

Softbox Studios

# *Booty Bat*

# *Game Design Document*

V1.0

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## Game Overview

### Concept

Booty Bat is a 2D sidescroller, where keeping airborne and accurate is the key to survival. A pirate bat braves the depths of a cursed cave to retrieve the treasure left there by the greatest pirates on the Seven Seas, The Big Booty. The player faces off against evil skeletons, parrots, and other baddies when flying through the dangerous cave avoiding spikes, cascades of rushing water, and all sorts of environmental hazards.

### Gameplay Summary

The player, a bat, has the ability to fly. Using this, the player dodges attacks, environmental obstacles, and traverses the level. When the player is in flight mode they must continue to flap to gain altitude, because “gravity is the only law that applies to pirates”. Hidden in the cave are tons of collectibles and secrets that the player finds, these impact the player’s score. The player isn’t helpless, Booty Bat has the ability to fire an ultrasonic projectile that damages and destroys enemies and some obstacles. The player uses all of these abilities to make it through the maze-like cave and find the treasure that awaits at its center.

## World

### Overview

The world of Booty Bat is a cartoonish, colorful world that is not without its dangers. The island that is being played through features crystal clear oceans and lush tropical jungle that surrounds an underground cavern that is ripe with dangers and treasure alike.

## Characters

### Player

- Booty Bat
  - The hero of this story and the player character. Booty Bat is a young pirate who has heard stories of the treasure “Big Booty” all his life. He started his naval career early, stowing away in a fruit merchant’s ship and was made cabin boy after he was found.



### Enemies

- Pico



- Bubbles



- Clammy



- Doots McKenzie

## Mechanics and Metrics

### Measurements

- One block is made up of 32 X 32 pixels
- Level 1 is 37 X 136 blocks
- Level 2 is 39 X 64 blocks
- Level 3 is 39 X 64 blocks
- Booty Bat is 2 blocks tall

### Movement Metrics

- The player moves right and left at a rate of 2.5 blocks per second
- The player falls at a rate of 2 blocks per second

### Flapping

Gravity continually affects the player during flight, and to stay aloft he must flap his wings. The player must always keep in mind Booty Bat's altitude to make sure that the player doesn't run into the multitude of hazards in each level. Each flap increases his upward momentum, creating the scenario where rapidly tapping the flap button ends with the player running right into a hazard or enemy.



### Flapping Metrics

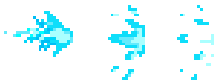
- One flap increases the player's height by 2 blocks
- The player drops at 1 block per second

### Health Metrics

- The player has three health points
- All enemies do 1 damage to the player
- Vertical traps (Coconuts, Stalactites and Arrow Traps), Horizontal Traps (Arrow Traps), pits, and Stalagmites do 1 damage to the player
- The player receives damage, temporarily invincible engages for 2 seconds.

### Player Attack

Booty Bat has another ability that the player uses to survive the challenges in this game, the ability to fire projectiles. These ultrasonic waves that Booty Bat emits destroy certain types of blocks and all enemies, though some are tougher than others. The wave fires in the direction of the on-screen cursor, allowing players to stay mobile while still accurately hitting targets. Each time the player begins a level, players are given one projectile to fire and are able to increase the amount of stored projectile by collecting coins.



### Player Attack Metrics

- Projectile is 16X16 pixels
- Moves at a rate of 5 blocks per second
- Does 1 point of damage

- Fires at a rate of 1 shot per 2 seconds

## Enemies

- **Melee Ground Enemy**

- Skeleton
- These enemies have 1 health
- They patrol horizontally, up to 10-12 blocks moving left and right
- Moves at a rate of 2.5 blocks per second.



- Hermit crab
- These enemies have 1 health
- They patrol horizontally, up to 10-12 blocks moving left and right
- Moves at a rate of 2.5 blocks per second



- Parrot
- These enemies have 1 health
- They patrol horizontally, up to 10-12 blocks moving left and right
- Moves at a rate of 2.5 blocks per second



- **Ranged Ground Enemy**

- Clam
- These enemies have 1 health
- The clam is 2X1 blocks in size
- Fires a projectile every second at a rate of 3 blocks per second in an arc



