

# Waterstreak GDD

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# Executive Summary

## Game Overview:

Waterstreak will be a 3D-based platformer game that will be developed in Unity using the c# language. Gameplay will be based on traversing an obstacle course throughout each level while remaining hidden from the main enemy. Additionally, another feature will be the option of using one of two different modes/buffs to aid in completing a level. (Burst and vapor mode.)

Player's task will be to complete a level before running out of time or as fast as he can, whilst remaining hidden from the main enemy, whom of which will be centered throughout all levels to give a sense of being stealthy. The environment for the obstacle course will be household furniture inside a living room. Each section of the course will be mainly placed behind the environment so that the enemy doesn't spot the player. The burst or vapor mode aid in completing the obstacle course by either increasing speed or allowing movement through certain obstacle pieces. At the end of a level, there's an option to upgrade the lifespan for either the burst or vapor mode.

## Core Concepts:

### Goals/Objectives:

#### Main Goal:

Remain hidden from the enemy while going through sections of the obstacle course that are emplaced behind household furniture in a living room, until reaching the end of a level.

## Secondary Goal:

Complete the level before time runs out (or as fast as possible) while using either burst or vapor mode.

Avoid hazardous parts of the obstacle course that aid the enemy, complete the level attempting a level. To more efficiently complete a level, player upgrades either burst or vapor mode. Additionally, be offered the option of changing the skin of the player, which will affect the particle effects when activating the modes.

## Win/Loss Objective:

Win Condition- Player must reach the end of a level before time runs out.

Lose Condition- Player becomes spotted by the enemy or runs out of time. Being spotted would be caused by making too much noise, becoming discovered while transitioning from different sections of the obstacle course, and becoming diverted from a hazard object of the course towards the enemy's center position.

## Core Elements of Gameplay:

### Enemy

- Centered throughout all levels
- Programmed to survey the transitioning areas of the environment
- During night-time, will be attributed a flashlight for more immersion in the level
- In the duration of the entire game, will be given different survey speed rates

### Burst Mode

- Increase the speed of the player when activated
- Particle effects added for more immersion

## Vapor Mode

- Ability to move through certain obstacles of a section (like a ghost moving through walls)
- Speed remains the same, but when spotted, enemy survey speed rate increased

## Awards

- Based on how fast a level is completed, extra time awarded for adding to only one mode's duration (Burst or Vapor mode)
- Different skins which in turn affect the color of the particle effects

## Difficulty

- Based on level number, enemy's survey speed rate will be altered for the purpose of adding more suspense while playing a level.
- Variation of obstacle placement/pattern will be randomized in accordance with enemy's altered survey speed rate.

## 3D Platformer Genre... New Suspense:

Waterstreak primarily belongs to the 3D platformer genre as he/she ventures through level-based sections of the game, while avoiding certain hazards/obstacles along the way. However, the centered enemy adds a new suspense to the game while the unique variety of each obstacle course keeps the player engaged and active, along with modes that aid in completion.

## Project Scope

### Perspective:

Waterstreak's camera perspective/visual representation is set to be a 3D platform style. Will have blended elements from games like Super Mario Bros and somewhat Batman Arkham Asylum. For example, . For this 3D ground-based game, certain platforming mechanics will be essential to the player, as he needs to traverse the obstacles while avoiding certain hazard objects/traps and then reaching the end of the game.

## Art Style:

Initial concept for the game is that the player is an alive water bottle while adventuring through a modern style type of environment. There should remain a playful theme throughout the game along with suspenseful connotations. The feeling should evoke a sense of danger or fear and make the mode features feel of great use. For example, there may be children's tables, toys, other types of small wooden tables, vases/flower holders, and other housing furniture that leave the player vulnerable to the enemy.

Waterstreak will most likely have different models in each level, such as different furniture or hazardous objects/areas. All levels are to provide slightly different experiences as the player progresses, but increased variety of the environment proves for more creative innovation.

