

CS 615 Project Step 2 - User & Task & Domain Analysis

User analysis:

Personas for the potential users are attached below.

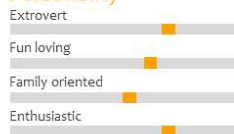
Casual gamer, Cho



'Just get through the weekdays'

Name: Cho Chang
Age: 26
Education: Bachelors in CS
Profession: Engineer
Location: Boston, MA
Gender: Female
Physical limitations: None

Personality



Goals

- Rent a variety of board games quickly and easily for weekends.
- Chance to try out new games before buying one.
- Find and explore new and popular board games in her favorite categories.
- Spending less money on games.

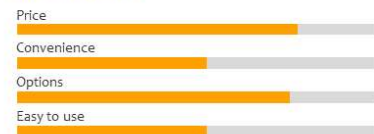
Frustrations

- Spending a lot of money on board games
- May unlike new games bought
- Limited space in apartment to store multiple games for long
- Reselling after buying a game

Bio

She loves playing classic board games with her friends. Despite her busy life and work, she enjoys the strategy and fun of board games. She believes they're a great way to relax with friends and make lasting memories. In her free time, she explores local game shops for new games to share with her friends. She may be a casual gamer, but she values the moments of fun and connection with her friends through games.

Motivations



Communication pattern

- ☒ Text message
- ☒ Email
- ☐ Mail

Characteristics

Domain experience: High

Computer experience: High | Tech savvy

Factors distracting: Work responsibilities

Relationships: Active in social circles

Family focused, Fred



'I love my kids'

Name: Fred Weasley
Age: 42
Education: College educated
Profession: Grocery store owner
Location: Boston, MA
Gender: Male
Physical limitations: None

Personality



Goals

- Find games with clear instructions and age-appropriate content.
- Discover new board games suitable for family play.
- Limit excessive screen time of his children.
- Use educational board games to make learning fun for his kids.
- Organize frequent family game nights to bond with his children.

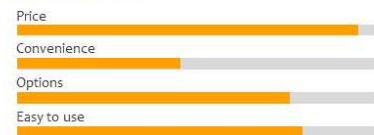
Frustrations

- Spending a lot of money on single game
- Limited free time, due to work and marital responsibilities
- Finding games that are suitable for both children and adults' enjoyment.
- Kids get bored of limited game purchases

Bio

Fred's home is filled with laughter, and family game nights are a cherished tradition. He values the quality time spent with his wife and children, seeing board games as a way to strengthen their relationships and teach valuable life lessons. He's always on the lookout for new and exciting games that his family can enjoy together.

Motivations



Communication pattern

- ☒ Text message
- ☐ Email
- ☒ Mail

Characteristics

Domain experience: Limited

Computer experience: Basic

Factors distracting: Family responsibilities

Relationships: Married with 2 kids

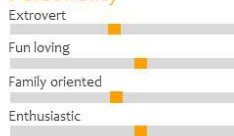
Newbie gamer, Neville



'One game at a time'

Name: Neville Longbottom
Age: 22
Education: College Student
Profession: NA
Location: Dorchester, MA
Gender: Male
Physical limitations: None

Personality



Goals

- To gradually expand his knowledge and collection of board games.
- To find affordable and beginner-friendly games that suit his tastes.
- To achieve a balance between academics, social life, and his newfound passion for board gaming.
- To become a confident gamer and contribute to game nights with friends.

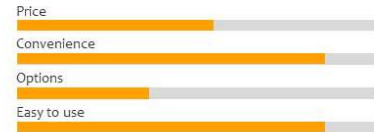
Frustrations

- Balancing board gaming with college assignments and social activities.
- Feeling like a newcomer among friends who are experienced gamers.
- A limited budget as a college student for buying new games.
- Feeling lost with so many games to choose from.

Bio

Neville is excited to join his college friends who are experienced gamers in their game nights. He loves how board games are simple yet great for relaxation and socializing. Even though he's new to board games, he sees it as a chance to learn and make friends.

Motivations



Communication pattern

- ☐ Text message
- ☒ Email
- ☐ Mail

Characteristics

Domain experience: Limited

Computer experience: Moderate

Factors distracting: College course work

Relationships: Single, lives with friends

Enthusiastic gamer, Emma



'What to play this weekend?'

