



GAME DESIGN DOCUMENT (GDD)

Team Name:

Game Group 5

Team Members:

Drew Barlow

Kirk Caponpon

Dominic Verardi

Daniel Mack

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Date:

2/20/2022

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Revision History:

Date	Version	Description	Author
2/20/2022	1.0	Document initialization	Dominic Verardi
2/23/2022	2.0	Filled all of the sections of the document to get a basic understanding of what our game is.	Devin Pesmark Kirk Caponpon
2/23/2022	3.0	Made minor edits to document format and style.	Drew Barlow
3/16/2022	3.5	Determined what each team member will do	Drew Barlow Kirk Caponpon Dominic Verardi Daniel Mack Devin Pesmark
4/2/2022	4.5	Began the main menu	Drew Barlow
4/2/2022	4.5	Begin working on the player movement	Kirk Caponpon
4/4/2022	4.5	Created Basic Scene and Collision Layer	Dominic Verardi
4/5/2022	4.5	<ul style="list-style-type: none"> Got together to discuss the cuts needed for the game started working on the game with everyone having individual duties 	Everyone
4/5/2022	4.5	Added better Collision Handling Method	Dominic Verardi
4/7/2022	4.5	Added animation and collision to enemies	Devin Pesmark
4/11/2022	5.0	Added the Shotgun Script to the Player	Kirk Caponpon
4/11/2022	5.0	Added in movement to Player from Kirk to scene and player prefab	Dominic Verardi
4/12/2022	5.0	Added more items for the Shop	Daniel Mack
4/12/2022	5.0	Added attacking abilities for skeleton	Devin Pesmark
4/12/2022	5.0	Began the pause menu	Drew Barlow
4/12/2022	5.0	Created Power Ups, Coin Drops, and added Devins and Kirks prefabs for enemies and shooting	Dominic Verardi
4/13/2022	5.0	Added barrel enemy Added thief enemy	Devin Pesmark
4/13/2022	5.0	Added Player Health Bar and Organized the team	Kirk Caponpon
4/17/2022	5.0	Added Boundaries for player	Dominic Verardi
4/18/22	5.0	Finished pause menu and main menu Added death screen	Drew Barlow
4/18/22	6.0	Added final enemy	Devin pesmark
4/18/2022	6.0	Added more sprites and gameobjects onto the main map and fixed some bugs	Kirk Caponpon

4/19/2022	7.0	Added Sounds and updated Screen Bounds Script	Dominic Verardi
4/21/2022	7.0	Added different damage based on Enemy to Player Stat Script	Dominic Verardi
4/20/2022	7.0	Added the level design and help implement the enemy spawning into the main scene	Kirk Caponpon
4/20/2022	7.0	Added UI into the main scene	Drew Barlow
4/20/2022	7.0	Added enemy spawning and timer	Devin Pesmark
4/21/2022	8.0	Added enemy slides to presentation	Devin Pesmark
4/21/2022	8.0	Remove Item Shop from the game	Daniel Mack

Game Name

Treasure Hoarder

Genre

Pirate Action Roguelike

Game Elements

Avoiding and shooting at enemies, while collecting drops (from killing enemies) that helps the player purchase player upgrades in the in-game store. While playing in-game, the player is able to pick up drops that exponentially helps the player defeat more enemies.

//Game elements are the basic activities the player will be doing for fun

Player

Single player game

GAME PLAY

The player has to survive against a horde of enemies for a certain time period that are constantly coming at them from all directions with their only available action being to use their weapons against the enemies and dodge the enemies. This “endless wave” based system will only end once the player has perished or once the maximum time frame has been reached. Once the player has lost they’ll be able to purchase permanent upgrades in a shop to be able to survive for longer in the next run. This gameplay loop will continue with the main objective of the player to get more and more powerful and be able to survive longer and longer against the waves of enemies.

//Describe how the game is played.

Game Play Outline

This outline will vary depending on the type of game.

- Opening the game application - will prompt player to press any button, bring them to the main screen

•Main Menu

1. Press Play - starts game
2. Options
 - i. Slider to adjust volume
 - ii. Controls
 - a. Show how to play
3. Shop
 - i. Purchase permanent main upgrades for the player
4. Exit - Exits game

•Story synopsis

1. You are an infamous pirate that has recently gone into retirement on a deserted island with the vast riches you’ve accrued over the years. The other pirates have gotten greedy and believe you to be old now and not much of a threat and are trying to steal your gold. You must defend against these pirates and monsters whose goal is to steal your treasure.

