

# Obsidian Ark

## Team 27 Product Backlog

*Yi Dou, Danny Zou, Jordan Stoddard, Devon Lee, James Hawk*

### **Problem Statement**

Quick-play games are quite popular in modern day gaming due to their simple concepts that allow players to jump right into the action. However, the majority of these games are usually limited to single genres. As developers, we'd like to create a 2D-adventure game that incorporates RPG elements, horde-style fighting, and a diverse set of maps. As such, this offers players a wider range of choices and gameplay while retaining the simplicity that comes with a quick-play game.

### **Background Information**

Gaming is a large and diverse industry, and every member of our team is undoubtedly familiar with the countless genres that each game is built upon. We've noticed however, that the players who are looking for a quick, easy-to-start and easy-to-finish game are somewhat restricted in variety. Many of these quick-play games are built around a single context, such as The Binding of Isaac's roguelike dungeon crawler. Our goal is to build a game that players can jump right into and are not limited in gameplay. To do this, we plan to combine genres like RPG, seen in larger games such as Skyrim or Final Fantasy, with genres like hack-and-slash that are popular among smaller, quick-play games such as Hero Siege. This will allow users to experience more of each genre, while maintaining the session-based gameplay that quick-play games are known for.

### **Environment**

We will build the bulk of the game in Javascript on top of a game framework such as Phaser.io or Pixi.js. The majority of the saved data (such as account information, rewards and scores) will be stored in a MySQL database hosted on any cloud server such as AWS or Azure.

## Requirements

### Functional

Backlog ID	Functional Requirements	Hours	Status
1	As a user, I would like to be able to create an account	5	Completed in Sprint 1
2	As a user, I would like to be able to login to my account	3	Completed in Sprint 1
3	As a user, I would like to be able to change my password	2	Completed in Sprint 1
4	As a user, I would like to be able to see my highscores	2	Completed in Sprint 2
5	As a user, I would like to be able to select a map	2	Completed in Sprint 1
6	As a user, I would like to be able to see global high scores	3	Completed in Sprint 2
7	<del>As a user, I would like to be able to see my unlocked rewards</del>	3	Sprint 2
8	As a user, I would like to be able to choose a starting difficulty	2	Completed in Sprint 1
9	As a user, I would like to be able to navigate the menu options	4	Completed in Sprint 2
10	As a user, I would like to be able to stop a session at any point	2	Completed in Sprint 1
11	<del>As a user, I would like to be able to choose upgrades</del>	4	Sprint 2
12	As a user, I would like to be able to control my character	2	Completed in Sprint 1
13	As a user, I would like to be able to pause the game	4	Completed in Sprint 1
14	As a user, I would like to be able to gain experience and gold after defeating an enemy	2	Completed in Sprint 2

15	As a user, I would like to be able to start with stronger enemies if I choose a higher difficulty	1	Completed in Sprint 2
16	As a user, I would like to be able to use different weapons to fight (to be more test-friendly, press Q to change weapon as you change class)	4	Completed in Sprint 2
17	As a user, I would like to be noticed and attacked if I'm in enemy's sight	2	Completed in Sprint 1
18	As a user, I would like to see the enemy get knocked back if I deal enough damage to it	2	Completed in Sprint 2
19	<del>As a user, I would like to spend my gold/points from a shop for better weapons</del>	2	Sprint 2
20	As a user, I would like to be able to find power-ups around the map	1	Completed in Sprint 2
21	<del>As a user, I would like to spend my skill points to upgrade skills after level up</del>	2	Sprint 2
22	As a user, I would like to be invincible for a short time back if attacked by enemy's attack	2	Completed in Sprint 2
23	As a user, I would like to see my final score after my character dies	1	Completed in Sprint 2
24	<del>As a user, I would like to be able to fight with a boss after defeating enough enemies</del>	2	Sprint 2
25	As a user, I would like to hear the bgm while playing the game	3	Completed in Sprint 2
26	As a user, I would like to see mob spawns every few seconds	3	Completed in Sprint 2
27	As a tester/developer, I would like to have some dev tools that convenient for testing	2	Completed in Sprint 2

## **Nonfunctional**

Backlog ID	Nonfunctional Requirements	Hours	Status
1	As a developer, I would like player account information to be secure	15	Completed in Sprint 1
2	As a developer, I would like to efficiently handle up to 50 entities on the screen	7	Completed in Sprint 2
3	As a developer, I would like to have a server to store the scores of players	7	Completed in Sprint 2
4	As a developer, I would like to have the server store account information	8	Completed in Sprint 2
5	As a developer, I would like to learn common game development practices	20	Complete
6	As a developer, I would like to improve my Javascript programming	20	Complete
7	As a developer, I would like to learn how to correctly debug my game	20	Complete

## Use Cases

### Case: Account Creation

Action	Response
1. Click "Sign up" at the menu	2. Display sign up screen
3. Input password and username	4. Display username and hide password
4. Click "Submit" button	5. Display login screen

### Case: Login

Action	Response
1. Input username and password	2. Login user
3. Login is successful	4. Display the game menu
5. Login unsuccessful	6. Return to login screen

### Case: Change password

Action	Response
1. Click 'Change password' at the menu	2. Display change password screen
3. Input username and old password, and new password	4. Change the user's password to new password
4. Click "Submit" button	5. Display success/error message
	6. Display login screen

### Case: Start a game session

Action	Response
1. Login	2. Display main menu
3. Click 'Play'	4. Display map selection screen
5. Select a map and difficulty	6. Begin game session

### Case: Pause the game

Action	Response
1. Hit the pause button	2. Display pause screen
3. Click resume button	4. Remove pause screen and resume gameplay

### Case: Control character

Action	Response
1. Hit direction control keys	2. Character moves in the selected direction
3. Hit action/attack key	4. Character attacks towards current direction

### Case: Choose upgrades

Action	Response
1. Select upgrades	2. Show currently selected upgrades

### Case: Logout

Action	Response
1. Click 'Logout' button	2. Log user out
	3. Display login screen

### Case: Gain exp and gold

Action	Response
1. Use attack action to defeat enemy	2. Add golds and experience points to player
	3. If experience reach the required amount, player will level up

### Case: Change difficulty

Action	Response
1. Select desired difficulty at the screen display after clicking "start game"	2. Enemies will get a multiplier to their health point and power

### Case: Enemy/Player action - knock back

Action	Response
1. Player/enemy get attacked by some heavy attacks	2. Player/enemy get knocked one step back

### Case: Character Death

Action	Response
1. Player character's health point reach zero	2. Game displays "game over" screen with final score and "return to main menu" button

### Case: Shop

Action	Response
1. Interact with a shop in the game map	2. Display shop screen
3. Select one of 'Purchase', 'Sell' or 'Exit Shop' button	4. Display relative screen (purchase or sell)
	5. Back to game (exit shop)

### Case: Treasure box

Action	Response
1. Interact with a treasure box in the game map	2. Obtain an item and treasure box disappear