Name: Emma
Age: 17
Education: Highschool
Profession: NA
Location: Boston, MA
Gender: Female
Physical limitations: None

Personality



Goals

- Explore every new board game.
- Host budget friendly game nights with friends.
- Vlog the boardgame experience.

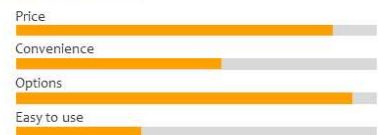
Frustrations

- Limited time for gaming due to high school studies.
- Balancing gaming with homework and family time.
- Struggle to afford new games on a teenagers' allowance.

Bio

She loves board games. She's known for her strategic thinking and dreams of designing games someday. In her free time, she plays and invents board games, improving her creativity and problem-solving skills. Emma enjoys various types of games and often plays with friends. Emma lives with her supportive parents who share her love for board games. They encourage her passion and enjoy playing together as a family, recognizing the fun and learning that comes with it.

Motivations



Communication pattern

- ☒ Text message
- ☒ Email
- ☐ Mail

Characteristics

Domain experience: High

Computer experience: High | Digitally adept

Factors distracting: College social events

Relationships: Single, Lives with parents

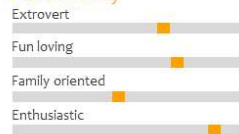
Admin Boss, Bellatrix



'Let's go full house but empty'

Name: Bellatrix LeStrange
Age: 32
Education: Bachelors in BA
Profession: Retail game store owner
Location: Boston, MA
Gender: Female
Physical limitations: None

Personality



Goals

- Streamline inventory operations by effortlessly adding new board games, efficiently editing game details, and seamlessly removing items when needed.
- adopt user-friendly software solutions that can help automate various aspects of her business, like customer communication, and website maintenance.

Frustrations

- Manual tracking of the inventory.
- Manage customer requests.
- Balancing her work with family life and maintaining a competitive edge in the board game rental industry.

Bio

Bella is a passionate board game enthusiast and a small business owner with a good understanding of the board game rental industry. She is motivated to provide the best possible experience for her customers and seeks software solutions that can help her efficiently manage her business while accommodating her busy lifestyle. Clear communication and user-friendly software are essential for her success in running 'Board for Bored'.

Motivations



Communication pattern

- ☒ Text message
- ☒ Email
- ☐ Mail

Characteristics

Domain experience: **Moderate**
Computer experience: **High**
Factors distracting: Maintaining store
Relationships: Married

Task Analysis:

Tasks for Board Game Rental Management:

- Login/logout that includes the necessary validation.
- Feedback and reviews system.
- Create an admin page to manage inventory.
- Search and browse the board games.
- Booking and reservation system.
- Manage user accounts and profiles.

High level tasks:

Goal: Create a user-friendly admin page to efficiently manage website inventory.

- Create an admin page to manage inventory.
 - Create a feature to add new board games.
 - Create input to add game details.
 - Create game title input field.
 - Create game description input field.
 - Create game rules input section.
 - Create categories input section.
 - Create an option to add images.

- 1.1.4 Create input for price.
 - 1.1.5 Create availability selection.
- 1.2 Create Update feature.
 - 1.2.1 Create an option to edit game images.
 - 1.2.2 Create an option to update the game price.
 - 1.2.3 Create an option to update availability status.
- 1.3 Create a feature to remove the board game.

Plan 1: Do 1.1, 1.2, 1.3 in any order.

Plan 1.1: Do 1.1.1, ... ,1.1.5 in any order.

Plan 1.1.1: Do 1.1.1.1, 1.1.1.2, 1.1.1.3 in any order.

Plan 1.2: Do 1.2.1, 1.2.2, 1.2.3 in any order.

Goal: Develop an intuitive search and browsing feature that allows users to effortlessly explore and find board games, along with filtering and sorting options.

2 Search and browse the board games.

- 2.1 Implement the search feature.
 - 2.1.1 Write a search algorithm.
 - 2.1.2 Design the search bar.
 - 2.1.3 Implement button to trigger search.
 - 2.1.4 Link the search button to the search algorithm.
- 2.2 Implement the filters.
 - 2.2.1 Define filter categories.
 - 2.2.2 Write an algorithm for filtering.
 - 2.2.3 Design filter menu.
- 2.3 Implement sorting features.
 - 2.3.1 List sorting options.
 - 2.3.2 Update search results based on sorting.
- 2.4 Display the results in grid view.
 - 2.4.1 Fetch image and game title.
 - 2.4.2 Display information on a card.
 - 2.4.3 Link card with game details page.

