Party on Wall Street

By

Maroon and Gold Game Studios

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Abstract

Party on Wall Street is a web-based video game developed by Maroon and Gold Game Studios. As an educational entrepreneurship video game, Party on Wall Street provides a refreshing and exciting new experience for the tycoons in society who want a little more of that entrepreneurial lifestyle. With proper research on customer demographics, Maroon and Gold Game Studio's brand identity consists of a modern game with multiple use cases. With strong partnerships with multiple creatives and built from scratch game development, Party on Wall Street implements a fun, high intensity business competitive environment for players and students to engage in.

This thesis consists of building an interactive experience through the use of AirConsole, a third party platform that hosts the game and allows players to join it by connecting to the same website on their mobile device. The primary user has access to hosting a game which can be casted to a larger screen, typically a television. When hosting a game, a room code is generated which can be typed in on the mobile device to connect to the game. When all players have joined the game, the host can initiate it. Players go through 6 rounds of pitch style investing presentations and have the opportunity to invest in other products with the ultimate goal of earning the most money.

In the end, the game was successfully implemented, extensively user tested, and is under review by the AirConsole game team. Over the last year, the team successfully brought an idea through the entire product development process, learned to build a game in Unity, made practice of extensible testing and validation methods, and leveraged customer research and feedback to design a game that is ultimately both enjoyable and educational.

Introduction

The prompt that was delivered to the team in the initial phases of this project expected an interactive experience that taught players entrepreneurial skills. The prompt originally requested a board game, but after the team conducted customer research, it was found that users would be more excited and engaged if it were a video game instead. Technology has become culturally ubiquitous and nearly all Americans own a smartphone that can browse the web. It was clear to the team that in order to reach more customers, the board game prompt should be refactored to accommodate the reality that most users will be able to operate our technology from their own personal device, instead of relying on expensive hardware that permeates the video game industry. Initially research was conducted to investigate the difficulties in developing our own platform for hosting the experience. However, it was clear that given the scope of the project, resources would need to be saved to finish by the deadline. The team chose to use AirConsole, a library and store of hundreds of couch-style multiplayer games where users use mobile devices as controllers while a television displays the game screen.

Customer Discovery

Prior to any technical development of Party on Wall Street, the audience and target demographic of the game was determined. Market research was conducted via a two-pronged approach with various methods taking place to hone in on a specific goal. This took place due to the questions asked having a variety of intended response lengths. The two-pronged research was split through two separate surveys, one containing questions that command longer, more thoughtful answers, while the other questions possess shorter and simpler answers. Our goal was to thoroughly interview five subjects using the thorough survey (Appendix A) and upwards of twenty participants using the short survey (Appendix B). With the customer discovery structure established, results included twenty participants for the short-answer questionnaire while there were five individuals interviewed in depth for the long form questions.

Thorough Interviews

These interviews were conducted in-person. All interviewees were ensured to be familiar with the style of couch-party games and the idea of Shark Tank and pitching entrepreneurship ideas. The beginning of the interview was providing an overview of Party on Wall Street and subsequently asked several questions. The questions asked about their past experiences with similar games, their familiarity with entrepreneurship, their preference of how to play the game, and if they had any ideas of what they wanted to see. The exact questions can be found in Appendix A.

The first key takeaway from the thorough interviews was that several of our interviewees stated the appeal of couch-party stylized games is the competitive aspect with their friends. They

noted that it was a fantastic way to simultaneously spend time with friends and play a game together while a competitive aspect was still present.

In addition, we also saw that there was a consensus that the engagement of shows like Shark Tank that focus on entrepreneurship as entertainment is the excitement of seeing innovative ideas coming to life and comparing their initial evaluation of the product with how the judges, or "sharks", react.

Furthermore, interviewees unanimously agreed that using phones as controllers would be the most applicable participant option. It significantly lowers the investment required to play the game and makes it accessible to everyone with no preparation required, while lowering the barriers to entry of location, as everyone always has their phone present.

Larger-Audience Short Survey

The primary focus of the quick survey was to gather demographic traits and data regarding game focused feedback through a simple online form (Appendix B).

There are several key takeaways that we were able to gather from this survey. The first is that our target audience is as expected, college age students. This is the target demographic for other couch style party games and board games. Knowing the age of our audience, we can cater the use of language, humor, and current events as key features in the game.

In addition, we see that the vast majority of our target audience has already played couch-party style games, specifically regarding the suggested games we provided. This provides insight to familiarity with our game. Less time may be needed consuming instructions or a tutorial, and adopting a general framework similar to the games mentioned may be the most efficient route to target familiarity.

We also realized that it would not be wise to assume every person who played a mature game preferred the mature aspect of said game. A fifth of our respondents would not prefer a mature style game, leading us to consider a filter option that users can select before the game starts. Our primary focus would still be on leading a mature style for the majority that would enjoy the style of content and implementing it in a sustainable fashion with minimal intervention. If a filter option does not make sense for implementation, the game at least needs to be playable in a clean fashion.

