

Lecture 3: Level Design

Game Design
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What functions do levels have?

- Narrative element
- Showcase mechanics
- Challenge player's progression
- Set the pace for gameplay

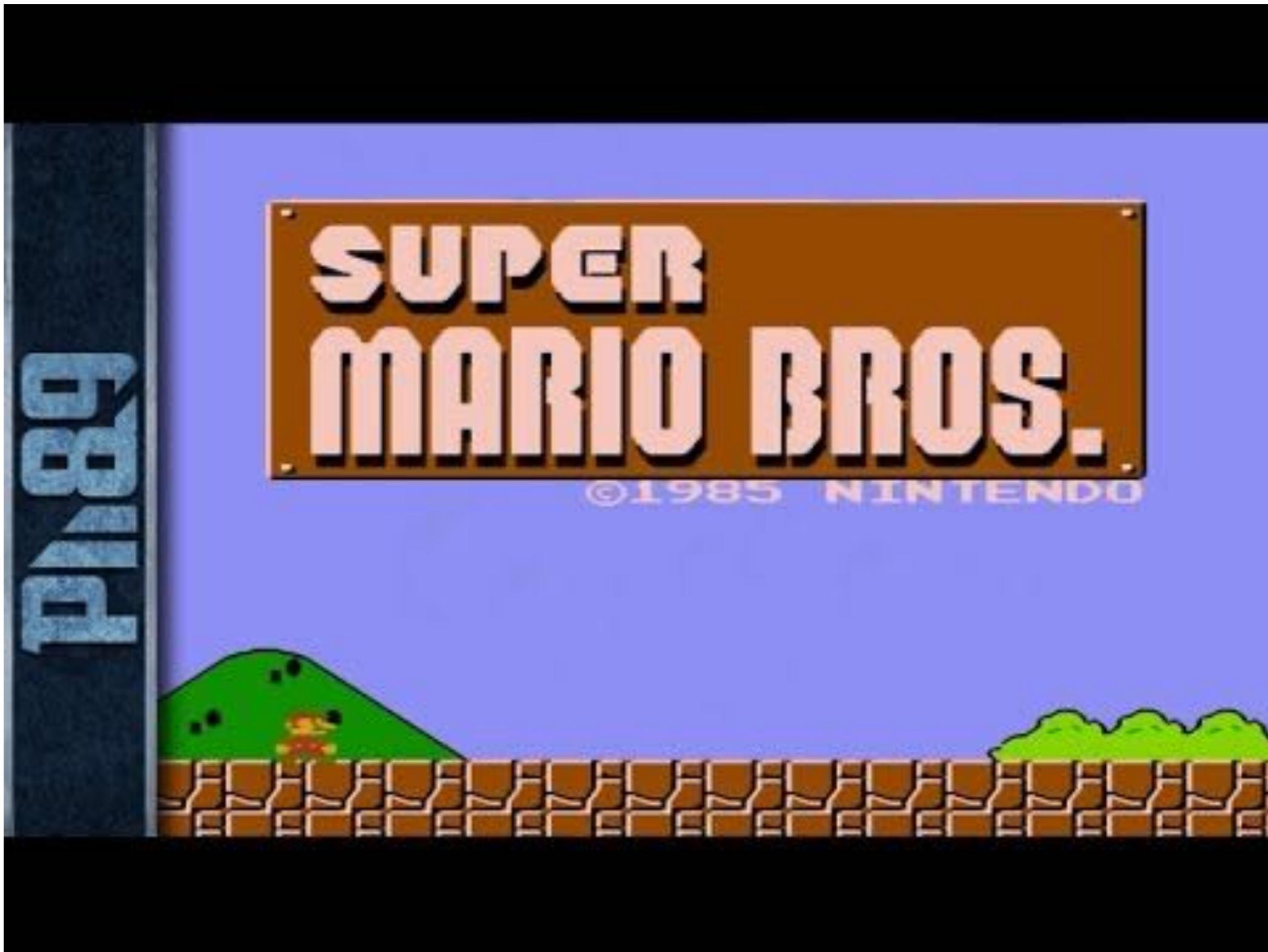


Teaching mechanics

- Tutorial levels
- Isolated stress-free levels
- Trial-by-fire



Super Mario Bros 1-1



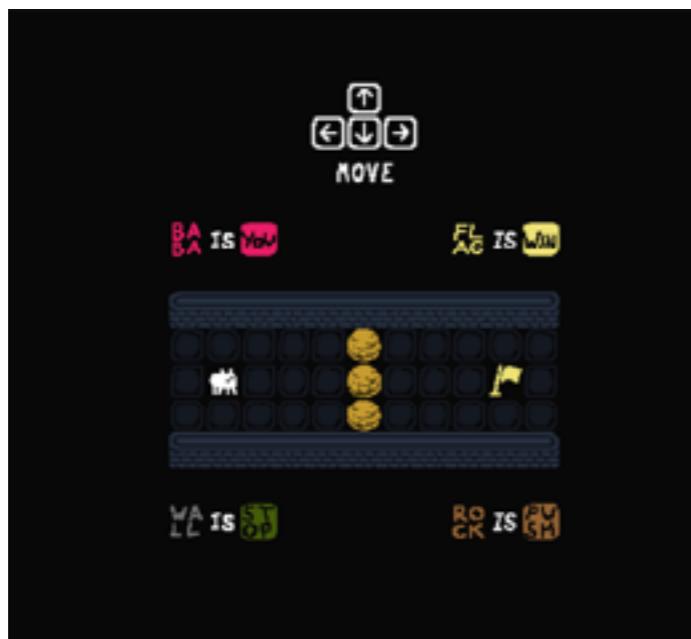
Good Tutorial Levels



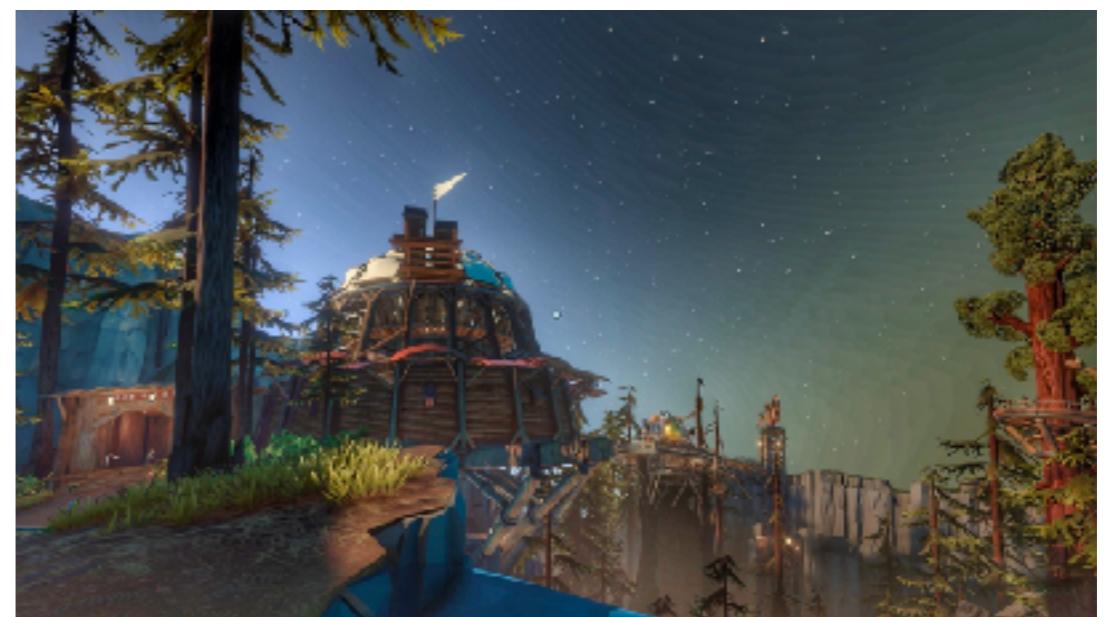
Super Meat Boy



Zelda: Breath of the Wild



Baba is You



Outer Wilds

Bad Tutorial Levels



Zelda: Ocarina of Time

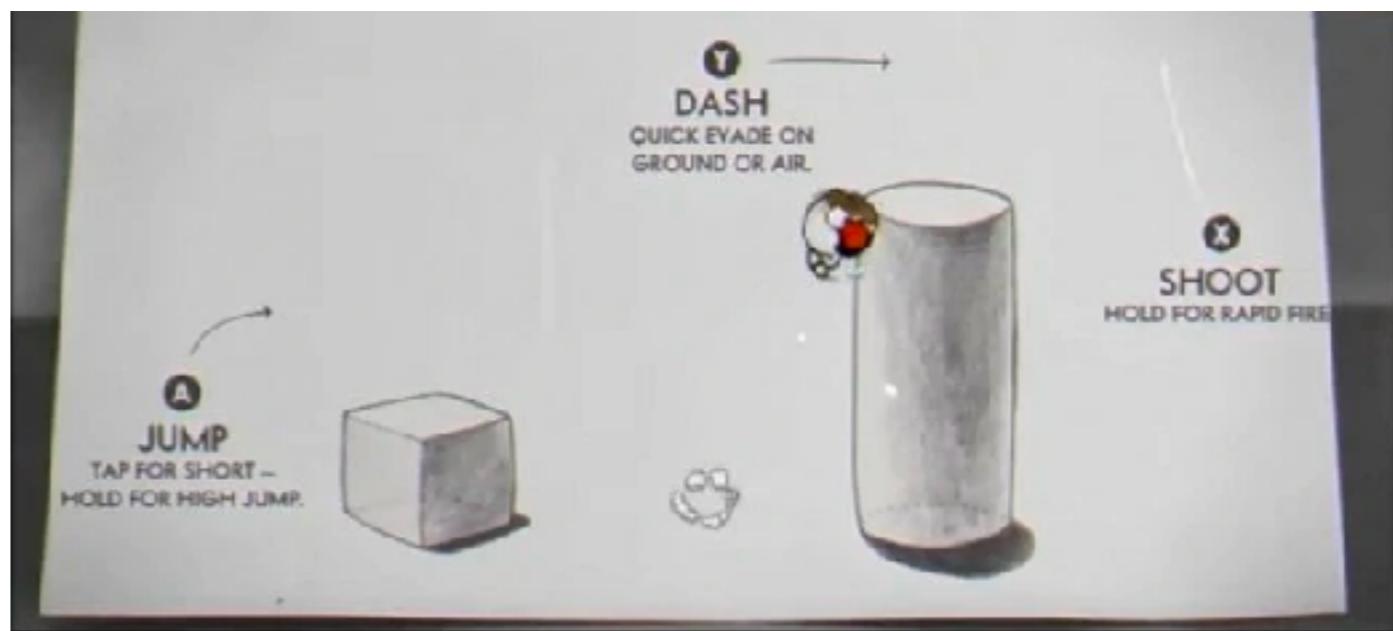


Early Final Fantasy

Ok Tutorial Levels



Undertale



Cuphead

Level design patterns

Level Design Patterns in 2D Games

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Abstract—Videogame designers use tips and tricks and tools of the trade to design levels. Some of these tips are based on their gut feeling and others have been known in the game industry