

# Berzerk

A Reproduction of Classic Game

Aurelio Rodrigues  
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By Mark Baldwin  
Baldwin Consulting  
<http://baldwinconsulting.org>

The Game Design Document (GDD) is the blueprint from which a computer or video game is to be built. As such, every single detail necessary to build the game must be addressed in the document (or support documents). If it's not in the document, then it probably won't be in the game.

Below you will find an outline for a generic Game Design Document. The problem is that no generic GDD will be able to address all the various genres for which a game may be created. For example, consider the games PacMan, SimCity and Doom. All three games required detailed design documents, but if you think about it, those documents would be entirely different! As such, when using the outline below you will find sections that will be totally meaningless to your game. But also, there will be sections that your GDD requires to describe the game. Just because it's not in my outline, it doesn't mean that it doesn't belong.

The GDD is a reference document. Members of the development team will constantly be using the document to find specific information for their specific needs. Consider the size such a document may grow to in order to document every piece of the game. We don't want the GDD to cause information overload and then become a prop under somebody's wobbly desk. As such it is important that you organize and format the document to make it easy to use. Also note that some of these sections might not appear in the GDD itself but instead would appear in supplemental documents such as an Art Bible or Test Plan. This helps make the overall document more manageable and readable.

One last comment, a game design document is meant to be a living document. Just as when the artist changes the design of his painting every time he takes his brush to the canvas, a computer or video game evolves as code and art are created. The GDD then is the communication tool from which all the members of the team can follow that evolution.

**Document Revision history:**

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## 1. Section I - Game Overview

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### 1.1. Game Concept

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Berzerk is a retro-style action game inspired by the classic arcade game of the same name. Players navigate through a maze-like environment, avoiding enemies while attempting to hit them down.

### 1.2. Design History

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The initial design of Berzerk was inspired by the original arcade game released in 1980. Since then, the game has undergone several iterations to refine gameplay mechanics, level design, and visual aesthetics.

### 1.3. Feature Set

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- Retro-style graphics and sound effects
- Maze-like levels with increasing difficulty
- Player movement and attack mechanics
- Enemy AI behavior
- Score tracking and lives system
- Collision detection and resolution
- Pause and quit functionality

### 1.4. Genre

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Action

### 1.5. Target Audience

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The target audience for Berzerk includes fans of retro arcade games, as well as players who enjoy challenging action games with simple mechanics and nostalgic visuals.

### 1.6. Game Flow Summary

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Players navigate through maze-like levels, avoiding obstacles, collecting power-ups and attacking enemies to progress. The game features multiple levels with increasing difficulty, challenging players to survive and achieve high scores.

### 1.7. Look and Feel

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Berzerk features a retro aesthetic, with pixel art graphics reminiscent of classic arcade games. The visual style is colorful and vibrant, with simple animations and detailed environments.

### 1.8. Project Scope

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A summary of the scope of the game.

#### 1.8.1. Number of locations

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Multiple maze-like levels.

#### **1.8.2. Number of levels**

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Progressive difficulty with increasing levels

#### **1.8.3. Number of NPC's**

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Two enemy types.

#### **1.8.4. Number of weapons**

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Only one – Dragon Spear

## **2. Section II - Gameplay and Mechanics**

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### **2.1. Gameplay**

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#### **2.1.1. Game Progression**

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The game progresses through a series of levels or stages, each with its own challenges and objectives. As players complete these objectives, they unlock new levels and advance the storyline.

#### **2.1.2. Mission/challenge Structure**

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Missions or challenges are structured to provide a mix of tasks, including exploration, puzzle-solving, combat (if applicable), and story progression. Completing missions often requires players to use their abilities and resources strategically.

#### **2.1.3. Puzzle Structure**

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Puzzles are simple mazes with low complexity.

#### **2.1.4. Objectives – What are the objectives of the game?**

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The objectives of the game include exploring the game world, going through the maze rooms, and advancing the storyline.

#### **2.1.5. Play Flow – How does the game flow for the game player**

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The play flow is dynamic, with the player transitioning between exploration, combat (if applicable), and story-driven sequences. Players may also have the freedom to choose their own path and explore the game world at their own pace.

### **2.2. Mechanics**

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#### **2.2.1. Physics**

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The game world adheres to simple physics. There is no gravity and momentum, but there are collision detections with different elements.

#### **2.2.2. Movement**

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#### **2.2.2.1. General Movement**

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Players control character movement using directional inputs such as arrow keys.