## Hazards

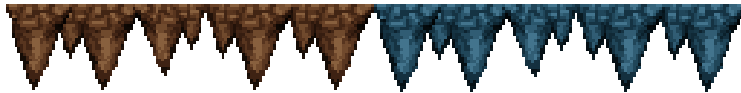
- **Coconuts**

- A vertical hazard that causes coconuts to fall based on a global timer
- Each time the player comes into contact with the falling coconuts the player loses one health
- This hazard appears in the first stage of the game
- Falls when the player enters a nearby trigger collider at a rate of 3 blocks per second



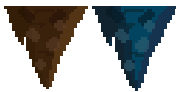
- **Stalagmites**

- A horizontal hazard of rock that gather in a line
- Each time the player comes into contact with the stalagmites they lose one health
- This hazard appears in the second stage of the game



- **Falling Stalactites**

- A vertical hazard of rocks falling based on a global timer
- Each time the player comes into contact with the rocks they lose one health
- This hazard appears in the second stage of the game
- Falls when the player enters a nearby trigger collider at a rate of 3 block per second



- **Arrow Trap**

- A horizontal hazard that shoots based on the same global timer as the falling stalactites
- These hazards appear in the second stage of the game
- Fires when the player enters a nearby trigger collider at a rate of 4 blocks per second





## **Game Flow**

The game begins on the beach with Booty Bat, controlled by the player, learning how to use the skills acquired from Booty Bat's years of piracy to traverse the land, an environment that is filled with dangers.

The player begins on Booty Bat's ship, which has come aground right next to a tutorial marker, that shows the player how to flap. Adjacent to this marker is a very large dune that the player must flap up to using the knowledge that is conveyed by the tutorial. Now understanding how to navigate, the player goes to the next dune that has another tutorial marker that shows how to attack and an enemy to practice on. At the end of the level the player must use the projectile to break into the cave, making sure that the player fully understands how to attack and interact with the environment. The player, now familiar with how to control Booty Bat, enters the Cursed Cave.

The second level consists of going through a more enemy and hazard filled area, because the closer the player gets to the pirate treasure the more guards and dangers there are to stop them from continuing. This adds new sets of both ground/ceiling and ranged hazards that the player must utilise both their combat and traversal knowledge to make it through and find the treasure.

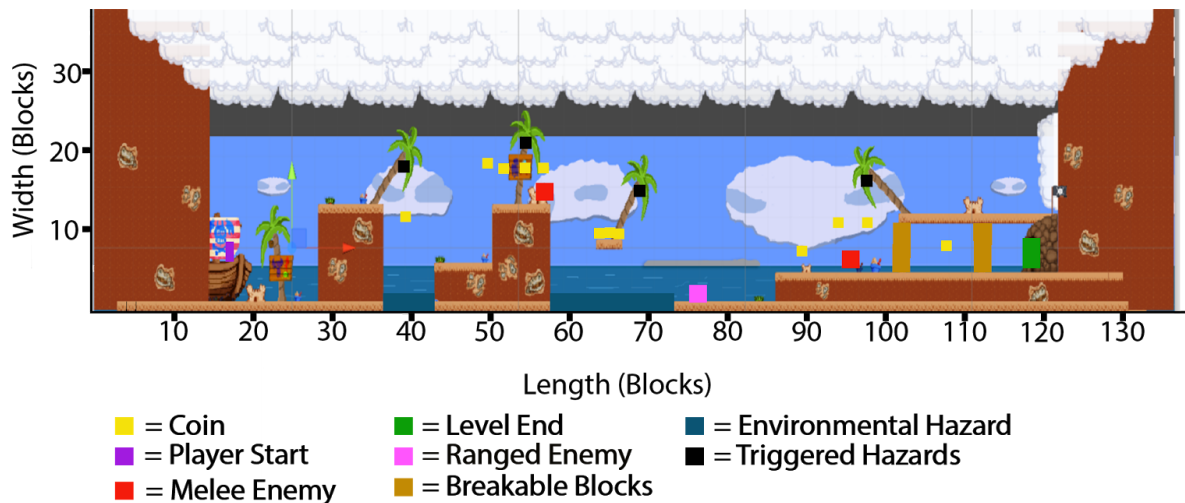
The third and final level features similar characteristics of the second stage, though with a different design towards it. The hazards are more compact, requiring players to be precise with controlling Booty Bat through the hazards in order to avoid damage.