Next, political commentary is something we toyed on as an aspect of our game. There are many opportunities for humor to be integrated with politics, and the responses gathered were surprising as we expected more of a divide. However it seems that people do enjoy the commentary integrated with politics. There is also potential for specific business ideas to merge through political figures and time periods that may make for a larger variety of gameplay scenarios.

We also asked the subjects where they would ideally download the game. This is an extremely important question for us as we were initially scrambling on where Party on Wall Street would be platformed and hosted. Initially we assumed Steam would be the primary choice for PC users, however we were surprised by the number of consoles and more importantly Fire TVs being present. In conclusion, we will have to look at using a web hosted server, in which we can host the title on many platforms with little restrictions.

Furthermore, we used this survey as an opportunity to ask the subjects if they had any ideas for us to implement into the game. Perhaps there was a great idea out there that we were missing on how to make the game more enjoyable. Some of the most notable responses can be found in Appendix C. In general, several respondents showed interest in an explicit version of

the game. Many also thought that drawing should be incorporated into the game. Receiving primary host feedback is incredibly important so that as creators we are not dead set on game prototype functionality. We want the game to be challenging while still being fun for groups, and the responses that we received only reinforce this concept.

We also asked subjects to create any short product pitch. The reason we asked this question was to get an idea of some of the inventions that people may come up with so that we can design the game with them in mind. When implementing problems that users will have to solve, the responses exemplified a level of creativity that will make the game truly succeed. Users are the idea generators, however clever ideas only come with truly random, unheard-of problems. This is a key factor that was crucial in the development of our game.

Finally, we asked surveyees how much they would be willing to pay for a game of this nature. We were surprised at the relatively higher average price received in the responses, and we leveraged it to look into multiple pricing models. One-time purchases, as well as subscriptions, have their pros and cons, and producing an analysis to maximize revenue may have been necessary.

Brand Identity

Mission Statement

To provide a refreshing and exciting new experience for the tycoons in society who want a little more of that entrepreneurial lifestyle.

Brand Story

We are a team of technically gifted ASU students living an entrepreneurial lifestyle and searching for a way to share that with other students like ourselves. We are avid supporters of personally directed business ventures and self-led projects. As creators of our own destinies, we wanted to share that experience with others who have a passion for the self-made mindset. Our brand's goal is to provide a fun and relaxing experience that brings together individuals who share that drive, and to challenge each one of them and their ability to produce unique and creative solutions on the fly. Our team is focused on providing an experience that resembles the entrepreneurial process while also participating in that same very process: a game for the players, made by the players.

Brand Name

When deciding on a brand name, we looked to other game studios for inspiration. A game studio has the potential to develop multiple titles, so we wanted a name that was concise and could be displayed on multiple types of splash screens. Potentially integrating with partial ASU heritage was also in our thought process, and we also checked a list of current trademarks to ensure there were no conflicts.

- Devil Studios
- Devil Eye
- Start-it-up
- Maroon Tycoons

- Calculated Studios
- Maroon and Gold Studios

Logo

Deciding on our logo was a particularly crucial decision that we consulted a graphic designer on. We discussed the importance of making our both brand family friendly and competitive, utilizing the paralleled concept when making design choices and throughout development. An ideal logo would utilize a cartoon font to appeal to our younger audience, while still including the competitive money-making aspect by implementing dollar signs and gold/green colors. We also wanted our brand name to have its own logo and font style. The typography style that was finally chosen was Boogaloo, designed by John Vargas Beltrán.

- WSB Inspiration
- Two business people facing off (fighting), cash in hands.
- Word-art style for "Party on" (top) and "Wall Street" (bottom)
- Vector vs. image
- Separate logo for Maroon & Go

Product Logo, Party On Wallstreet

Brand Colors

For our company "Maroon and Gold Game Studios", the obvious choice of brand colors was the ASU Maroon (#8C1D40) and ASU Gold (#FFC627). However, for the particular game "Party on Wall Street", we made our theme colors for the game similar to that of U.S. currency, with a money green (#118C4F) and money gold (#FFCF40). Since this is an entrepreneurial game focused on gaining money, we felt that a money-colored game would be the optimal approach to our branding. The above codes are in hex color format.

Website Analysis

Our website (https://party-on-wall-street.herokuapp.com/) includes all of the brand information described above: the brand name, mission statement, logo, and also a description of our upcoming product, Party on Wall Street. We have also laid out a section of the website that is dedicated for downloading the game once it is available and for viewing screenshots and reviews once this information becomes readily available. Future plans for expanding upon the website also includes providing a section where users can buy the video game, and an area on the website that links to the mobile controller. The Website is a hub for all things related to the project and will be consistently updated as development progresses. The layout of the website can be found in Appendix D.

Partners

Partners we collaborated with include external resources as well as business catalysts necessary for the exploration and expansion of Party on Wall Street's game logic and production. Game development was an excruciating task and required significant project management which could be assisted through multiple sources. Below are the partners necessary throughout development.

Dr. Michael Sutton is the Chief Gamification Officer/Chief Knowledge Officer at Funification. While Dr. Sutton was a business catalyst for cohort four, we found his background would be extremely beneficial as a potential partner for Party on Wall Street. There were many aspects of game design and the implementation of education into a game that were spoken about throughout our talks with Dr. Sutton. Some key points that were discussed are listed below:

- Developing randomness in between years to subvert expectations.

