

CS408: Product Backlog

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Problem Statement

The video game industry is massive, and only growing every day. At the forefront of the industry is the MOBA (Multiplayer Online Battle Arena) genre. MOBAs are also well known for their toxic communities and steep learning curves. Currently, there are no resources for interactively learning about MOBA mechanics. Our game aims to bridge the gap between beginner and learner by introducing the player to the control scheme and camera style of a MOBA. The game will challenge the player by having them face hordes of enemies that come in waves at a time in order to earn a high score on the leaderboard.

Background Information

A lot of complicated online multiplayer games can be intimidating to beginners who have no experience. This is an issue because some video games have very few new players coming in because of the complexity and the mock from the old players. Therefore, we aim to make a small and easy MOBA-like game for beginners to try out in the browser which requires no installation.

Environment

For our environment, we plan on using the open source online game framework such as Phaser. This utilizes HTML5, WebGL and JavaScript. We will be using Google Firebase as a database.

Functional Requirements

Backlog ID	Functional Requirement	Hours	Status
1	As a User, I would like to be able to start a new game	4	Sprint 1
2	As a User, I would like to be able to play as different characters	15	

3	As a User, I would like to be able to play against an AI opponent	8	Sprint 1
4	As a User, I would like my character to have MOBA like abilities	20	Sprint 1
5	As a user, I would like to view leaderboards containing high scores	8	
6	As a User, I would like to play on a unique designed map	4	Sprint 1
7	As a User, I would like to be able to pause the game	4	
8	As a User, I would like my abilities to have cooldowns	3	Sprint 1
9	As a user, I would like to see how many enemies remain in the wave	2	
10	As a user, I would like to enter my name into the leaderboard after my game	2	
11	As a user, I would like the game to have sound	6	
12	As a user, I would like to be able to mute the sound	2	

13	As a User, I would be able to pick up power-ups to boost my characters stats in game	5	Sprint 1
14	As a user, I would like to have a shop where I can purchase stat upgrades with in-game currency	6	
15	As a user, I would like the difficulty to increase with each wave of enemies	6	
16	As a User, I would like to know when I have won or lost the game	4	Sprint 1
17	As a user, I would like to face against a variety of enemies	10	
18	As a user, I would like the environment to be partially destructible	5	Sprint 1
19	As a user, I would like information in the game to be clearly displayed (things like health, exp, gold, etc.)	8	Sprint 1
20	As a user, I would like a main menu at the start where I can do things like check the leaderboard or start a new game.	10	Sprint 1
		Total: 130	

Non-Functional Requirements

As a user, I would like the game to load quickly when opening the browser

As a user, I would not want the game to crash

As a user, I would like the game to have good looking graphics

As a user, I would like to have a fluid and fun gaming experience

As a developer, I would like to have good scalability

As a developer, I would like to host the game on a server

Use Cases

Case	Actions	Responses
1 Start new game	1. Click 'Start Game' button on the main menu	2. Select character screen appears
2 Play different characters	1. Click on a character in character selection screen 3. Click on confirm selection	2. A brief description of the character appears 4. A new game begins with that character
3 Play against AI	1. Game begins 3. User moves or acts in game	2. Enemies spawn in 4. Enemies intelligently respond to players position
4 Have MOBA abilities	1. Click on 'q', 'w', 'e', or 'r'	2. The corresponding ability happens in the game and goes on cooldown
5 View leaderboards	1. User clicks on 'view leaderboard'	2. A leaderboard of every user's submitted high score is displayed
6 Have unique map	1. User loads into game	2. Map displays for User

7 Pause game	<ol style="list-style-type: none"> 1. User clicks pause button in game 3. User clicks resume 	<ol style="list-style-type: none"> 2. Game pauses and menu pulls up to wait for resume 4. Game resumes
8 Cool down abilities	<ol style="list-style-type: none"> 1. User casts ability 	<ol style="list-style-type: none"> 2. Ability is uncastable for cooldown duration
9 Number of enemies remaining	<ol style="list-style-type: none"> 1. Game or new round begins 3. Enemy killed 	<ol style="list-style-type: none"> 2. Number of enemies is displayed on screen 4. Number of enemies displayed decreases
10 Enter a name for leaderboard	<ol style="list-style-type: none"> 1. A game ends 3. Enter name 4. Confirm entry 	<ol style="list-style-type: none"> 2. A text input appears 5. The name is added to the leaderboard with a score
11 Have sound	<ol style="list-style-type: none"> 1. Begin the game 3. User uses abilities 	<ol style="list-style-type: none"> 2. Sound plays from the user's device 4. Sound plays from the user's device
12 Mute sound	<ol style="list-style-type: none"> 1. User click the mute button 2. User clicks the mute button 	<ol style="list-style-type: none"> 2. Sound cuts off immediately 4. Sound resumes
13 Pick up power ups	<ol style="list-style-type: none"> 1. User moves character over a powerup 	<ol style="list-style-type: none"> 2. User's character's stats are increased according to the powerup gained
14 Have a shop	<ol style="list-style-type: none"> 1. User clicks on shop icon 3. User clicks on an item to buy 	<ol style="list-style-type: none"> 2. The shop is displayed in the game 4. Item is purchased, subtracting the gold amount and adding stats

15 Difficulty increase each wave	<ol style="list-style-type: none"> 1. Clear all enemies on screen 3. Begin next round 	<ol style="list-style-type: none"> 2. The game moves on to the next round 4. Enemies this round have higher stats (speed, health, etc.) than previous round)
16 Won or Lost	<ol style="list-style-type: none"> 1. Win condition reaches 3. User health reaches 0 	<ol style="list-style-type: none"> 2. Display victory and show the main menu 4. Display you lost and show the main menu
17 Variety of enemies	<ol style="list-style-type: none"> 1. User clears the first wave 	<ol style="list-style-type: none"> 2. Game beings to spawn different enemies as more and more waves get cleared.
18 Destructible environment	<ol style="list-style-type: none"> 1. User deals lethal damage to environment object 	<ol style="list-style-type: none"> 2. Environment object is destroyed and removed from the environment
19 Information displayed	<ol style="list-style-type: none"> 1. User starts the game 	<ol style="list-style-type: none"> 2. Relative information to the game such as health bar and skills icon show on the screen
20 Main menu	<ol style="list-style-type: none"> 1. User opens game 	<ol style="list-style-type: none"> 2. The main menu is displayed containing things like 'start new game' and 'view leaderboard'