Plan 2: Do 2.1 – 2.2 - 2.3 – 2.4, in that order.

Plan 2.1: Do 2.1.1 through 2.1.4, in that order.

Plan 2.2: Do 2.2.1 - 2.2.2 – 2.2.3, in that order.

Plan 2.3: Do 2.3.1 – 2.3.2 in that order.

Plan 2.4: Do 2.4.1 – 2.4.2 – 2.4.3, in that order.

Goal: Design a booking and reservation system, ensuring efficient management of game availability, rentals, and reservations.

3 Booking and reservation system.

3.1 Implement the availability feature.

- 3.1.1 Create a calendar view to show the availability.
- 3.1.2 Write algorithm to show the availability.
- 3.1.3 Color code the available and unavailable dates.
- 3.1.4 Create a select dates feature.
 - 3.1.4.1 Create start date input field.
 - 3.1.4.2 Create end date input field.
 - 3.1.4.3 Add functionality to block the unavailable dates.

3.2 Implement the cart feature.

- 3.2.1 Create a button “add to cart.”
- 3.2.2 Write algorithm to add the item to the cart.
- 3.2.3 Create a button “remove” to remove from cart.
- 3.2.4 Write an algorithm to remove the appropriate item from cart.

3.3 Create payment gateway.

- 3.3.1 Create a form.
 - 3.3.1.1 Create ‘name on card’ input field.
 - 3.3.1.2 Create ‘card number’ input field.
 - 3.3.1.3 Create ‘expiry date’ input field.
 - 3.3.1.4 Create ‘cvv’ input field.
 - 3.3.1.5 Create ‘pin code’ input field.
- 3.3.2 Create a button to submit.
- 3.3.3 Create a display for payment status.

3.4 Create a function that adds the reservation to active rentals.

Plan 3: Do 3.1, 3.2, 3.3, 3.4, in any order.

Plan 3.1: Do 3.1.1 through 3.1.4, in that order.

Plan 3.1.4: Do 3.1.4.1 through 3.1.4.3, in that order.

Plan 3.2: Do 3.2.1 through 3.2.4, in that order.

Plan 3.3: Do 3.3.1 through 3.3.3, in that order.

Plan 3.3.1: Do 3.3.1.1 through 3.3.1.5, in that order.

Goal: Design an effective review system to encourage user engagement to gather valuable insights, enhancing the customer experience and building trust among our users.

4 Feedback and reviews system.

4.1 Create a review form.

- 4.1.1 Create a rating feature.
- 4.1.2 Create 'description section' input field.
- 4.1.3 Provide option to add images.
- 4.1.4 Create the submit button.

4.2 Create a display for reviews.

- 4.2.1 Calculate and display average rating.
- 4.2.2 Create a display for individual reviews.

Plan 4: Do 4.1 – 4.2, in that order.

Plan 4.1: Do 4.1.1, 4.1.2, 4.1.3 in any order. Then do 4.1.4

Plan 4.2: Do 4.2.1, 4.2.2 in any order.

Goal: Create a user profile page where individuals can store their personal information and easily track both their past rental history and current active rentals.

5 Manage user accounts and profiles.

5.1 Create a personal details section.

- 5.1.1 Create 'add username' input field.
- 5.1.2 Create 'add user email address' field.
- 5.1.3 Create 'add the user picture' input field.

5.2 Orders

- 5.2.1 Create active rental sections.
 - 5.2.1.1 List the current rental item.
 - 5.2.1.2 List the due dates.
- 5.2.2 Create a history section.
 - 5.2.2.1 Add the list of past purchases.
 - 5.2.2.2 Create a function that includes the rental duration.

Plan 5: Do 5.1, 5.2 in any order.

Plan 5.1: Do 5.1.1, 5.1.2, 5.1.3 in any order.

Plan 5.2: Do 5.2.1, 5.2.2 in any order.

Plan 5.2.1: Do 5.2.1.1 – 5.2.1.2 in that order.

Plan 5.2.2: Do 5.2.2.1 – 5.2.2.2 in that order.

Domain Analysis:

The Entity Relationship diagram is attached below.