- Implementation of ROI equation(s) in final and second to last rounds.

- Incorporating entrepreneurial framework into an educational aspect of the game.

- Research ludology and its part in game development.

- Keep players engaged in "Shark" rounds by displaying prompts that spawns entrepreneurial thinking.

- Engage players and keep them thinking about their competition.

- He also suggested that we examine potential competitors and see what worked well in their games:

  o The Entrepreneur Game by EESpeaks

  o The FreshBiz Game

- Some of his key insights also assisted us with tackling the development problems we would have, he provided us a list of existing platforms to help us build our game:

  - Tabletopia.com
  - OCTGN.net
  - Board Game Arena
  - Foundry Virtual Tabletop
  - Happy Meeple
  - YourTurnMyTurn
  - Game Structor
  - Battleground Gaming Engine
  - Zuntev
  - BordGamr
  - LackeyCCG
  - Tabletop Playground
  - Tabletop Simulator
  - Vassal
  - Screantop.g

- In addition to the above, he also provided us with a template for a simple elevator pitch that outlines important aspects of a good pitch, we will definitely need this for one of the rounds in our game:

  - FOR (target customer), WHO HAS (customer need), (product name) IS A (market category) THAT (one key benefit). UNLIKE (competition), THE PRODUCT (unique differentiator).

We met with Amanda Federico, a fellow ASU student majoring in animation and a certificate in game design. Amanda's portfolio is extremely impressive, taking inspiration from modern entertainment and culture. She took the time to demo us some of her animations and they are arguably on par with other animations on popular animation platforms like Crunchyroll. We haven't yet worked out payment rates with her as the amount of work for her to do is also yet

to be determined but we will be sure to iron out the details as soon as possible in order to secure the funding. We would prefer to work with her over employing someone from Fiverr because one of us knows her personally and we would be able to meet in person if necessary.

With a background in both game design and animation, there couldn't be a better fit for a potential partnership for the development of visuals for Party on Wall Street. The capabilities of certain artistic professions and provided advice is crucial as an included skill set in order to polish the game's feel:

Jakob is a music producer for the various tunes used throughout the game. He is required for audio production in our game, including main menu music, transitions, overall environment, and leaderboard music. All music will be copyright free and exclusive for Party on Wall Street. Jakob is a crucial partner, as a positive atmosphere plays a majority role in player perception of the game. Music can also be used to convey certain emotions and can be used as a personality trait of the game. If you survey students on what they like about the game Kahoot, for example, many of them will at one point mention the music. Drawing players in with a recursive and catchy score influences engagement positively. Below are the specific songs produced for Party on Wall Street:

- Track 1: Intergalactic
- Track 2: Clouded
- Track 3: Wish
- Track 4: Profits
- Track 5: Baha

Ryan Filan is a Graphic Design Student at Arizona State University. We've known Ryan for many years as he was also a student at our high school. When we found out we would need to construct a brand image we knew we would have to reach out to a more experienced and more artistically capable individual. We spoke with Ryan about potentially becoming a partner and he said he would be able to provide us with feedback on our current brand choices and also assist us in designing a more finalized version of our logo. Ryan has many other projects he is working on, so our project was not a primary focus for him, however he advised us on the capabilities of certain artistic professions and provided advice on some skill sets we should search for in order to polish the game's feel:

- Graphic Designer (Brand Theming and Logo)
- 2D Animator (Video Game Transitions and Animations)
- Voice Actor (Announcer)

Heatwave Studio (https://asu.campuslabs.com/engage/organization/vgdc) would be a great partner for video game development assistance. The organization is located on ASU's campus and provided apt development advice for Maroon and Gold Game Studios. There are specific rules that Heatwave Studio expects individuals and organizations to follow when inquiring for assistance, including uses of specific game-dev server channels to reach the proper individuals required. Expertise varies throughout the members present at any given time, meaning that project assistance, especially paid, could have been structured as a "freelance" specialty. Heatwave Studio informed me that during the week, users and developers are typically focused on classwork, so the weekend and holidays can be prime posting hours for assistance.

Marketing Strategy

<u>Target Audiences</u>

Our product, Party on Wall Street, is a video game primarily meant to be enjoyed by all ages. However, as this game has the opportunity for more adult content, our target audience for advertising is most likely a young adult / college student crowd (17 - 23).

Business school teachers/professors might want to use our game as a tool for learning in the classroom. In general, however, this video game is meant to primarily serve as a couch party game and is a direct competitor to other couch games like Jackbox, so in a sense, another target audience would be any customer of other couch games.

<u>Advertising</u>

All transactions and purchases relating to our product will be handled by AirConsole. Our website serves as a hub, so that all internet traffic can funnel onto a single page where it is easy to find our products (link to AirConsole store) and make purchases.