for the last 30 years. In this work, we discuss six of common level design patterns present in 2D videogames. The patterns under discussion are the product of an exploratory analysis of over thirty 2D games. We choose to focus on patterns that are both common and impactful for the overall player experience. We discuss in detail the rationale for and advantages of each pattern, showing examples of games that make use of such. We conclude with a discussion of the usage and understanding of these patterns from the perspective of level design and how other technical approaches can benefit from them.

Index Terms—Design Patterns, Level Design, Analysis

the story, create smaller short-term achievable goals and help shape the player experience, with the objective of enhancing player immersion. Level creation plays such an important part in a game that sometimes developers provide their audience with level design tools, so they can create and share new levels.

Although the level design patterns we present might be well known to game designers, it is important to formally document them. By doing such, we can facilitate communication between experienced and novice designers, ultimately contributing to the growth and sharing of level design practices. For this purpose, this work aims at formalizing the concept of level design patterns, providing not only valuable resource to novice

Themes

How to differentiate your levels and make them unique

- Do they have a narrative purpose?
- Do they have a distinct mechanics, interactions, NPCs, or effects?

Lava	Water (yikes)	Ice
Space	Pirate	Floating
Dark	Candy	Forest
Haunted	Factory	Desert
City	Cyber	etc.

Themes in Levels

Kirby and the Amazing Mirror

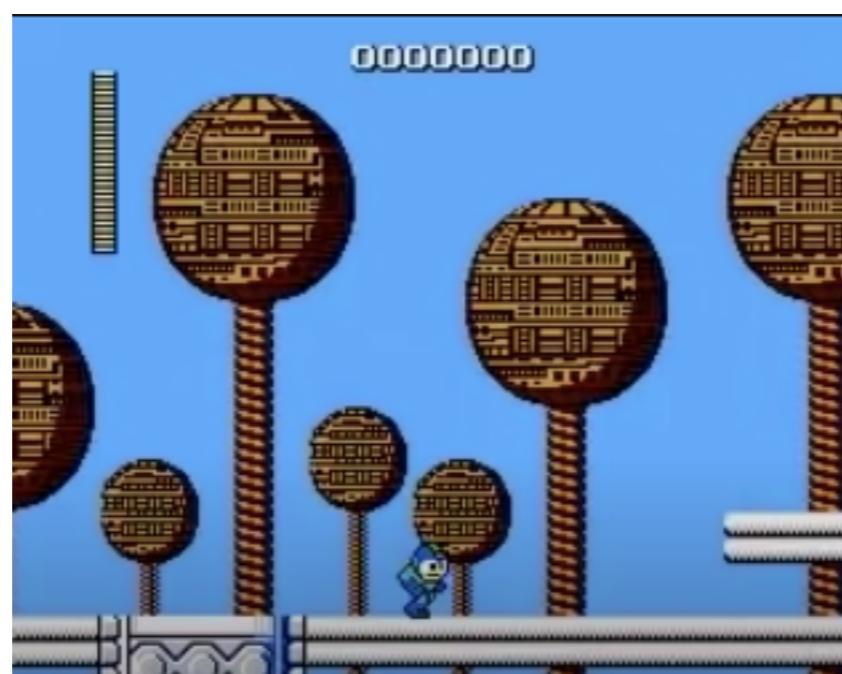


Weenies

- “Weenie” -
(n) architectural or visual magnets that draw people towards them; coined by Walt Disney



Where do you want to go?



Persona-Focused

- What kind of player do you have in mind for your level? And how will they intend to play through it?