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#### **2.2.3. Objects**

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##### **2.2.3.1. Picking Up Objects**

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Interacting with objects in the environment involves approaching them and touching them. This action allows players to pick up items and utilize them as tools.

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#### **2.2.4. Actions**

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##### **2.2.4.1. Switches and Buttons**

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Players can activate buttons to attack enemies and make movements.

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##### **2.2.4.2. Picking Up, Carrying and Dropping**

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Picking up objects involve to pick up weapons.

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#### **2.2.5. Combat**

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Players can execute attacks and make movements to avoid contact with enemies.

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### **2.3. Screen Flow**

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#### **2.3.1. Screen Flow Chart**

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Each room has its own pattern of maze and doors. There are no connections among all rooms.

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#### **2.3.2. Screen Descriptions**

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##### **2.3.2.1. Main Menu Screen**

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The main menu screen serves as the central hub. Players can choose from the following options:

- Start Game: Begin a new game.
- Credits: View the credits to acknowledge programmer involved in creating the game.
- Exit Game: Close the game.

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### **2.4. Story and Narrative**

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The narrative elements of "Berzerk" contribute to the experience of the game, providing context and motivation for players as they progress through the levels.

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#### **2.4.1. Back story**

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As players guide the protagonist through a series of maze-like rooms, survival becomes paramount. The relentless attacks from corporate enforcers intensify with each passing room, reflecting the escalating struggle for freedom in the face of a



formidable adversary. The narrative unfolds dynamically, with the protagonist's journey through these hazardous environments mirroring the broader fight for liberation against a powerful and oppressive force.

#### **2.4.2. Game Progression**

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As players navigate through maze-like rooms and confront waves of corporate enforcers. Each new room is a victory against the enemies.

### **2.5. Game World**

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#### **2.5.1. General look and feel of world**

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The game world of "Berzerk" is composed of rooms. There are walls in different positions, creating mazes.

#### **2.5.2. Area #1**

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##### **2.5.2.1. General Description**

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There are two doors. One from where the character came from and a second door on the other side of the screen, where the character needs to go to achieve the second level. Through the path, walls position makes the feeling of being in a maze.

##### **2.5.2.2. Physical Characteristics**

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Physics is limited to a 2D game, without gravity.

##### **2.5.2.3. Connections to other areas**

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Connections to other areas are made by doors.

#### **2.5.3. Area #2**

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##### **2.5.3.1. General Description**

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Similar to Area #1, there are two doors in Area #2. One door leads back to the previous area, and the second door is positioned on the opposite side of the screen, serving as the gateway to the next level. The layout of the walls creates a maze-like atmosphere, similar to Area #1.

##### **2.5.3.1. Physical Characteristics**

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The physics engine remains consistent with a 2D environment, devoid of any gravitational effects.

##### **2.5.3.2. Connections to other areas**

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As with Area #1, connections to other areas are established through doorways, providing access to both the previous and subsequent levels.

### **2.6. Characters**

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### **2.6.1. Character #1**

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#### **2.6.1.1. Back story**

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A soldier the challenging to go through rooms, avoid and defeat enemies, to survive.

#### **2.6.1.2. Personality**

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Determined and brave.

#### **2.6.1.3. Look**

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##### **2.6.1.3.1. Physical characteristics**

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The soldier has muscles, wearing practical adventuring attire such as a sturdy leather jacket, cargo pants, and hiking boots.

##### **2.6.1.3.2. Animations**

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The soldier has muscles and wears a helmet. He is also capable of holding weapons as he collects them throughout the game. The animations are simple. There is no running, only walking.

#### **2.6.1.4. Relationship to other characters**

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The unique relationship with other characters is with enemies.

### **2.6.2. Character #2**

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#### **2.6.2.1. Back story**

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The enemies are monsters armed with dragon spears. These creatures are tasked with guarding the rooms and attacking anyone who enters them.

#### **2.6.2.2. Personality**

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The monsters exhibit a ferocious and relentless personality, showing no mercy to intruders and fiercely defending their territory.

#### **2.6.2.3. Look**

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##### **2.6.2.3.1. Physical characteristics**

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The monsters are large, towering creatures with scaly skin and intimidating horns protruding from their heads. They have muscular bodies and sharp claws, giving them a menacing appearance.

##### **2.6.2.3.2. Animations**

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The animations for the monsters include menacing strides as they patrol their territory, aggressive lunges when attacking intruders, and triumphant gestures when they successfully repel enemies.