Due to the need for an online presence, we also took it upon ourselves to set up a Google Business profile that gives us a handful of tools to use that makes advertising easier. Google Ad Services allows you to target certain internet users: i.e., we can find individuals who belong to our target audiences and selectively advertise to them. Google has provided our business with a $500 advertisement credit.
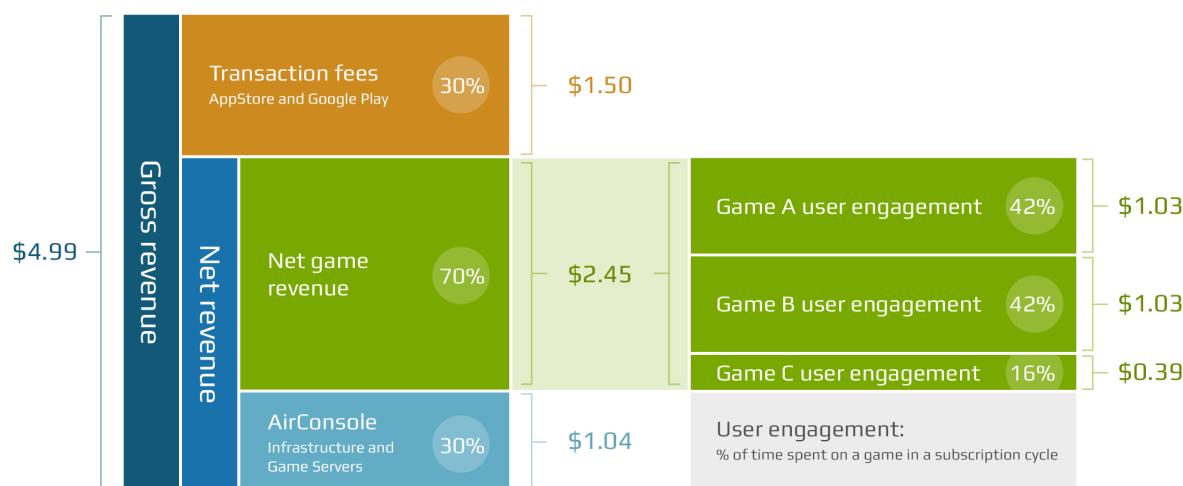
Another logical advertising platform to utilize would be social media. As video-game-players are already more technologically savvy than the average person, they are highly likely to also have social media accounts on platforms such as Facebook, Twitter, and

Instagram. It is convenient for us that social media marketing is a very cost-effective means of reaching mass audiences, costing around $5-10 per 1000 impressions.

One last advertising platform we are considering is YouTube. An ingenious new method of advertising these days is picking a YouTube creator who creates similar content to your own game and paying them to personally advertise your product for 5 seconds to 2 minutes. In our case, we would find a creator who plays couch-party games similar to Jackbox and pay them to mention our game or even create a video playing it. YouTube creators are a great way to reach an audience that is more likely to use your product because they already are interested in a similar product; otherwise, they wouldn't be watching that video.

Revenue Structure

Given that our game purchases are handled completely by AirConsole, we adhere to the revenue structure provided by them. All games run on AirConsole have advertisements to buy the pro version of AirConsole, which is the only cost on the users end, totalling at $5.99 currently. Seventy percent of the subscription cost is sent to the developer of the game depending on the user's engagement time.

Development

<u>Phase 1 (Mobile Device Connectivity)</u>

During phase one of production, development was very experimental. The task at hand consisted of connecting player smartphones as controllers to a host device that would run the game. Early development consisted of opening up WebSockets so multiple devices could interact with the website live. Opening different WebSockets would allow for connecting codes to coincide with multiple games at the same time, in which information could be sent and received from controllers and the host. This quickly proved to be incredibly difficult with the given development timeline and resources.

We started to investigate existing solutions to solve the problem of connecting multiple smartphones to a host. We discovered AirConsole, a platform that provides a link between Unity games and controllers through a JavaScript library. AirConsole also provided the aforementioned platform for the game. One incredibly appealing aspect of AirConsole was the efficiency of development and ample documentation provided.

