

# GAME DESIGN DOCUMENT

# Castle Run

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## High Concept Statement

Castle Run is an action-packed platforming adventure for PC, and it is set in medieval times. Players assume the role of the noble knight Lance Burr and maneuver through linear courses full of treacherous obstacles to obtain the legendary Iron Diamonds.

## Genre

This game is a linear 3D platformer with a third-person perspective, and it is designed exclusively as a single-player experience.

## Platforms

The game is being developed in Unreal Engine 5, and it is intended to be released for Windows computers.

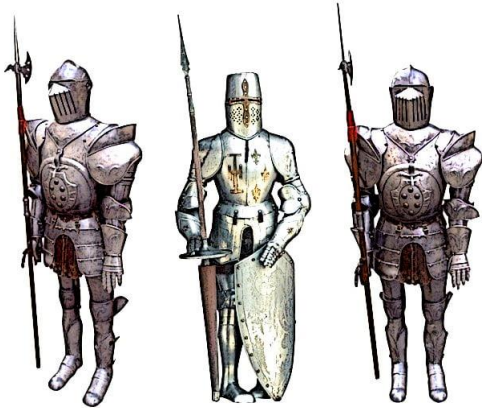
## Target Audience

Castle Run is meant to be accessible to general audiences. Adolescents and young adults will likely enjoy the game the most, but it would also appeal to young children and older age groups due to its colorful, stylized visuals, simple mechanics, and lack of mature content. The game contains no strong language, prominent violence, or other adult themes. It may also appeal to audiences with interest in medieval history or theming.

## Storyline & Characters

In this game, a brave and ambitious knight named Lance Burr has learned of a rare group of gems called the Iron Diamonds, which can be used to make armor indestructible. They are found at the ends of dangerous paths filled with obstacles, but Lance thinks that their power is worth the risk. With these diamonds, he could become the most powerful knight in all the land – adored by the people and feared by the monsters. The gameplay involves him running and jumping through these levels to obtain the Iron Diamonds.

Lance Burr, the player character, is a noble knight who enjoys exploring the vast medieval world. He is fascinated by the legendary Iron Diamonds, and he will use his athleticism to find them. He wears a full suit of armor wherever he goes, and he can run without getting tired and jump high.



## Gameplay

### Overview of Gameplay

The core gameplay involves careful running and jumping through linear hallway-like environments. The player's goal is to reach the end of each level and grab the Iron Diamond. Within the level, there are moving obstacles and enemies that the player needs to avoid or else they will be damaged. You can also collect extra gems within the level and grabbing them all will reward you with additional text at the post-level results screens.

### Player Experience

After selecting the "start game" option at the title screen, the player is greeted with a cutscene showing the giant glowing diamond at the goal area (a tall castle tower), and then the camera tracks backward to the beginning of the level, briefly showing the obstacles the player will face. After the cutscene, the player will be granted control of Lance, and they will move forward toward the goal area, navigating through challenging platforming sequences and enemy arrangements along the way. The player area is indicated by the tall, rocky cliffs on the left and right sides of the level, reminding the player that moving forward is the correct decision. They will also find optional gems throughout the level, and their shiny appearance will encourage the player to collect them. Upon finishing the level, they will be congratulated on their efforts and be shown how many of the total gems were collected. The next level begins afterward, which will have the same gameplay mechanics but with new level design containing unique challenges.

## Gameplay Guidelines

The gameplay must remain focused on platforming mechanics and real-time action. There may be moments where the player must stop and determine how to approach an obstacle, and the game will contain puzzles, but the team must remain dedicated to the intended genre. No matter how many assets are used in the game, they should fit within a medieval aesthetic. Violence should be kept to a minimum; cartoon violence and implied violence (falling into a bottomless pit) are allowed, but melee combat may be excessive, and there should be no blood and gore. The levels should make use of similar assets and obstacles in order to maintain a reasonable scope; creating dozens of original art assets and models would draw attention away from programming and level design.

## Game Objectives & Rewards

### Reward Systems

Players are nonverbally rewarded for solving puzzles and overcoming challenges by being able to progress and experience the next part of the game. Collecting gems triggers a sound effect and adds to a collectible total. Finishing a level provides congratulatory text and uplifting fanfare.

### Obstacles

Progress is restricted by platforming obstacles and hazards like spikes and bottomless pits. Failing a challenge may cause the player to receive damage, and enough damage will result in a game over sequence, forcing them to start the level over. In addition, players may be hindered by puzzles that block off the way forward; these will require skill and effort to solve. A puzzle can be failed and restarted, but the player cannot have their level progress reset by failing a puzzle.

### Difficulty

The game will likely have a single difficulty setting, but the level design should be fair and intuitive so that all types of players can make progress without frustration. Each level should be more difficult than the previous one, building upon the skills the player has gained and the ideas introduced previously.

## Gameplay Mechanics

Lance can run at a single speed and jump, which are controlled with the keyboard. These allow him to overcome platforming challenges and interact with puzzles and hazards. Taking damage from a hazard will subtract from the player's current health, and running out of health resets their progress back to the start of the level. Players can collect gems, which are optional, and Iron Diamonds, the main prize that is required for progression.