#### ***2.6.2.4. Relationship to other characters***

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The unique relationship with other characters is with the soldier.

### **3. Section IV – Levels**

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#### **3.1. Level #1**

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##### **3.1.1. Synopsis**

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In Level #1, the player navigates through a series of interconnected rooms filled with obstacles, and enemy encounters. The primary objective is to reach the exit door while overcoming challenges and collecting key items necessary for progression.

##### **3.1.2. Objectives**

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- Reach the exit door.
- Collect key items to unlock barriers and access new areas.
- Defeat enemies to clear pathways and ensure safe passage.

##### **3.1.3. Physical Description**

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Level #1 is characterized by dimly lit corridors, ancient ruins, and mechanical traps. The environment features crumbling walls, hidden passages, and occasional shafts of light piercing through cracks in the ceiling. The atmosphere is tense and foreboding, with eerie sounds echoing throughout the labyrinthine structure.

##### **3.1.4. Map**

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The map of Level #1 consists of a series of interconnected rooms and corridors, forming a complex maze-like layout. Key locations include starting point, key item locations, enemy encounters, and the exit door.

##### **3.1.5. Critical Path**

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The critical path of Level #1 involves navigating through the maze, avoiding traps, defeating enemies, and collecting key items necessary for progression. Players must strategize their route to overcome obstacles and reach the exit door.

##### **3.1.6. Encounters**

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Players encounter various obstacles and enemies throughout Level #1, including:

Mechanical traps such as spike pits, falling platforms, and rotating blades.  
Enemy encounters with monsters guarding key areas and attacking on sight.  
Puzzle challenges requiring logic and problem-solving to proceed.

##### **3.1.7. Level Walkthrough**

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- Starting Point: The player begins at the entrance of the level, equipped with basic gear and abilities.

- Exploration: Navigate through the interconnected rooms, avoiding traps and searching for key items.
- Enemy Encounters: Engage in combat with monsters patrolling the corridors, using weapons and tactics to overcome them.
- Key Item Collection: Locate and collect key items necessary for unlocking barriers and accessing new areas.
- Progression: Use collected items to overcome obstacles and advance deeper into the level.
- Final Stretch: Navigate the final challenges and reach the exit door to complete the level.

### 3.1.8. Closing Material

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As players exit Level #1, they are rewarded with a sense of accomplishment for overcoming its challenges and gaining valuable resources for their journey ahead. The closing material may include a transition sequence leading to the next level, a summary of achievements, and hints or foreshadowing of what lies ahead in the game's narrative.

## 4. Section V - Interface

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### 4.1. Control System

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- Players interact with the game using the following controls:
  - Arrow Keys: Control the frog's movement in up, down, left, and right directions.
  - W, A, S, D: Alternative keys for movement.

### 4.2. Audio

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The game incorporates audio elements to enhance the player's experience.

### 4.3. Music

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- The game features an engaging background music soundtrack that complements the gameplay.
- The music dynamically adjusts based on the game's pace, creating an immersive atmosphere.

### 4.4. Sound Effects

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- **Collision Sounds:** Audible feedback when the soldier collides with enemies.
- **Soldier's attack:** A distinctive sound when soldier attacks.
- **Background Ambiance:** Ambient sounds.

## 5. Section VI - Artificial Intelligence

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## 5.1. Enemy AI

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Monsters.

## 5.2. Support AI

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### 5.2.1. Player and Collision Detection

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In Berzerk, the Support AI for player and collision detection is essential for ensuring that the player character and enemies interact appropriately with the game environment. This AI system continuously monitors the player's movements and actions, detecting collisions with walls, obstacles, and enemy projectiles. It triggers appropriate responses such as player damage, enemy destruction, or level progression based on collision events. Additionally, the AI manages player input, interpreting commands for movement, shooting, and other actions to provide responsive gameplay.

### 5.2.2. Pathfinding

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Pathfinding in Berzerk involves guiding enemies through maze-like levels to track and engage the player. The Support AI utilizes pathfinding algorithms to calculate efficient routes for enemies to navigate around obstacles and pursue the player character. These algorithms analyze the layout of each level, considering the positions of walls, doors, and other barriers to determine the shortest or most optimal paths. As the player moves through the level, the AI dynamically updates enemy paths to adapt to changing circumstances and maintain relentless pursuit.