## Core Mechanics:

- Burst Mode- when activated, ability provides a speed boost to the player, until it runs out
- Vapor Mode- when activated, ability changes the player's form into a gaseous entity, capable of moving through certain obstacles such as walls, until it runs out. If spotted, increases the survey speed rate of the centered enemy
- Player Controlled Movement- can jump and move in all directions on a platform or ground, or push certain objects to aid in completing the course (can activate abilities)
- Game Over Events- hazard objects(like a treadmill) leading to the enemy spotting the player, spotted while transitioning from a section of the course to another, landing in hazard areas (such as a loud whoopie cushion), and running out of time

# System Mechanics

## Main Focus

Player's intent is to reach the end of each level while completing it under a time limit. Levels follow a standard progression and increase in difficulty as the player progresses in the game. Each level will have different variations of environments, such as different placement of the furniture/toys, different placement of the enemy (e.g. Not only centered in a level), different placement of the obstacles and hazards of the course, and different end-of-level areas. Hazards, enemy, environment, and obstacles are to be statically placed in each level. First level is meant to be easy so the player can get used to the game's mechanics, while as he progresses it becomes more harder and difficult to complete under a timeframe. As levels become harder, each requires for the player to repeat it until he adjusts to its new environment. Overall, player must avoid hazards, the enemy's sight, traverse an environment's obstacle course, and reach the end of each level. Based on how fast a level is completed, extra time will be rewarded to add on to the duration for only one mode of the player (Burst/Vapor Mode). Skins affecting the color of a mode's particle effects will be awarded throughout different levels(possibly receive a first one in the second level). Player's objective is to remain hidden from the enemy while not triggering any hazards in each level. Awarding extra time and skins comes after the player successfully completes a level.

## Player Character

Player controls a single character which is an alive water bottle. The player will retain the same water bottle skin throughout the whole game. The player will be able to allot extra time towards the duration of either the Burst or Vapor mode, based on how fast he completes a level. Lastly, he can equip different skins for the particle effects of the modes after completing certain levels.

## Core Features

In Waterstreak the player will be tempted to continuously play by earning skins for the modes, experiencing suspenseful moments while hiding from the enemy, and being rewarded with more time to extend a mode's duration. This relates to the "carrot on the stick effect", enticing the player to earn more and more in the game. Levels will become increasingly difficult so as to provide a more worthwhile gameplay experience while attempting to reach the end of them to earn rewards.

# Core Mechanics

## Player Mechanics

### Player Movement

#### Standard Movement

Standard movement in Waterstreak is split into four categories - forward, backward, horizontal and vertical. Player will be able to control the directions in which he/she goes in, along with the camera always following the player, keeping the player on screen at all times.

- Forward, backward, vertical, and horizontal movement will be controlled entirely by the player. All but the vertical movement can be manipulated by activating Burst Mode (increases player speed but not jump speed or height). Burst Mode will be able to increase player's speed to about 150%. Speed of the player is not able to be manipulated manually - only altered by the use of Burst Mode.
- For more detail in vertical movement or jumping, if the player activates Burst Mode and moves while jumping, the distance after landing will be increased due to the player's altered speed. Only the jump's height and speed will not be affected by the activated mode.

#### Special Movement

##### Burst Mode

This mode is a mechanic that can be activated by the player and increases his speed to about 150%. Can be activated by pressing the B button and will last for 8 seconds.

##### Vapor Mode

This mechanic transforms player into a gaseous form that has no effect on the player's speed. However, it allows for the player to move through certain obstacles that would otherwise need traversing over. For example, moving through an obstacle-like wall that would usually need a way to pass over it. It is activated by pressing the V button and will also last for 8 seconds.

## Player Abilities

Currently, the player can't attack anything. However, there may be an implementation for the player being allowed to push optional, movable objects to aid in completing the obstacle

course of a level. For example, there could be a tall, obstacle wall; to jump over the wall there is a placed object available to push in a position in order to jump onto it (like God of War).

## Enemy Mechanics

### Enemy Movement

Enemies will have four categories of movement - forward, backward, stationary while rotating and horizontal. However, the main enemy's movement will vary from level to level. For instance, main enemy could only be centered in a level and just rotate while trying to find the player. In another level, main enemy could be moving in a side-to-side path and possibly adjust itself to the course by moving slightly forward or backward (if a level's course was set up like a snake-like pattern).

