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Introduction

The task for this project was to create a prototype based off the project plan created earlier and also focus on creating a report that details the intentions of the game, development process/changes, and a critical reflection on the game development and design.

This paper will begin by setting out the context for my game and will then continue by diving into an analysis of the entire prototyping process.

Trial of the elements

Trial of the elements is a 2D top down puzzle game where the player must go through a number of challenges as quickly as possible to gain rewards. The player has numerous elements that they can interact with to help them get through the challenges the game poses.

The player plays as a wizard (in blue) and has the ability to move in four directions (up, down, left, and right), either going one grid space at a time or moving through multiple grids all in one go. Movement is controlled using the arrow keys.

How it works?

The player needs to walk into pushable objects to create combinations that will get them through some of the obstacles in the game. These combinations include:

- Fire + Earth = Lava
- Ice + Fire = Water
- Water + Fire = Steam
- Fire + Door = Access gained
- Earth + Hole = Access gained
- Steam + Lava = Access gained

The player needs to carefully determine which elemental combinations would work best for the level they are in.

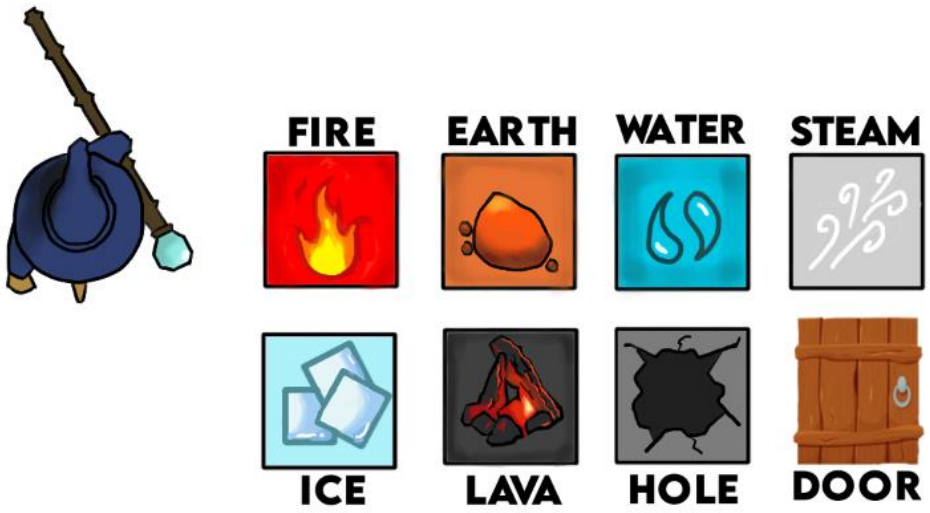

Figure 1: Elements and Obstacles in the game

The obstacles that the player has to overcome are either static or dynamic and each perform different functions. Static obstacles exist to block the players movement and present a challenge. These obstacles, like doors, can be destroyed using basic elements such as fire.

Obstacles that the player cannot push around include, lava, doors, and holes. Doors can be burnt to gain access of a passage on the map, holes can also be filled to gain passage access. Lava is a stagnant obstacle and cannot move. The only way to remove it is to destroy it using steam.

Dynamic obstacles come in the form of enemies. These enemies patrol certain parts of the map and cannot be killed. They, however, can kill the player once they come into contact with them and the player would then have to restart the level. The only way to overcome enemies is to strategically avoid them by either finding other alternative routes or by creating some special combinations that will hinder their mobility.

Intention

My task with this project was to design and build various interactions which pace the player to emulate levels, while at the same time providing the player with the most effective communication feedback system in order to make the game as easily comprehensible as possible.

I began the process of making this game by establishing some design goals for myself. These design goals included having a puzzle platformer with various obstacles which the player had to overcome in order to reach the objective.

Process

The procedure began with a session of brainstorming in which the fundamental goals of the game were determined. Thereafter, I took my game concept to my tutor for approval. This served as a go-ahead for me to begin working on the project.

I started by breaking down the required tasks of the game and assigning them to specific days. Through this allocating of tasks, I wanted to set new openings that will move the project forward. My tasks were broken into 3 main groups – primary, secondary, and tertiary.

The primary goals included:

- Having a top down, grid based movement game.
- Pushing and interacting with objects.
- Creating elemental combinations
- Creating obstacles and enemies
- Star system (Reward)

The secondary goals included:

- Quick and easy restart functionality
- Creating multiple solutions for a single level
- UI that provides the player with effective feedback

The tertiary goals included:

- Hint system
- Animations

- Co-op multiplayer
- Creating skins for characters
- Creating more complex levels as progress continues

I created a prototype which served as a visual representation of my game concept. This allowed me to assess the features and best possible ideas for creation.