Bartle's Taxonomy of Player Types

Explorer

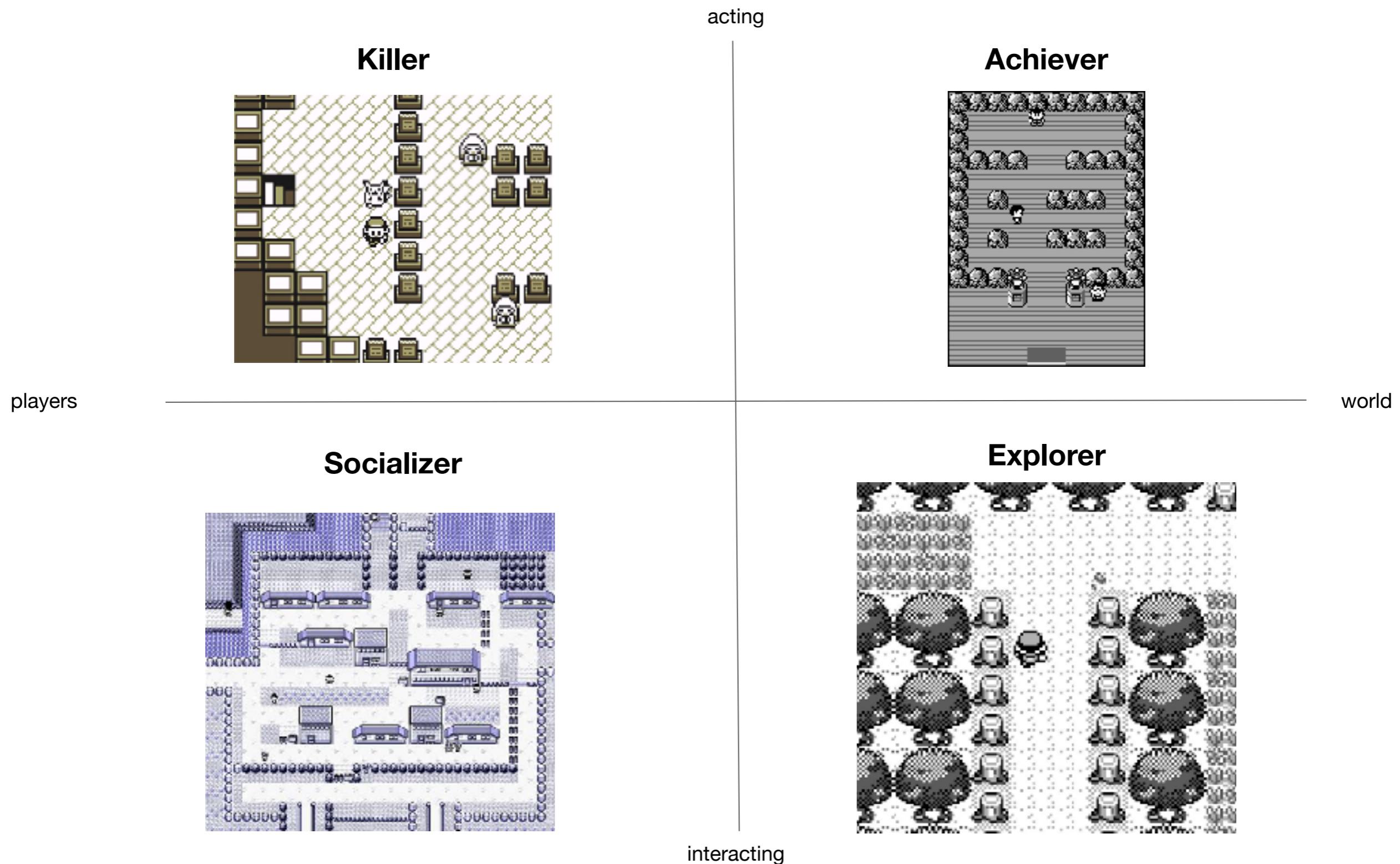
Killer

Achiever

Socializer

Maybe a mix of all 4? Maybe more?

Persona-focused Levels/Areas



Guidance



- a) The bananas guide players to dive into what looks like a bottomless pit ...

Collectibles used in *Donkey Kong Country 2* to guide players to what looked like a dangerous path.



- b)... only to find the platform that has the target they have to hit to finish the level.

Guidance



- a) *Super Metroid* uses enemies to highlight the path the game wants them to follow.