## Character Abilities

Character Attributes	
Character	Movement Abilities / Actions Available
Lance Burr	Run (arrow keys), jump (spacebar), collect gems, collect Iron Diamonds, solve puzzles (may involve interacting with objects using E key)
Game Modes	
The platforming gameplay is the only game mode, and there are no difficulty settings	Reach the end of the linear level sequence and collect the Iron Diamond to progress to the next level. Completing the final level will result in a congratulatory results screen, and the player can start a new playthrough from the beginning.
Scoring System	
Gems	How it's Awarded & Benefits
Small, optional collectible items found in levels	Gems are often awarded to the player for completing a difficult platforming challenge or solving a puzzle. Collecting all of the gems in each level will be rewarded with a results screen stating this achievement.

## Level Design

The game will include at least two to three levels, each one using similar environmental assets (a stylized medieval times theme) and many of the same hazards and objects. Later levels may introduce some new assets, as well as new layouts. Each level resembles a long, outdoor hallway with gaps in the terrain, obstacles, and puzzle sequences. The objective is always to reach the goal area at the end of the linear levels.

## Control Scheme

The game is exclusively controlled with a mouse and keyboard.

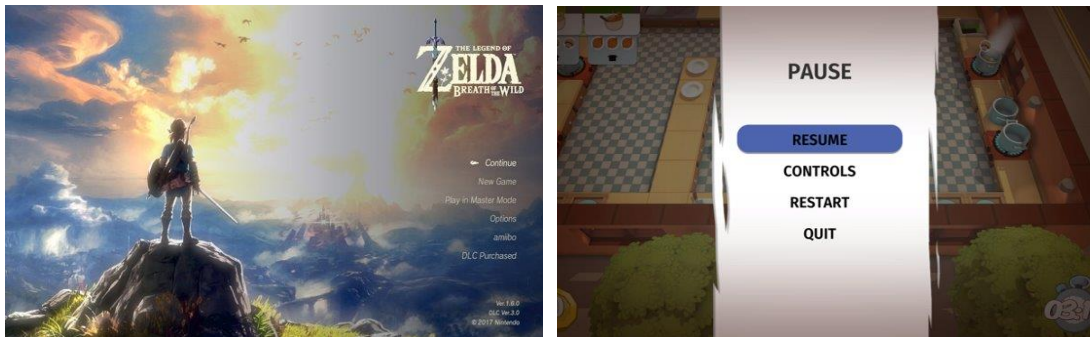
Button/ Touch Input	Action it Performs
Arrow keys	Move left/right/forward/backward
Spacebar	Jump

Mouse	Navigate menus
Left mouse button	Confirm selection

## Game Aesthetics & User Interface

The game will have a very colorful, somewhat low-poly art style and environmental assets will have simple textures. The look of the player character is still being determined, and it depends on the availability of high-quality meshes and animations. The game should have a casual and upbeat tone that complements the stylized visuals. The hazards and sense of danger in the levels will be quite comical and lack realistic stakes and violence. Players should feel in complete control of the hero's actions, and they will move smoothly and accurately with each input.

In the title screen and pause menu, the player's options are listed vertically. They will be allowed to start/resume the game, return to the title screen, or close the game. A player can select a menu option by clicking on it with the mouse. HUD elements will be anchored to the corners of the screen, so they do not obscure the player's view of obstacles ahead of them. Information like the player's current health, number of gems collected, and the current level will be visible in the heads-up-display.



(Left: inspiration for title screen layout; right: inspiration for pause menu layout)

## Competitive Analysis

Castle Run will share elements of linear level design and platforming mechanics with games from the *Crash Bandicoot* series and the 3D-style *Super Mario* games (in particular, *Super Mario 64*, *Super Mario Galaxy*, and *Super Mario Galaxy 2*). The former series contains beloved classics, but they are often criticized for requiring players to backtrack through levels with a camera angle that restricts visibility, which we plan to eliminate entirely. The design philosophy of *Super Mario* is praised for its strategy of teaching the players by introducing an idea in a low-stakes area and building upon it

with gradually higher difficulty. This level design is what allows for the games' high accessibility, a quality that we want to emulate in Castle Run.

The game's art style will be similar to the *Spyro Reignited Trilogy* and *Crash Bandicoot 4: It's About Time*. These games were critically and financially successful, and they have stylish and timeless visuals with a lot of personality. Our game will likely have a similar tone and art style. We believe that the combination of linear 3D platforming and an art style focused on simple geometry and textures will yield the intended lighthearted, cartoony, age-appropriate experience. This style should also allow for experimentation with the medieval times aesthetic, and it presents exciting challenges in designing backgrounds and enemies. The fantasy setting and unique story concept are what will allow our game to stand out, and the levels will be completely original, thoughtfully designed, and inspired by acclaimed and iconic linear platforming games. Unlike the previously mentioned games, Castle Run is exclusive to PC, which provides the team with the most freedom in design and graphical complexity, and it encourages audiences to engage with a specific platform.