

# PowerUp

## Technical Documentation

Manuel Bidmon (mb267)

### Game Summary:

The player controls a small character and tries to get him to the treasure at the end of the map. To bypass obstacles and avoid falling into traps the player can use power ups that are scattered around the map. The game has a puzzle effect, because you have to combine power ups to complete some parts.

It is a 2D Side-Scroller Jump and Run style of game, developed for PC and runs on very low requirements.

The game is fully implemented in Blueprints. There is no additional C++ code.

### Key bindings:

Key	Function
A	Walk to the left
D	Walk to the right
W / Space	Jump
J	Use power up 1
K	Use power up 2
ESC	Exit the game

### Power Ups:

To proceed through the level the player can use 3 different power ups

#### High Jump

Makes the player jump higher (about twice as high)

#### Faster Speed

Let's the player run faster and jump further

#### Projectile

The Projectile is used to shoot a button that opens a door

### Graphics:

The graphics are free online graphics for the background and self-made power up symbols

## **Game Components:**

Most of the game world is built using simple square blocks that have a variety of different shapes and can be colored.

There is no intro or tutorial at the beginning of the game. The player learns how to move and use the power ups by trying them out inside the world directly. In the beginning the player can fall back and try again if he fails the first time. If the player dies he will be respawned at the start location he joined the game the first time. There is no limit on attempts and the game can be failed and replayed as often as the player wants.

The player has to avoid spikes on the ground that kill him if he steps on them. They are the only type of trap in the game.

There is a button that can be shot with the projectile power up and will then open a door giving the player access to a power up he will need to proceed.

All power ups have a spawner that will spawn them back into the game so if the player uses the power up too early or wants to pick it up again for later use he will have to wait a specific amount of time and can then collect it again. Every spawner has its dedicated power up that it will spawn.

The character has some animations that make him look smoother and give a more realistic movement feel to the game.