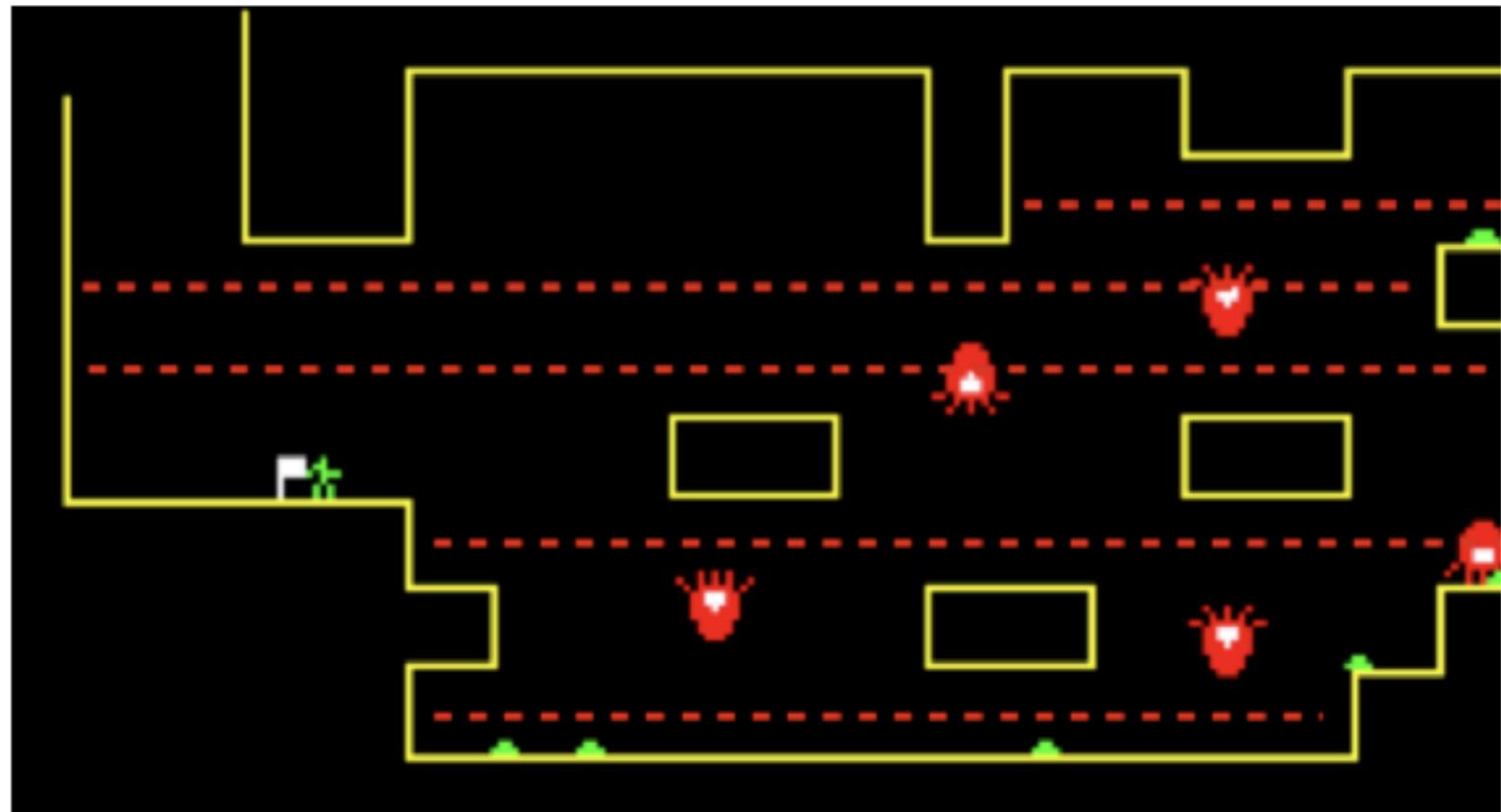
- b) *Castlevania Legends* uses the enemies to guide the player towards a trap.

An example of how *Super Metroid* and *Castlevania Legends* used enemies to guide players to specific areas.