<u>Phase 2 (Game Design)</u>

While experimental development concluded, we developed a flowchart to showcase (Figure 01) the game mechanics and round based system. This outline demonstrates a six-round structure which covers start to finish of what encompasses Party on Wall Street. With logic laid out throughout a visual, development is able to be outlined for efficiency.
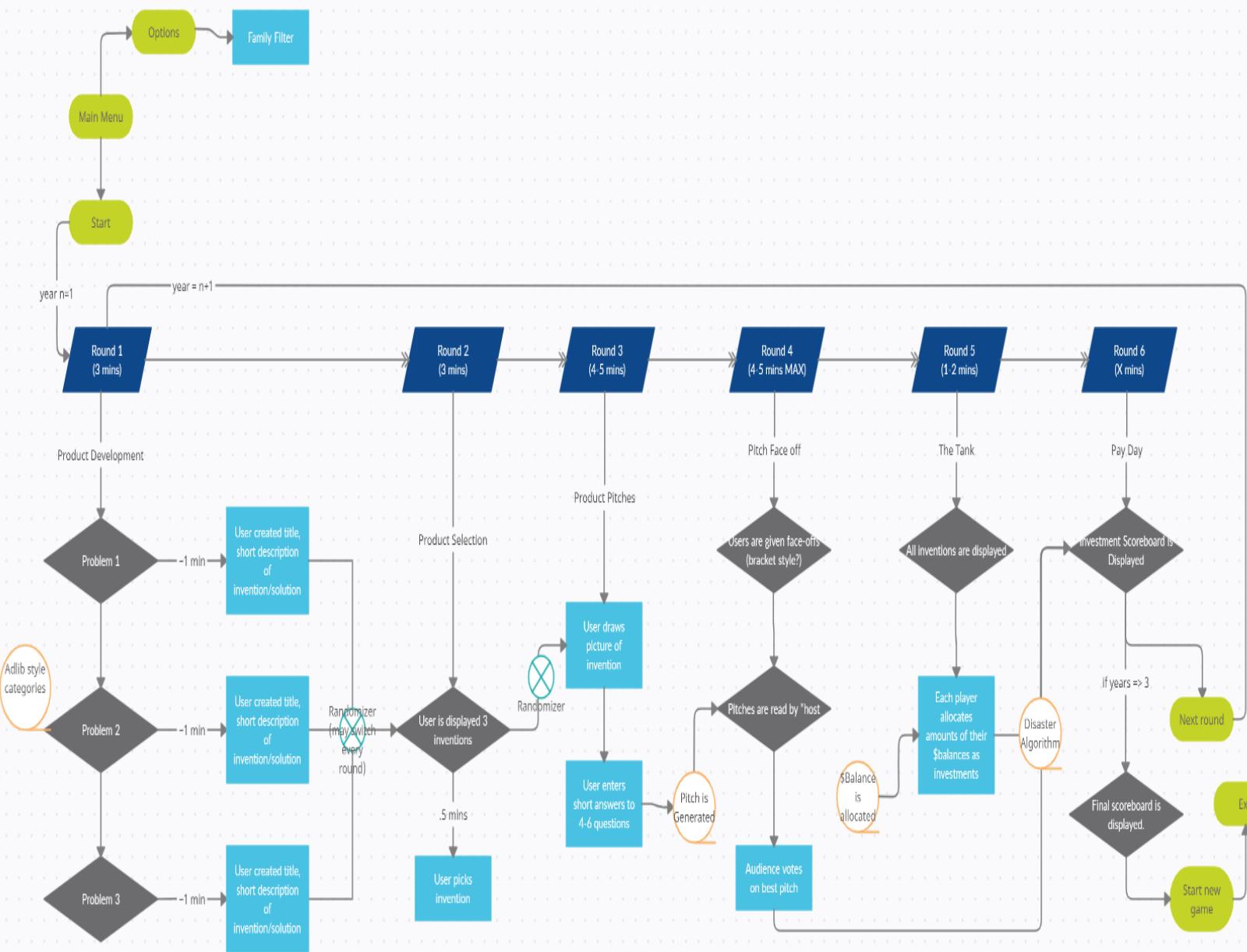
Figure 01: Game Design FlowChart

Round 1

Screen – Main Host: Host tells players to start thinking about titles/descriptions. There is a

timer animation, reminders for players to get ready.

Screen – Controllers: Players have problems on the top half of the screen, bottom half has two

text boxes, a title and description.

Round 1, Invention Creation

Round 2

Screen – Main Host: Host tells players to pick inventions. There is a timer animation, reminders for players to get ready.

Screen – Controllers: Players have inventions on top half of screen, bottom half lists three inventions that they must pick from.

Round 2, Invention Selection

Round 3

Screen – Main Host: Host tells players to draw inventions. There is a timer animation, reminders for players to get ready.

Screen – Controllers: Players have inventions on top half of screen, bottom half lists two inventions that they must pick from in the showdown.

Round 3, Invention Drawing

Round 4

Screen – Main Host: Host tells players to draft a pitch. There is a timer animation, reminders for players to get ready.

