

(source textcraft.net)



(source Unity3d.com)

Game Design Document

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# 1 Game Overview \*

Title: Elemental Smash

Platform: PC & Mac Standalone

Genre: Genre of your game

Rating: (10+) ESRB

Target: Casual gamer (aging from 12 - 30)

Release date: March 5th 2017

Publisher: Tyler Kirk, Nick Krisa, Thomas Tzrcinski, Joseph Shapiro

Description:

In Elemental Smash, you suddenly find yourself in a mysterious underground mine. The mine can be explored endlessly if you are careful about enemies and make sure to search through walls for food. You may eventually be led to a dungeon with glorious loot and more enemies. Whether you like exploring without limits or fighting through dungeons for loot, this game is fun for all gamers 10 and up.

# 2 High Concept\*

Elemental Smash focuses on exploring procedural game creation. When you spawn, you walk around a map that is procedurally generated as you go. There are breakable wall blocks that have a chance of spawning an item that restores health. If you find an exit, you teleport to a procedurally generated dungeon. In the dungeon there are procedurally generated chests with procedurally generated loot. Upon exiting the dungeon, return to your location in the original map. Throughout the game, there are procedurally generated enemies who follow you and attack.

# 3 Synopsis\*

You wake up in a foreign place. You don’t know where you are or even who you are, but you know what you must do. You must strive for the best boots, gloves, and,of course weapon!

# 4 Game Objectives\*

The objective of the game is to acquire the best gear in the game (magenta boots, magenta gloves, and weapon of your choice).

# 5 Game Rules\*

The player can move around with the arrow keys or WASD keys. Movement is turn based, but you only wait for turns if you are around zombies. If the player runs into something that they can attack (enemy, closed chest, breakable wall), the player will attack. The player starts with 100 health points and can get more by picking up more food or soda. Food and soda have a chance of spawning after breaking a wall. When you start, walls are breakable. Walls are not breakable within a dungeon. There is no upper limit to how much health the player can acquire. Player damage is increased if you have loot from a dungeon. Enemies will attack the player for 2 health points. Enemies can be killed. Upon player reaching zero health or lower, game is over and control of the player is lost.

6 Game Play\*

## 6.1 Game Controls

The player can move around with the arrow keys or WASD keys. Movement is turn based, but you only wait for turns if you are around zombies. If the player runs into something that they can attack (enemy, closed chest, breakable wall), the player will attack.

### 6.2 Maps

You spawn in a map that procedurally generates as you approach the edges of what you have previously seen. Enemies and breakable walls are present here.

Enter an ‘exit’ marker to enter a procedurally generated dungeon with loot and enemies.

# 7 Players (optional)

## 7.1 Characters

The Player

## 7.2 Metrics

Starting Health: 100

No Maximum Health!

Attack Damage: Initially 1 (depends on weapon)

Time to attack: 1 turn

## 7.3 States

Moving: Player moves to a new tile and faces the direction they are moving.

Attacking: Player deals damage and does an attack animation.

Waiting: The player cannot move when it is not their turn.

Dead: Upon reaching 0 or less health, the player cannot move and the game is over.

## 7.4 Weapons

4 blades, 4 hilts, and 4 handles are procedurally combined to create 64 possible combinations of swords. Found in loot chests within dungeons. All weapons increase damage by 2 + the attack modification given to you from your gloves/boots.

# 8 NPC (optional)

## 8.1 Enemies

**Zombie enemy type 1**

Health Damage

15 2

**Zombie enemy type 2**

Health Damage

15 2

### 8.1.1 Enemy States

Moving: Enemy moves to a new tile and faces the direction they are moving.

(If sprite has changed to the attack sprite, moving reverts sprite to original sprite).

Attacking: Deals damage and switches to attacking sprite.

Waiting: The enemy cannot move when it is not their turn.

Dead: Upon reaching 0 or less health, the enemy dies and is removed from the game board.

### 8.1.2 Enemy Spawn Points

Random (procedurally generated) when you explore spawn area.

Random (procedurally generated) within dungeons.

# 9 Art \*

3 Sprite sheets were provided

1 for general content

1 for sword components

1 for boots, gloves, and chest (open/closed)

## 9.1 Setting

The player finds themselves in an underground dirt mine. Enemies want to stop you from reaching your true potential.

## 9.2 Level Design

The initial level is an underground world made of tiles. As the player walks around, tile content and enemies are procedurally generated. Wall tiles here are breakable and may contain food. Upon entering an ‘exit’ sign, the player is teleported to a dungeon.

The entire dungeon is procedurally generated just prior to the player being teleported to the beginning. This includes unbreakable walls, chests containing loot, enemies, and a path leading to an ‘exit’ sign which teleports you back to where you came from.

## 9.3 Audio

NAME CATEGORY DESCRIPTION

sound1.wav Background noise Procedurally played along with other sounds sound2.wav Background noise Procedurally played along with other sounds

sound3.wav Background noise Procedurally played along with other sounds

9.4 What you Developed

I started with a base for the entire project, but nothing worked properly. I made everything work. I fixed or created the following aspects of game functionality: Procedural starting map generation, procedural dungeon generation, procedural food/soda spawning after breaking a wall, procedural enemy spawning, procedural chest spawning within dungeons, procedural item loot spawning upon opening a chest, enabling the player to use the items, UI that shows the player’s current items, procedural sound generation. There were other small things, but this covers all of the most essential aspects of what I developed.