Safe Zones



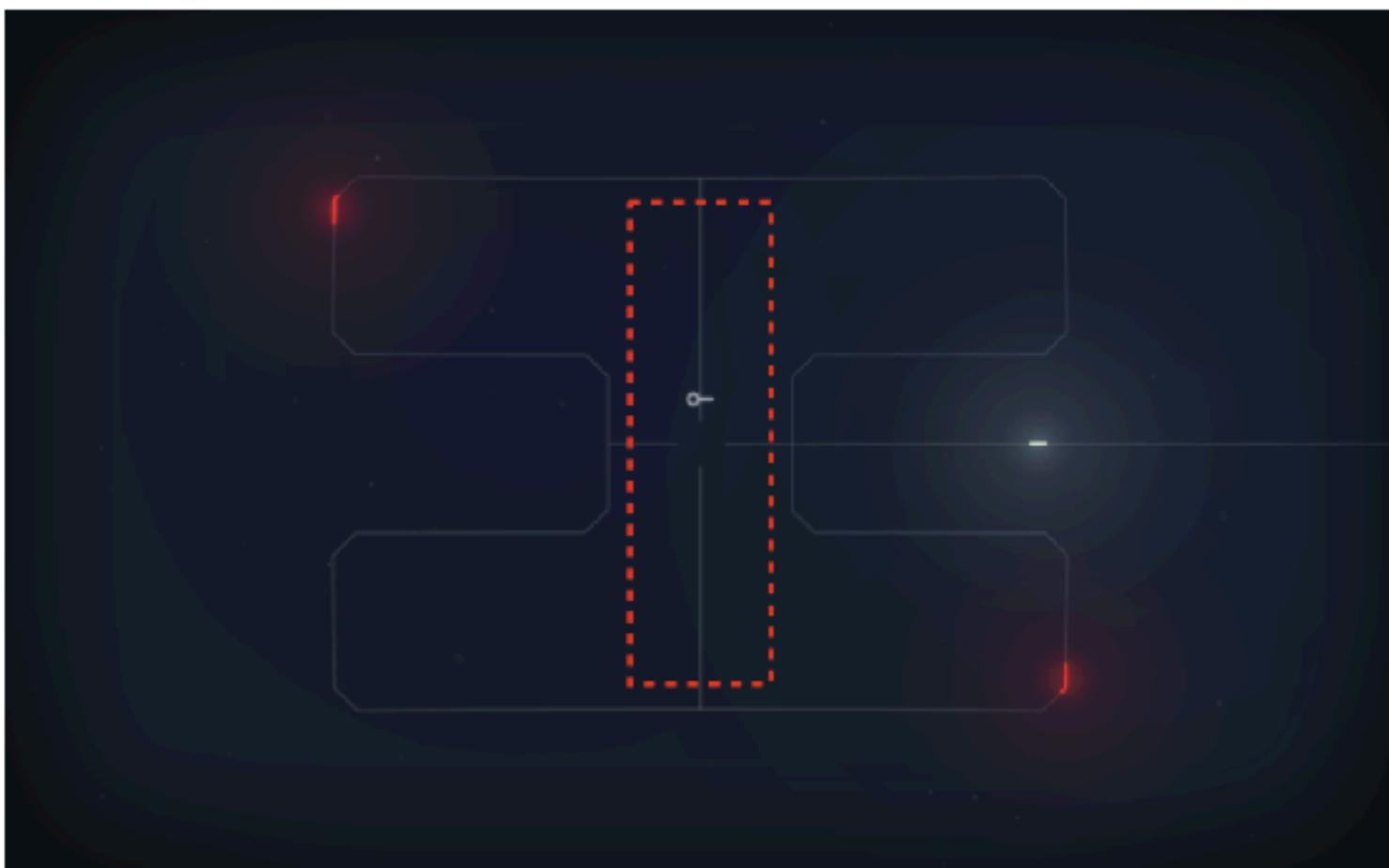
a) *Mega Man*



b) *Star Guard*

Safe Zones as shown by the spaces where the enemy lines of fire (which are invisible in-game), represented by the red dotted lines, do not cross.

Safe Zones



a) *Linelight*



b) *The Legend of Zelda*

Safe Zones being highlighted by red dotted rectangles.

Foreshadowing



a) The Spider hazard gets introduced.

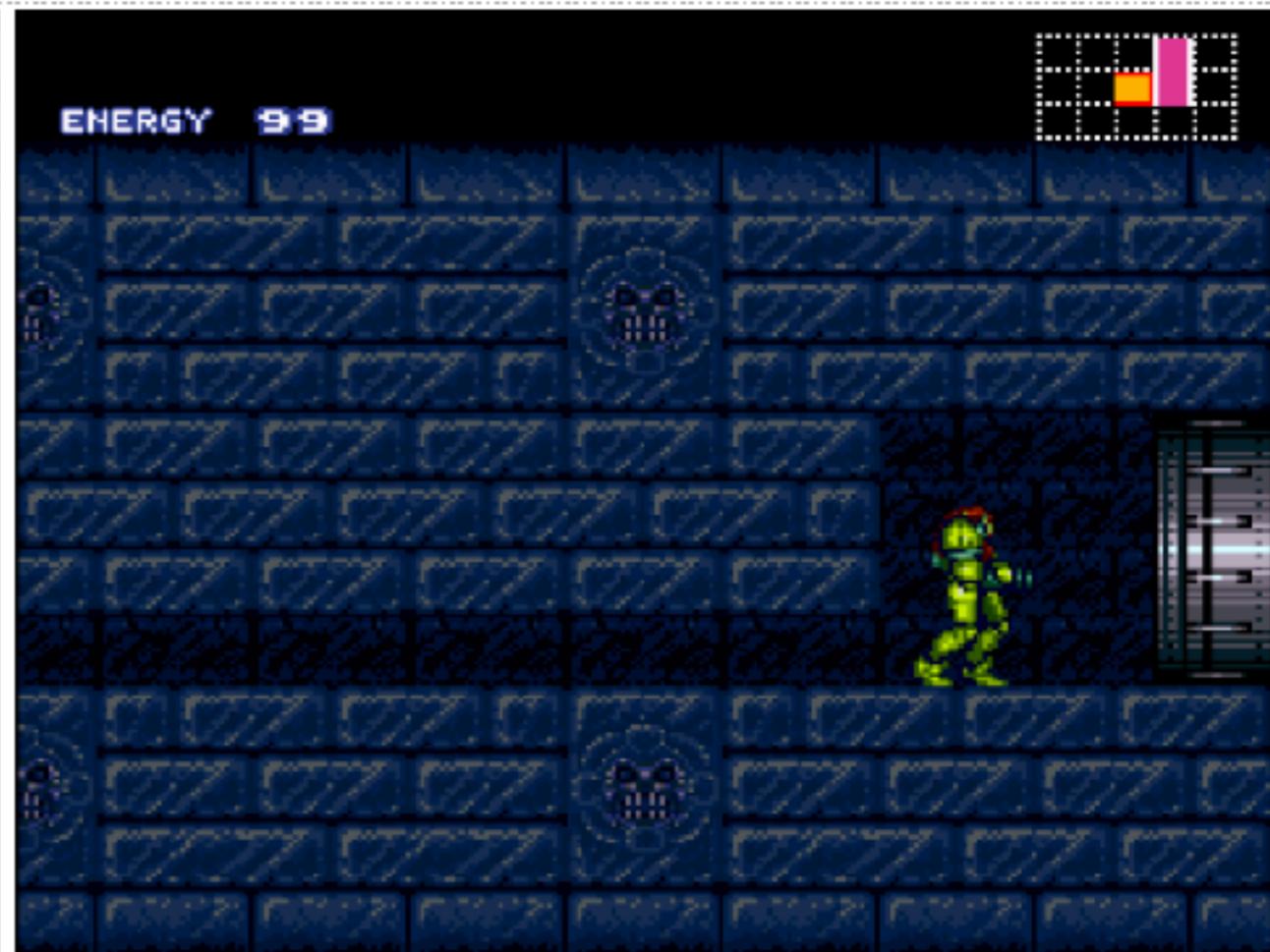
b) Later, it is part of a more challenging obstacle.