## 6. Section VII – Technical

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### 6.1. Target Hardware and operating system

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The game is designed to run on basic hardware configurations, including simple laptops and desktop computers, to ensure accessibility for a wide audience. It is optimized to operate smoothly on systems running Windows, macOS, and Linux operating systems, providing compatibility across various platforms. The game's resource-efficient design allows it to run smoothly even on older or less powerful hardware configurations, ensuring a smooth and enjoyable gaming experience for all players.

### 6.2. Supported game controllers and peripherals

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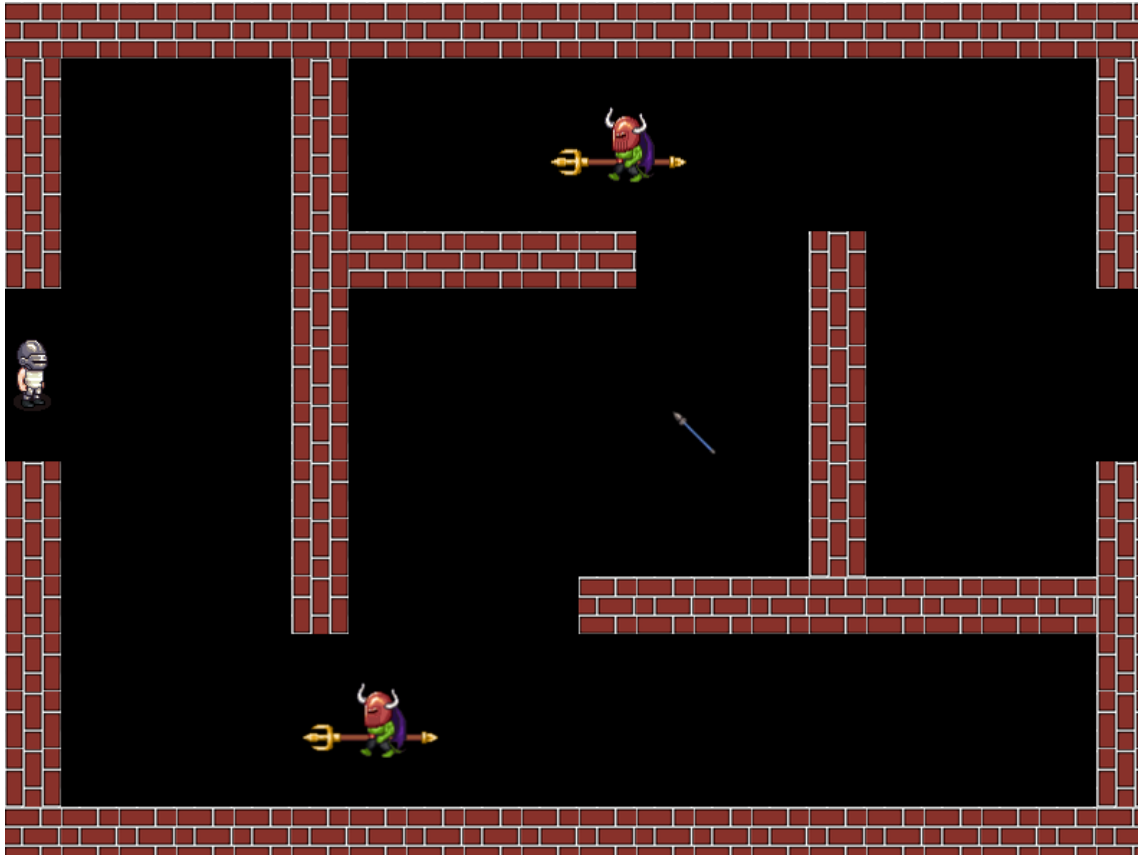
The game does not support game controllers.

## 7. Section VIII – Game Art

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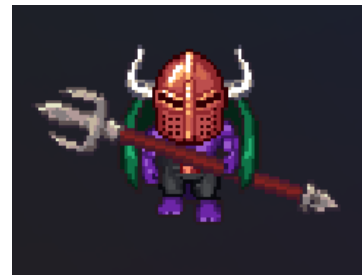
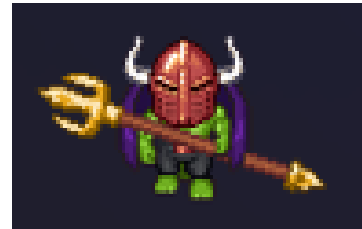
### 7.1. Concept Art

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## 7.2. Characters

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## 7.3. Equipment

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