- Game elements

1. Enemies
2. Pirate
3. Weapons
4. Drops
5. Shop

- Game levels - There will be one main level being the island

- Player's controls

1. W - move up
2. A - move left
3. D - move right
4. S - move down
5. Mouse - aim
6. Left Mouse Button - shoot pistol or shotgun
7. 1 - change weapon
8. 2 - change weapon

- Winning

1. The player would survive given a certain time duration after defeating waves of enemies.

- Losing

1. The player would lose all of their health because the enemies have depleted the player's health bar.

- End

1. The player would either win or lose.
2. The player could also exit out of the application.

- Why is all this fun?

1. It has replayability in that the player is challenging themselves to get farther and farther in the waves of enemies after each run.
2. It's fun due to the player being able to move around and be able to dodge certain obstacles, while still dodging enemies

Key Features

- Shop System & Random Drops
 - the shop is in the menus
 - the shop allows the player to upgrade their arsenal
 - Perminate speed upgrade
 - Health increases
- Enemies - There will be constantly spawning enemies around the player whose goal is to move towards that player and damage them when coming in contact.
- Pirate - This will be the main character that the player will be able to control to fight against the enemies
- Weapons - These will be abilities that the player can use to deal damage to the enemies. These weapons will have a cooldown for each with the cooldown denoting how often the player can use those weapons. There will be no other limiting factor other than the cooldown which affects the weapons.
- Drops - These upgrades will be dropped randomly by enemies throughout a "run" (A run in this case is a full play through from pressing play until the player dies to the enemies). These upgrades are short duration speed boost or a bomb that destoryes all enemies on screen.

//Key features are a list of game elements that are attractive to the player

Mechanics

- The player will be able to move with WASD to stay away from the enemies and aim with the mouse. They can shoot their basic weapon being the pistol with Left Mouse Button.
- The number keys of 1 and 2 will be used to switch to other weapons that the player can unlock in the game.
- The enemies will be locked onto the player and are constantly moving towards them at a given speed.

//Describe how GameObjects behave, how they're controlled and their properties. This is often referred to as the "mechanics" of the game. This documentation is primarily concerned with the game itself.

Game Design Definitions

- **Gameplay**
 - The player would move and shoot around avoiding enemies from getting close to them, while having the objective of surviving for a set amount of time. If the player survives at the set amount of time, a final boss would appear. In the opposite manner, if the player dies within the time limit, they would lose. This random drop of upgrades would allow the player to have an easier time of surviving.

//This section established the definition of the game play. Definitions should include how a player wins, //loses, transitions between levels, and the main focus of the gameplay.

Role	Team Member
Setting up the project	Drew
Creating the User Interface (Menu, Shop, Levels)	Kirk & Daniel
Building the Game Scene	Dominic
Getting the Assets/Objects	Kirk & Devin
Writing the C# code for various actions/methods/procedures (Refer to Programming Section)	All
Outlining and implementing the game rules	Devin
Sounds	Dominic
Programming (Sub-Section):	Team Member
Enemy Prefabs	Dominic
Player	Kirk
Menu/Pause Buttons	Drew

Actions/Skills	Dominic & Kirk
Shop	Daniel
Boss/Enemy that instakills you	Devin
Enemy Tracking	Devin

Cuts needed

- two weapon needed
 - pistol
 - shotgun
- shop is going to be in game
 - one weapon off the shop
 - damage boost
 - speed boost player
- 15 minutes until a big enemy changes
- 2 different enemy
 - one shooting
 - one following you around
 - enemies drop money for the shop

What needs to be done by next week?

- Player:
 - health and collisions
 - Bullet damage
- Finalize shop
 - Figure out a way to add shop into Dom's Scene
 - chest opens when you access the shop
- UI is almost done, just finalize
- Enemies:
 - just different stats and a bit of different animation
 - pirate themed
- World:

- pretty it up
 - shop location
- Sounds:
 - background music
 - player shooting sound
 - enemies dying
- Big Enemies comes at 15 minutes
 - One shots player
- On player death
 - Game Over Screen (General Screen)
 - Reset Button
 - Back to Menu