Mighty Jill Off foreshadowing a hazard to prepare the players for a later challenge in the game.

Foreshadowing



- a) *The Legend of Zelda: A Link to the Past* shows the players a stone that can be lifted later in the game.



- b) *Super Metroid* foreshadows a path that requires the Morph Ball power-up.

The Legend of Zelda: A Link to the Past and *Super Metroid* foreshadow obstacles that can only be surpassed with power-ups available later in the game.

Layering



a) *Lesbian Spider-Queens Of Mars*

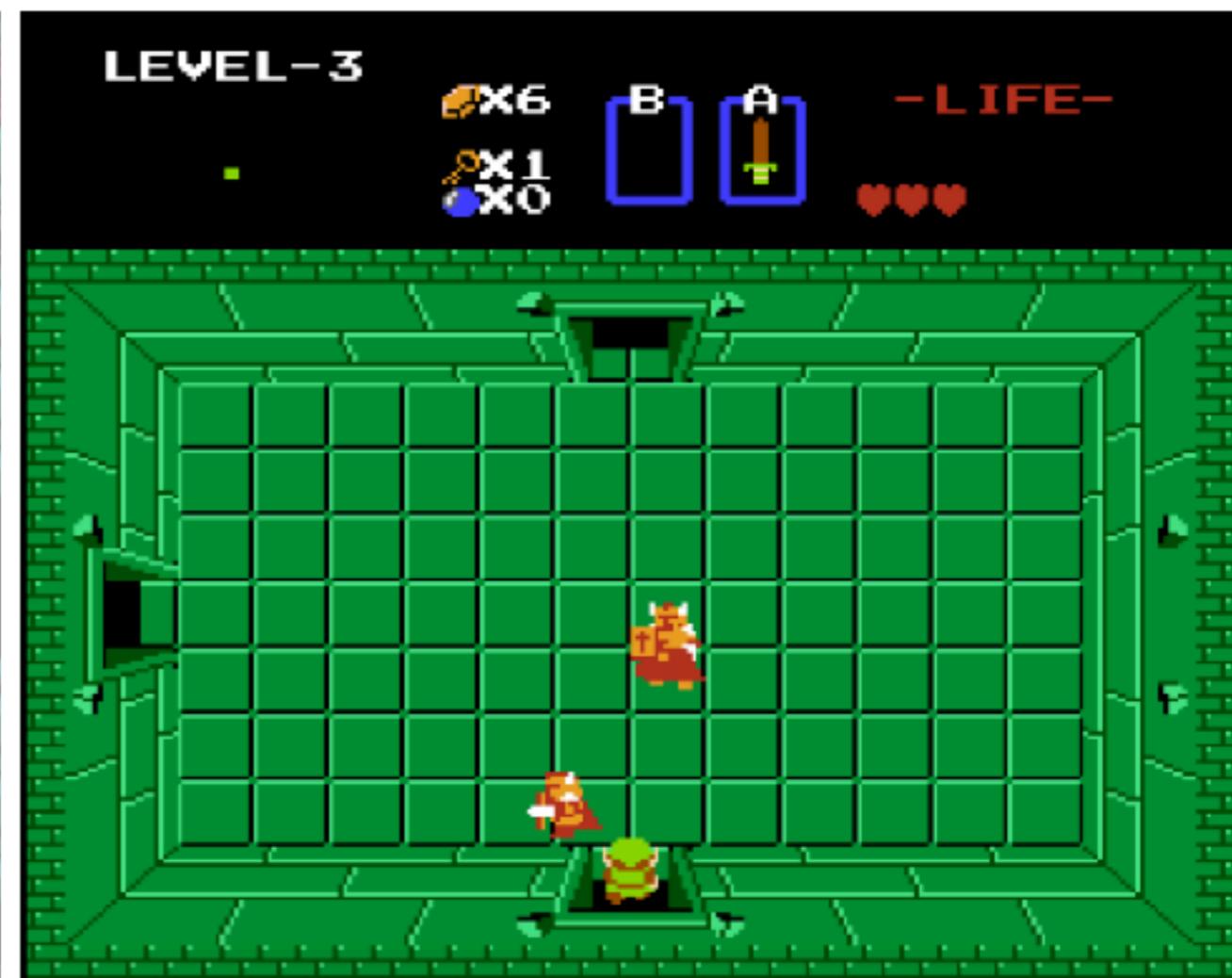
b) *VVVVVV*

Layering the same object increases the difficulty without introducing a new object or mechanic.

