)

Date: 1/31/2017

Time: 2:00pm

Click the link below to accept or decline:

<https://www.boardgamedex.com/invite/2736>

- BoardGameDex Team

## Screen 15 - Accept/Decline Invitation

BoardGameDex

Greetings **alice@example.com!**

You've been invited by **AverageUser9018** to play a game!

**Accept**

**Decline**

✓ **You accepted the invitation.**

Date: 1/31/2017

Time: 2:00pm

Game:

[photo]

**Candyland**

[Official Site](#) | [Amazon.com](#)

Genre: Family

Avg. Rating: 2.5/10

Player Count: 2-8

Est. Play Time: 100 hours

Difficulty Level: Beginner

*Game Summary:*

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

*Rules Summary:*

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

After clicking the unique link in an invite email, the invited user is taken to this page, which displays the date/time attached to the invite as well as full information about the suggested game. From here they can accept/decline the invitation ("I'm going" / "I'm not going"); this sends a notification to the person who originally sent the invitation.

## **Pros/Cons/Risks/Execution**

### **Pros:**

- Users will be able to discover new and/or similar games to try out
- The ability to send game invitations to friends to organize a meetup to play
- Users can rate their experience playing the games for future reference
- Recommendation feature helps users discover more games they may like
- Users will be able to keep track of games they've played before
- Provides game information and instructions so players can easily understand the rules

### **Cons:**

- Other websites that can provide lists of best board games to try out
- No filtering of nearby users if users want to play with people they don't know
- Not being able to add comments/reviews for a game to provide a more in-depth perspective because users are only able to rate games

### **Risks:**

- No email association with accounts so there might be a lack of security for users
- No verification of users' identities and the games they add to the website
- No reporting of bad or irrelevant content
- Users might have a desire to give unfair/incorrect ratings to heavily skew a game's rating

### **Execution:**

- Use Firebase for its tools and infrastructure to help create our web application (database, messaging, emails).
- Develop a dynamic interactive web application using HTML, CSS, JavaScript, etc.
  - Develop initial version with jQuery, then migrate to VueJS in second pass.
- Try to design user interface that is simple and intuitive to use, while covering primary use cases for our expected users.