

# Descriptive Document

## ADDventure

### Team Members

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### Logline

*(2D-Platformer + Puzzle)*

A 2D puzzle-platformer where players must not just move blocks, but carefully combine numbered blocks on target spaces so their sums match the placeholders' numbers, challenging both logic and spatial strategy in every level.

### Genre Research

Research done on three genre titles that are 2D puzzle:

1. Sokoban (Classic 2D Puzzle)
2. Crypt Raider
3. Baba is you

### Tropes:

Our game uses the familiar tropes of 2D puzzle games, such as maze-like levels that restrict movement, pushable blocks that can only be moved in certain directions (*up/down/left/right*), and locked paths that require the player to solve the puzzle before progressing. Similar to other Sokoban-style games, there are also move limits that challenge players to plan efficiently and avoid getting stuck. These classic puzzle elements form the foundation of our game, but we extend them with our twist i.e. the numeric sum mechanic, which forces players to think not only about block placement but also about how the values of the blocks add up to satisfy the placeholders.

### Twist:

Our game builds on classic block-pushing puzzles but adds a fresh challenge: each block has a number, and players must place them on placeholders so their total matches the target number.

Levels still feature familiar puzzle tropes like maze-like layouts and move limits, but the numeric sum mechanic forces players to think ahead and plan carefully. This combination of spatial reasoning and simple arithmetic is what sets our game apart from traditional Sokoban-style puzzles.

How the numeric sum mechanic is innovative for the genre:

Traditional block-pushing games focus mainly on spatial placement, but our game introduces a mathematical constraint that requires players to consider both the position and the value of each block. Every move affects not only where a block ends up, but also whether the total matches the target number on the placeholder. This makes planning and foresight much more critical. By blending numeric logic with spatial puzzles, the game creates a layered challenge that feels familiar yet fresh, offering a deeper level of engagement than typical Sokoban style puzzles.

Prototype description

ADDventure is a 2D puzzle-platformer that mixes classic block-pushing with basic math. The player moves numbered blocks through a maze and places them on target spots. Each spot has a number, and it is only satisfied when the blocks placed on it add up to that number.

Players must carefully push blocks through tight corridors without getting stuck or pushing a block into a dead end, and they must also think about which blocks to use so the sums work out correctly. The game makes players think in two ways at once: figuring out how to move blocks through the maze and making sure the numbers add up correctly. This mix of movement and math makes the puzzles more interesting and challenging.

A level is completed only when all placeholders have been satisfied. At that point, the exit door unlocks, i.e. transitioning from a locked state to an open state, signaling the player’s success and allowing progression to the next challenge.

Twist and Mechanic Matrix:

Mechanics	Description	Interaction with Twist	Affected Genre Elements	Type of Genre Innovation	Supports
Player movement, , Block pushing, Target constraint satisfaction	Player moves in 2D space to move boxes onto targets to satisfy conditions and progress to the next level.	Players must consider both block position and block value to satisfy target sums	Puzzle-solving, spatial reasoning, goal completion	Introduces arithmetic logic as a core twist layered onto traditional block-pushing puzzles.	Encourages and focuses on planning, logical thinking, and engagement

## GitHub Repository

<https://github.com/CSCI-526/paired-prototype-canvasquest>

## Individual Contributions

<b>Pooja Salve</b>	<i>Map and Level Design, Level Progression Logic, Door (lock/unlock) Logic, UI Elements</i>
<b>Vedant Rajeshirke</b>	<i>Level Implementation, Player Movement, Block Pushing and Wall Mechanics, Constraint (Placeholder) satisfaction logic</i>

## Diagram/Sketch