Screen – Controllers: Players have four text boxes that ask for product qualities for the purpose of generating an enticing pitch.
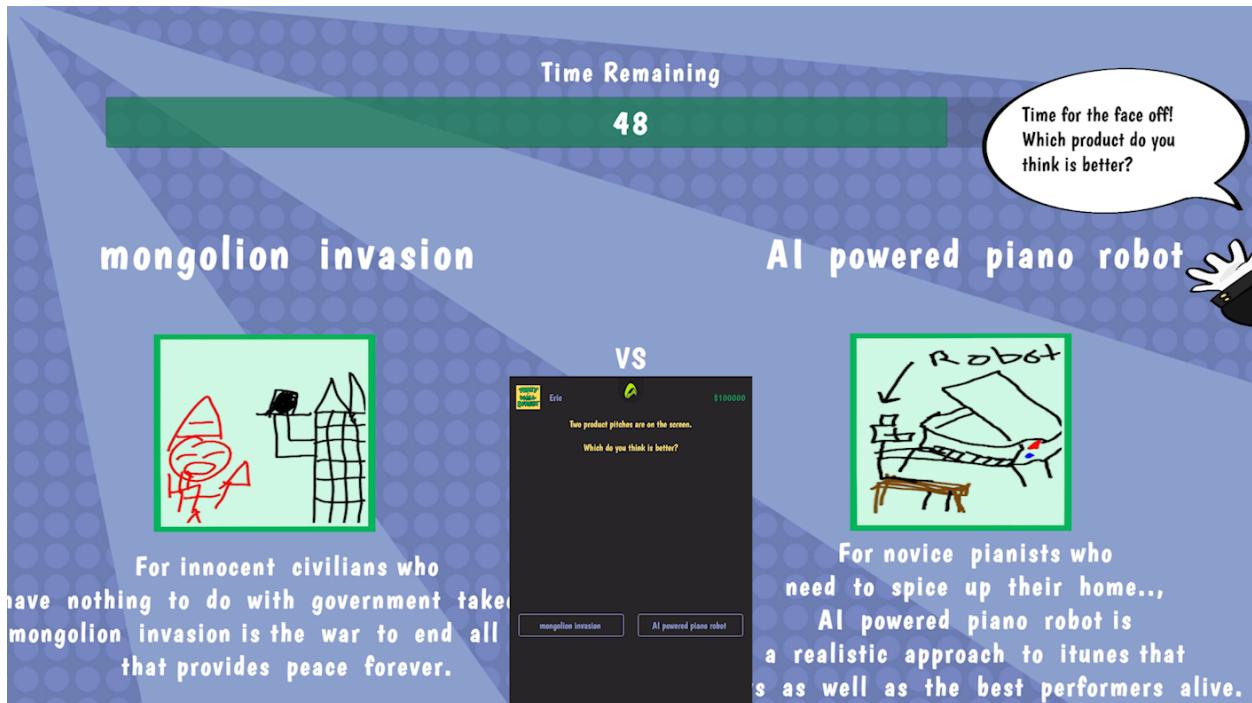
Round 4, Pitch Creation

Round 5

Screen – Main Host: Host displays brackets. There is a timer animation, reminders for players to get ready.

Screen – Controllers: Players have inventions on top half of screen, bottom half lists the invention vote casting.
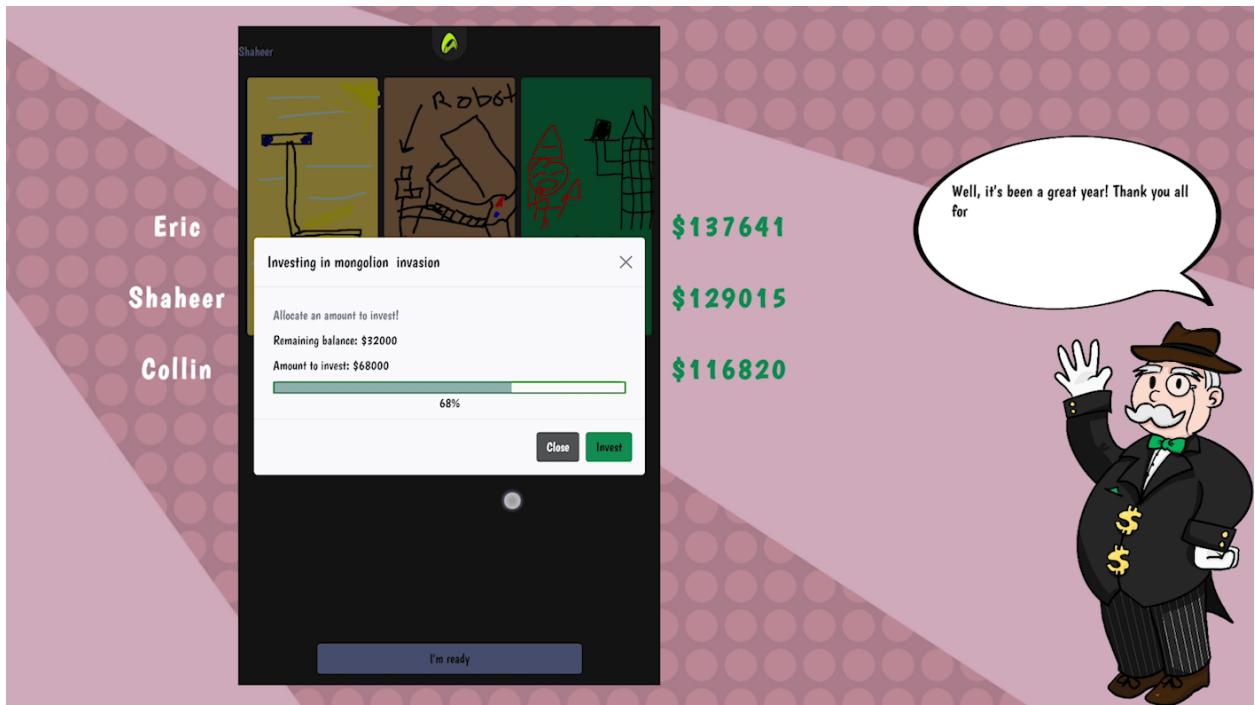
Round 5, Pitch Face Off

Round 6

Screen – Main Host: All products are displayed on the screen with their title, description, picture, and company name.

Screen – Controllers: Players allocated current dollar balance to invest with animated sliders, they must invest at least half their balance, or else the remaining portion will be randomly distributed.

Round 6, Investment Round

Round 7

Screen – Main Host: Players are notified of how well their product launch went through a simulation. The leader can elect to end the game or begin another round.