## Locations

- **The Beach**

A serene beachfront where Booty Bat first lands, this area serves as the setting for the first stage/tutorial. It's large dunes, deep blue water, and swaying palms provide the perfect open environment to help players familiarize themselves with how to control Booty Bat and how the game works

Level 1: The Beach

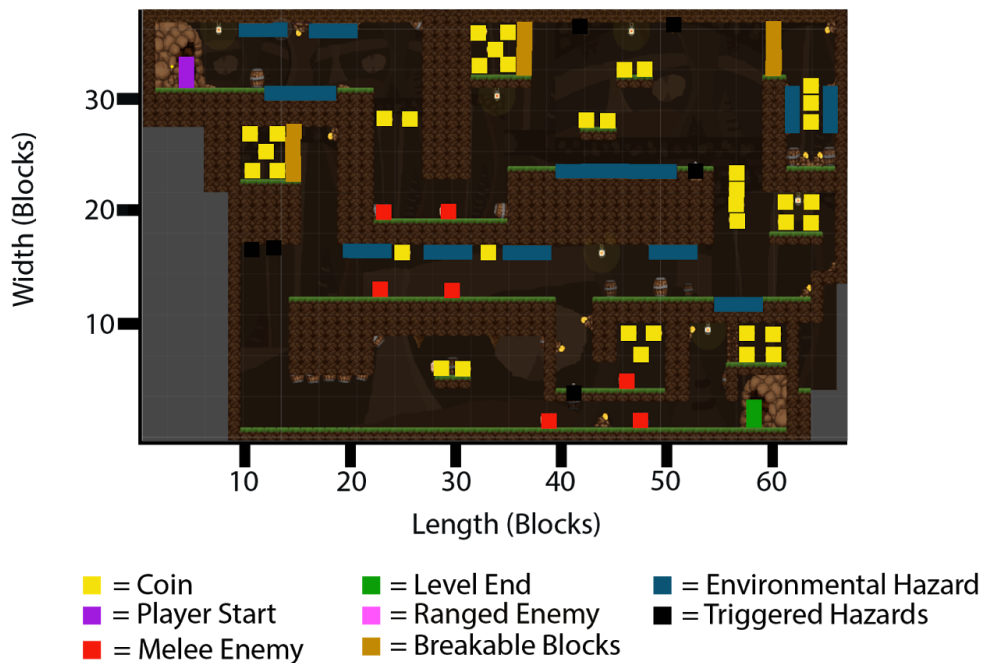


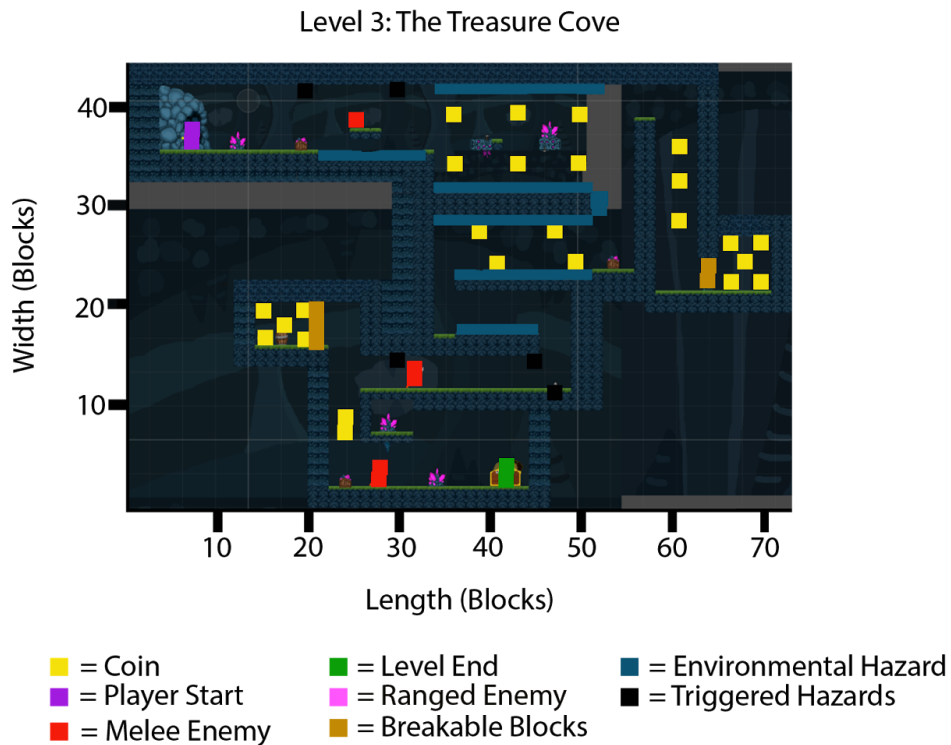
- **The Cursed Cave**

A place of both great reward and great danger, the Cursed Cave is the resting place of the greatest treasure in all of the Seven Seas. Home to powerful magic and deadly traps, this cave is filled with the bodies of the pirates and adventurers that came before, looking for the same thing Booty Bat is looking for, fame, respect, and most of all, riches. While the entrance to the cave looks unassuming, its depths hold many dangers, from falling rocks to the reanimated skeletons of the ones who failed to survive the caves many hazards. At its center though, lies the Crystal Core that holds the The Big Booty.

