# **Delivered - Game Design Document**

Delivered is a 2D Platform game which tells the story of **D**, the envelope. **D** has to go through some small (or big) challenges so he can find his Mailbox. The game has 4 different levels, which are the easy level (2 rooms), medium level (1 room, mini boss), hard level (1 room, enemies are bigger, run faster and have more hp), and the final level (final boss, has much more hp, a little bit slower than the hard level enemies, but shoots every 30 frames).

In this game, **D** has an infinite number of bullets (mini-envelopes), which are shot by clicking the left-mouse button and aiming your mouse to the desired place to shoot at.

**D** can also move left (A key), move right (D key), and jump (Space-bar key). The jump mechanic only allows **D** to jump one block high.

There are some special features added to the game, which are:

* **Jump buffer** – While developing the game, I found that most recent 2D platformers give the player a “leverage” where even after they are not on the block that they wanted to jump anymore, the game allows a certain time so that the player can still jump while mid-air. In **Delivered**, the jump-buffer is 10 frames/steps. This allows the player to visualize the game differently and come up with better ways of passing a specific part of a level.
* **Shoot bloom** – This is a mechanic that I find amusing and makes the game a tiny bit harder. The **shoot bloom** makes the bullets shoot in a different direction every time the player shoots. Take this as an example:

Figure - No bloom

Player

BulletsD

This is what most games have as a shooting mechanic. Notice that the bullets always go in a straight line and will always start in the same position where the player is.

Player

Figure - Bloom

BulletsD

In this case, the bullets have **bloom**. In a range selected, the bullets will either shoot with a slight miss-position, which causes the bullet not to shoot in a straight line, or the bullets will go in a straight path. In **Delivered**, the bloom is set in a range of (-3, 3) pixels, in which the game will choose between that range every time the player shoots. If, for example, the value is -3, the bullet will shoot slightly downwards, but in the other case, if the value is 0, it will shoot straight, much like a normal bullet would.

**Enemies**

In Delivered, there are four types of enemies:

A picture containing text, outdoor

Description automatically generated

: 4 health points, has afraid of heights.

A picture containing text, outdoor

Description automatically generated

: 50 health points, 5 times the size of the first enemy (child object), has afraid of heights.

Graphical user interface, application

Description automatically generated with medium confidence

: 10 health points, 2 times the size of the first enemy (child object), has afraid of heights.

: 100 health points, 5 times the size of the first enemy (child object), has afraid of heights, and shoots bullets. The bullets are shot every 30 steps, and they will not be shot in a range of 600 pixels. The enemy will also know when to shoot, so if you are covered somewhere, it will not shoot.