Screen – Controllers: Each player is rewarded money (or deducted money) depending on how well their investments were. The next year starts, and players go back to round one with their new balances. Now certain players have more money to invest for the next year, while others are left with failed investments, leading to varying risk/benefit analysis for the years to come.

Round 7, Investment Results

Phase 3 (Implementation / Development)

With AirConsole chosen as a platform, development now had a stable structure to be built upon. Visual Studio was utilized to manipulate C# scripts that were manipulated in Unity along with game objects to work on a scene live with changes being reflected as they were made. Unity also provided an efficient structure for pushing and pulling to sync changes with other contributors. HTML JavaScript was implemented to manage controller functionality. The interaction between controllers and the host game was implemented through C# to JavaScript message handlers and vice versa.

Once the logic based off the flowchart was implemented in development, the bulk of time was spent fixing bugs. There was an exorbitant number of bugs and challenges in development. Below are a few communicable examples of difficulties sought through:

- Players selecting random inventions out of a pool of all of them but their own.
- AirConsole requires a custom keyboard and does not allow a phone's default option.
- Handling players leaving mid game, random disconnects, low power mode.
- ROI algorithm scaling properly given voting and $ invested.
- Prompt problem generation that is truly random to ensure player options and creativity.

Phase 4 (Testing and Validation)

As development neared completion, game testing started with focus groups from multiple audiences, and the game is exemplified in the screenshots above.

References

Airconsole.com. 2022. [online] Available at:

<https://www.airconsole.com/file/AirConsole-Developer-Content-Policy.pdf>

[Accessed 30 April 2022].

Airconsole.com. 2022. [online] Available at:

<https://www.airconsole.com/file/AirConsole-Developer-Distribution-Agreement.pdf>

[Accessed 30 April 2022].

Developer.mozilla.org. 2022. *The WebSocket API (WebSockets) - Web APIs | MDN*. [online]

Available at: <https://developer.mozilla.org/en-US/docs/Web/API/WebSockets_API>

[Accessed 30 April 2022].

Developers.airconsole.com. 2022. *AirConsole API Documentation*. [online] Available at:

<https://developers.airconsole.com> [Accessed 30 April 2022].

Docs.microsoft.com. 2022. *Visual Studio documentation*. [online] Available at:

<https://docs.microsoft.com/en-us/visualstudio/windows/?view=vs-2022> [Accessed

30 April 2022].

Google Fonts. 2022. *Google Fonts*. [online] Available at:

<https://fonts.google.com/specimen/Boogaloo> [Accessed 30 April 2022].

Hinge Marketing. 2022. *A Two-Pronged Approach to Your Market Research Process -

Hinge Marketing*. [online] Available at:

<https://hingemarketing.com/blog/story/a_two_pronged_approach_to_your_market_res

earch_process> [Accessed 30 April 2022].

Party-on-wall-street.herokuapp.com. 2022. *Party on Wall Street*. [online] Available at:

<https://party-on-wall-street.herokuapp.com/> [Accessed 30 April 2022].

Technologies, U., 2022. *Unity - Manual: Interaction with browser scripting*. [online]

Docs.unity3d.com. Available at:

<https://docs.unity3d.com/Manual/webgl-interactingwithbrowserscripting.html>

[Accessed 30 April 2022].

Unity Documentation. 2022. *Unity Documentation*. [online] Available at:

<https://docs.unity.com/> [Accessed 30 April 2022].

Appendix

A: Thorough Survey Questions

Survey Questions

1. You were selected with the verification that you have played couch-party games such as Jackbox or Kahoot in the past. What is it about these games that are enjoyable and keep your attention?

2. You are also familiar with shows such as Shark Tank where entrepreneurship is the focus of the entertainment. What makes those enjoyable?

3. With the description you have been provided, what is particularly useful about utilizing a phone as the controller for this game? Is there an alternative approach you would prefer?

4. Do you have any alternative ideas or features that can be added to the game? What could make it more fun? What may teach entrepreneurship skills more thoroughly?

B: Short-Response Survey Results

Please follow the link below to view the results of the short-response survey.

https://drive.google.com/file/d/1mZkl1jSCZABeCqdT5g5-7HY7Y02zMZw5/view?usp=sharing

C: Short-Response Survey Results (Textbox)