The Cursed Cave is split into two different section; the Gold Mine and the Treasure Cove. Each feature a different stage layout and color palette. the Treasure Cove, being much deeper in the earth than the Gold Mine, is a darker and more foreboding area. The first stage consist of an earthen tone, showing that they are about to enter a dangerous area. The second stage has a more dark foreboding feel, to show that players are deeper in the cave, where there are even more deadly hazards and new traps.

Level 2: The Gold Mine





## Collecting

Throughout the island are treasures that the player collects increases their score. These pickups are coins and is one of the means players are able to increase their final score after reaching the end of the game. At the end of the game the player's final score is tallied and shown to the player. This feature adds replayability towards the game, as it encourages more hardcore players to beat their own high scores and the high scores of their friends. In addition to being used as a means of increasing player's final score, collecting coins are the only means players have to increase the amount of projectiles held by the player. Both of these mechanics combined provide ample incentive for the player to explore the levels and collect coins.

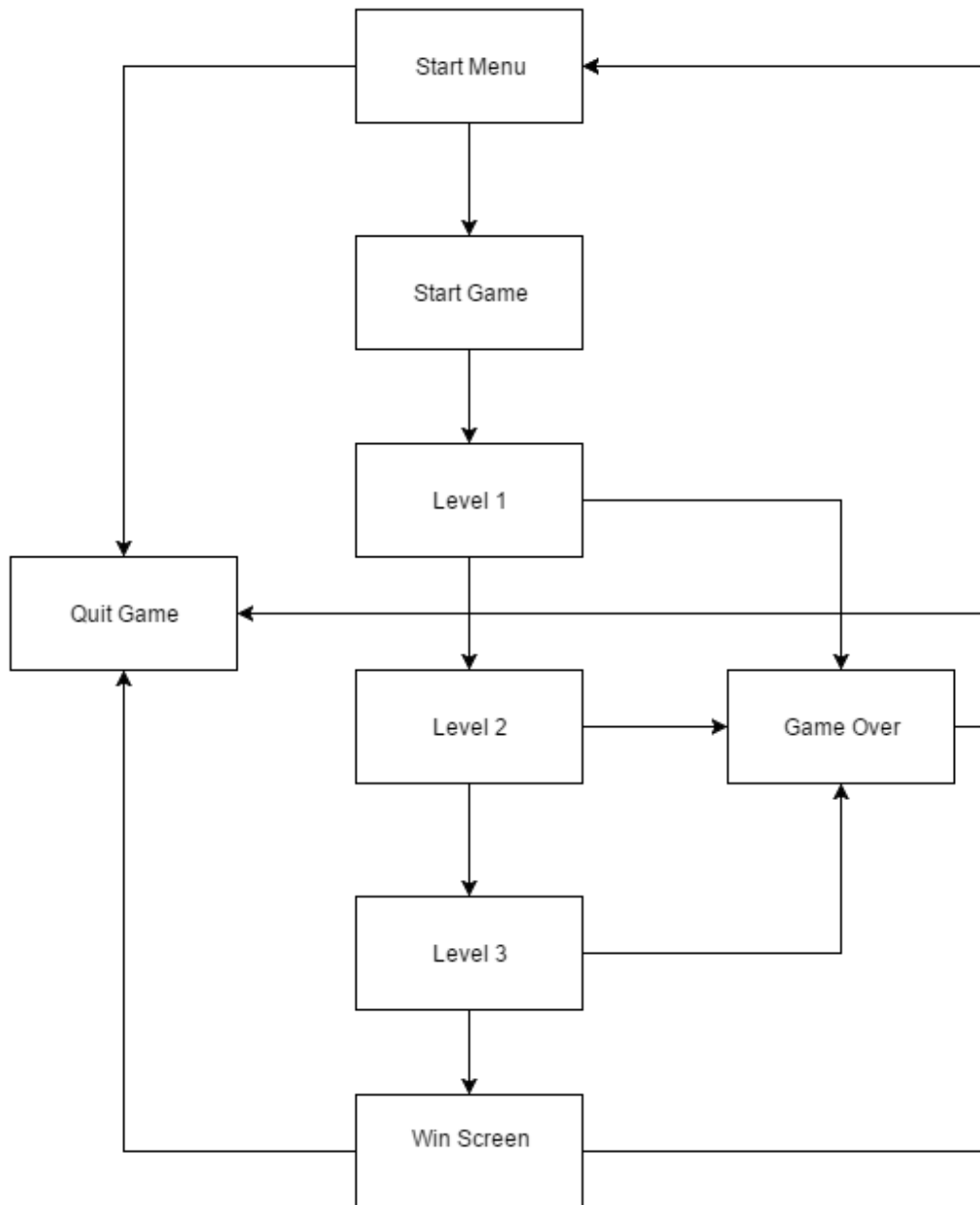
## Score System

Players are able to increase their score through two different methods, collecting coins and defeating enemies. Collecting coins adds one point to their score and defeating enemies adds

ten points towards the score. When the player dies, they are sent back to the first stage of the game and all points earned are erased and the counter is set back to zero. At the end of each stage, the score earned is saved and points earned in the next stage continue to increase the total amount of points.

## Interface

### Game Structure



## Controls



## Front End

The front end is simple to allow the player to quickly start the game. All text and buttons that are not part of the background are made through the in-engine text editor.

The following elements make up the front end:

- **Title Screen**
  - Press “Start” to go to the main menu
  - The background is the main promotional logo for *Booty Bat*
- **Start Game**
  - The game begins when the player controls Booty Bat to the right of the title screen
  - The player is taken to the start of the tutorial level, “The Beach”
- **Game Over**
  - After the player has received enough damage, the player is immediately transferred to Game Over screen
  - In this section, players have the choice of starting over from the first level by controlling Booty Bat to the left of the screen or quitting the game by going to the right side of the screen
  - There are two ways players receive a game over, by losing all of Booty Bat’s health or the timer for the stage the player is currently on reaches zero.