Branching



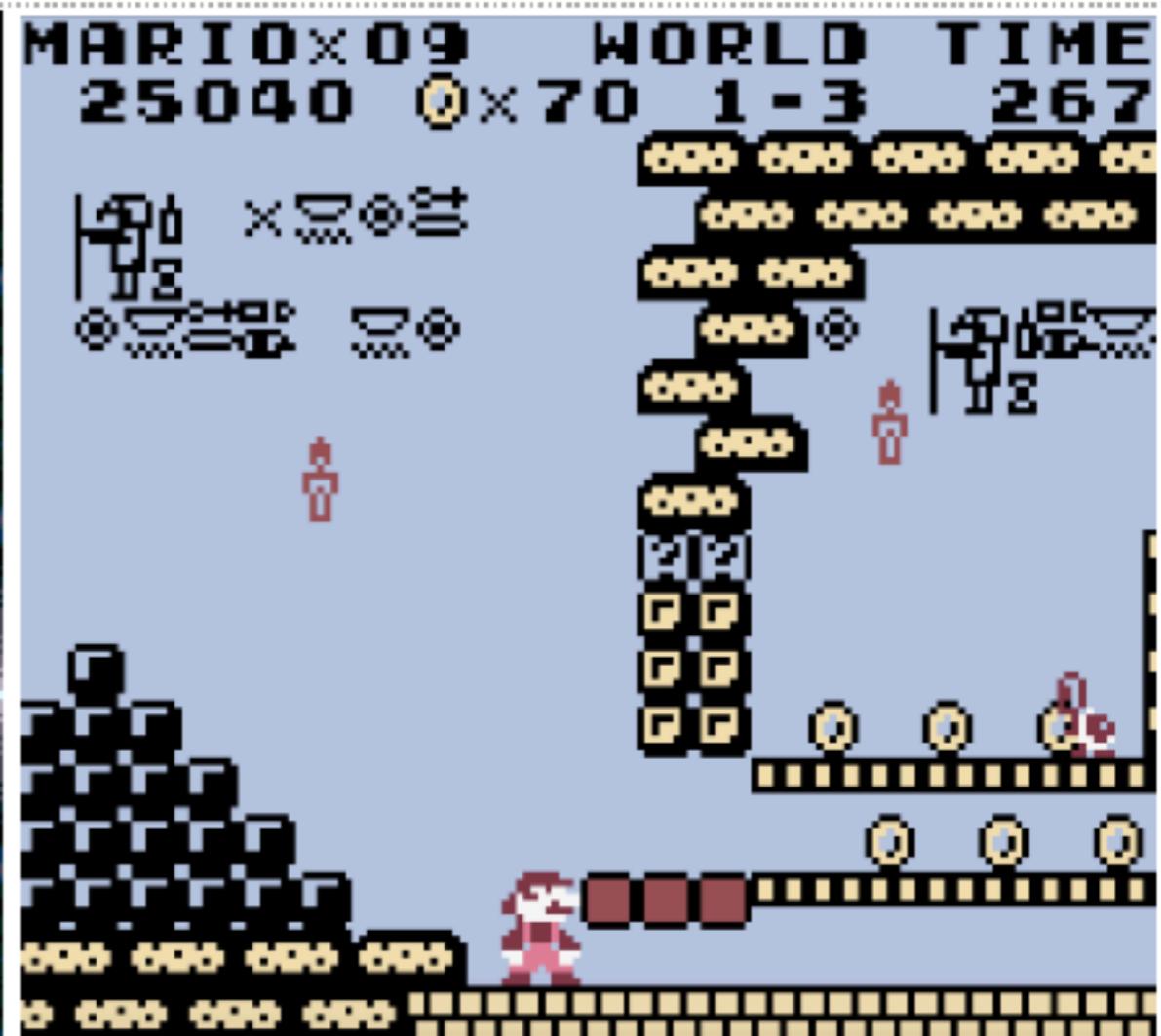
a) *L'Abbaye Des Morts*



b) *The Legend of Zelda*

Branching with no restrictions. Players can freely choose which path they want to take at any point.

Branching



- a) *Super Metroid* requires that players find power-ups to open certain doors.

- b) In *Super Mario Land*, taking the power-up makes specific paths inaccessible.

Conditional Branching where players depend on having achieved specific conditions to take certain paths.

Branching



a) *Excitebike*



b) *SpeedRunners*

Skill-reward Branching. Players can choose a safer path with a small reward or a path that requires more skill, but offers bigger rewards.

Pace-breaking



a) Fighting with multiple enemies occurs regularly...

b) ... until reaching a much stronger foe at the very end.

Final Fight uses boss fights to create tension.

Pace-Breaking



- a) *L'Abbaye Des Morts* reduces tension after stressful challenges.

- b) *Mega Man 11* reduces the stress just before the climactic fight of the level.

L'Abbaye Des Morts and *Mega Man 11* use empty areas to relax and break tension from players.

Your mission

- Build a single-player game prototype that has exactly two levels
- The first level should teach several mechanics
 - (3 or more - movement does not count)
- The second should let the player use skills learned in the first level, and could focus on:
 - Challenge
 - Exploration / Secrets
 - Something else