Notable responses for Question #10:
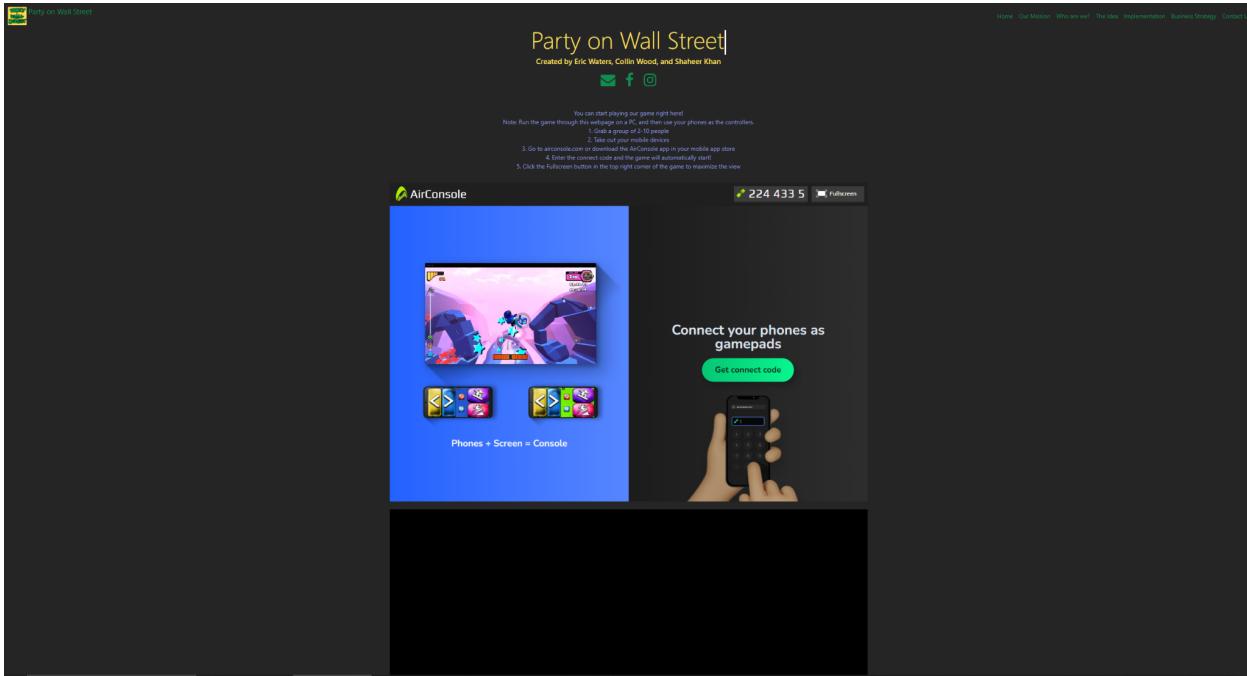
1. "I would make it card based where you can combine ideas drawn from cards to make an idea work for the pitch. If there's no template-based cards, it'll be hard for people to come up [with ideas due to a more casual and lighthearted setting]"

2. "Allow there to be a family friendly filter don't strictly focus on being just one be 50/50"

3. "The more content, the merrier!"

4. "Have a list of questions that challenges the players with niche edge cases, as well as nitty gritty details to make them really think."

5. "Require a model or visual"

6. "Encourage deceit"
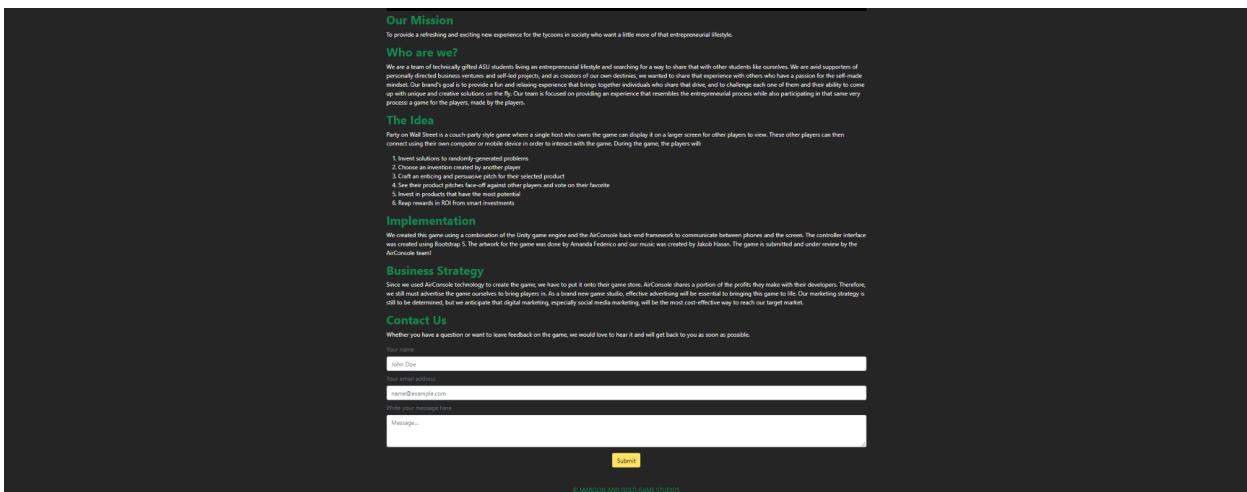
Notable responses for Question #11:

1. "A new drinking game"

2. "Rent a puppy, picture an app like renting scooters but to go play with puppies"

3. "Create a two-way marketplace for event hosts and vendors that digitally automates the party planning process without a 3rd party"

4. "24 hour cafe in Tempe so I can study somewhere other than my room."

5. "You want to buy this pencil"

6. "New spice"

7. "Exotic pet pounds"

8. "A company that recreates car chase scenes from movies with stunt drivers and paintball guns."

D: (Product Website)

Website home page with game launch window and trailer frame

Website home page with 'contact us' and project information