- **Credits**

- A roster of the SoftBox Studios team is shown on the Start Menu, each with their roles in the production of Booty Bat.

- **Quit Game**

- Entering the side of the Game Over screen with the Quit Game text will end the game and send the player straight to the desktop

## HUD

- The score total is located in the upper right corner of the screen at the top of the canvas
- The shot counter is located in the upper right corner of the screen below the score total
- The health indicator is located in the upper right corner of the screen below the shot counter
- The timer is located in the upper right corner of the screen under the health counter
- Booty Bat himself, who is controlled by the player.
- Enemies/hazards that appears on the screen that players avoid or attack.



## **Tutorial**

- The tutorial information is conveyed by the player through signs and text boxes that appear when struck by the player's projectile attack or landed on.

## **Pause**

- The player presses the START button, stopping the action on screen and accessing the Pause Menu. This menu has the option to continue the game or quit the game. Pressing the continue button unpauses the game and pressing the quit button takes the player to another text box that asks them to confirm that they want to quit.

## **Camera**

- The camera is a 2D sidescrolling camera that frames Booty Bat in the middle of the screen, so as to give the player ample time to see and react to the obstacles they encounter in front of them or behind them.

## **Timer**

- There is a limit to the amount time the player takes to reach the end of each level. The counter begins at fifty seconds and ticks down until reaching zero. Using fifty seconds, players are given a choice to explore other sections of the level or head straight for the end, without collecting coins or discovering secrets.

## **Audio**

- **Environmental**
  - Each level has unique environmental sounds that accompany the main OST. The Beach's music is supplemented with the calming sounds of the ocean and the rustle of palm trees..
- **Damage**
  - Damage inflicted on enemies causes the enemies to emit a simple grunt to indicate that they have taken damage. Destroyed enemies disappear with a small explosion animation and sound.



## Music

- **The Beach**

- A light and breezy track, just like the location it's made for. Light energy filled with flute and other woodwind-like instruments, as well as light acoustic guitar.

- **The Gold Mine**

- A bouncy, fun track that elicits feelings of hope and adventure, but is tinged with a slight foreboding that comes with entering such a strange new place.

- **The Treasure Cove**

- A high energy track, with an increased feeling of foreboding. The darker tone of this track implies that the player is nearing their goal, but the danger is getting greater every step.