I broke my process furthermore into 4 project phases:

1. The first iteration included having the core mechanics for the game.
2. The second iteration included having the UI and art implementation. With this, my goal was to have a prototype which provides effective communication feedback towards the player.
3. The third iteration focused on level design. Through it, I wanted to have a game which includes various interactions which pace the player to emulate levels. These interactions included enemies patrolling certain parts of the map, as well as the pushable elements the player had to move around.
4. The fourth and final iteration focused on finalizing the project. At this stage, I wanted to implement the tertiary goals of the game that would add extra "juice" towards the overall game. Elements such as sound effects, background music, and animations.

After the iterations had been completed, I worked on the weaknesses that I could fix and manage. These weaknesses were issues such as the player not moving correctly, or the elements not combining in ways that they are supposed to and many other. Some of which were beyond my control but did not break the playability of the game.

Changes

There were multiple things that I changed from the initial project plan that was delivered. These changes came as a result of the multiple playtests that I conducted and also realizing at a later stage that I might have over-scoped in the initial project plan.

These are a some of the issues that did not work well with the game and had to be changed:

- Creating a movement mechanic that strictly moved one block.
  This mechanic restricted dynamism for the player to move and I wanted to create an overall much faster-paced game.

- Ice making the player move in one direction until they collide with a wall. Through playtests, I came to the realization that this feature helped the player way too much than I had envisioned it to be. Players did not see the ice as an obstacle but rather as a helping help to move across platforms faster.

Reflection

I approached the task of creating this project with multiple ideas. Whilst many of them were implemented, the core concept of it being a 2D top down puzzle was maintained from the beginning.

My project's focus was on creating a well-rounded prototype with the inclusion of data design that could be manipulated by the player, an effective feedback system, as well as interactions which pace the player to emulate levels. The projects goal was to also develop a game that encourages the use of logic, rather than twitch skill and that is what I developed in the end.

Through playtesting and some peer reviews, I was able to identify elements that did not work well with the game, some of which had to be removed while the others were tweaked. While even at its final iteration of this prototype, there were some features that could have been developed better.

Appendix

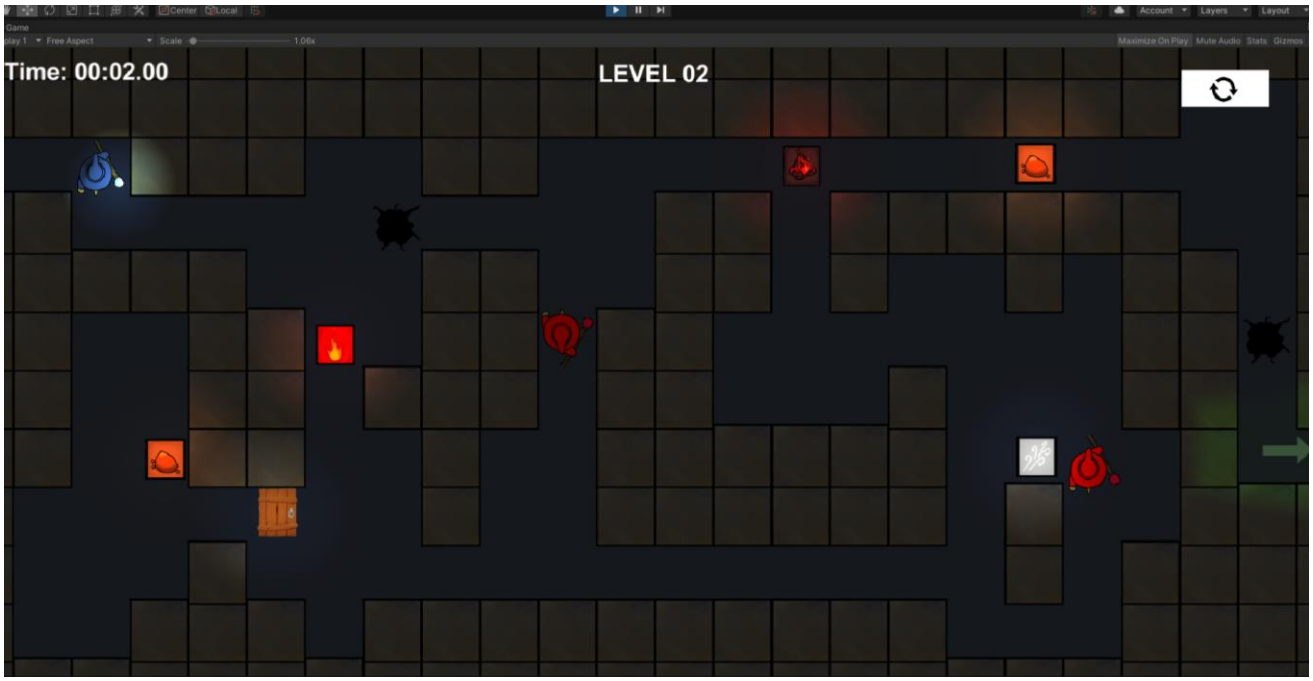

Figure 2: A screenshot of a level in the game

References

Author: gertraut_hecher

Name: harp arpeggios – music of the rose garden

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URL: https://freesound.org/people/gertraut_hecher/sounds/560524/#