#### Stationary While Rotating

As this movement implies, stationary enemies (such as hazards) will be immovable and perform their specific actions. Won't move from their current positions, but will be able to rotate in place.

#### Main Enemy Movement

Can rotate 360 degrees if remaining stationary in a certain level, can adjust its path by moving forward and backward, and can move in a horizontal path in certain levels. No matter the type of movement, goal of main enemy will be to find the player while he is transitioning from one part of the course to another, or until player triggers a hazard (e.g. can see player if he is moving on the floor between two different couches or furniture).

Horizontal, rotational, forward and backward movement are exclusive to the main enemy. Rotational movement will be based on the circular-like setup of a level's obstacle course. Horizontal, forward and backward movement is determined by either curvy-like or straight patterns of a level's environment. Stationary enemies (hazards) will be placed to make traversing the whole course more challenging and hopefully harder to complete.

### Enemy Actions/Attacks

The main enemy will be using ranged actions (throughout the level) such as an eyesight indicator during daytime and a flashlight during night to find player. As soon as player is exposed to main enemy's ranged actions, the main enemy will move towards the player's position until almost reaching it - ends the game afterwards. Mini treadmills (stationary) placed throughout the course will simply move the player in the direction of the main enemy if made



contact with - ending the game. Another enemy example; whoopie cushions (stationary) if landed on will launch player above the furniture, causing main enemy to move toward player's position- ending the game. All of these actions/attacks always keep the player wary of his strategy while traversing the obstacle course.

## Non-Enemy Obstacle Mechanics

### Non-Moving Obstacles

These obstacles will remain inanimate from their x, y, and z position. However, some obstacles will serve as walls or supporting objects that will aid the player in completing the course. Others are to hinder the player's progress such as the hazard objects.

### Hazardous Obstacles

These objects are to slow the player's progress in the duration of the course or to cause a game over event when interacted with. Examples: a placed mini treadmill will force the player in the direction of the enemy, a whoopie cushion placed to force the player upward and dragging the enemy's attention towards him, and building blocks that when pushed by the player, will cause too much noise and end the game level.

### Supporting/Movable Obstacles

These supporting/movable obstacles will serve as supporting elements for the player, providing him a small challenge to overcome to move on into the next part of a section. Example: player comes across two platforms with one raised higher than the other, making the player's jump not enough to reach the raised platform. However, there are toy blocks on the player's platform that can be pushed in any direction so that the player can jump on them to reach the higher platform. A different supporting obstacle could be a bouncy ball that will already be placed for the player to jump on and reach a higher position/platform. Since a moving sphere can be pushed easily more than a cube, the ball will be made as static and will not be moved.

## Github Link

Github gitignore file link:

<https://github.com/github/gitignore/blob/master/UnrealEngine.gitignore>

# Art Assets

## Environment Art References

Red chairs/table -

<https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=2ahUKEwiZ5PTpid3dAhWeITQIHVhiBuoQjRx6BAGBEAU&url=https%3A%2F%2Fwww.toyuniverse.com.au%2Fproducts%2Fjolly-kidz-abc-table-and-chairs-red&psig=AOvVawoezpgiC-RCwDsklYaUYc3R&ust=1538202717719828>

(Without the holes in the table, letters, and middle texture on the table)

Wood table example -

<https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=2ahUKEwjYweOdit3dAhXdGTQIHd1OBLOQjRx6BAGBEAU&url=https%3A%2F%2Fcfusrug.org%2Ftop-15-photos-ideas-for-how-to-build-wood-table%2Fbuild-wood-outdoor-table-easy-diy-toy-box-plans%2F&psig=AOvVawoezpgiC-RCwDsklYaUYc3R&ust=1538202717719828>

(A more simple one to model)

Kids ball - [http://newimg.globalmarket.com/PicLib/821/1901821/prod/42\\_1330067427168\\_1.jpg](http://newimg.globalmarket.com/PicLib/821/1901821/prod/42_1330067427168_1.jpg)

(Small ball that launches the character upwards)

Treadmill - [https://scheels.scene7.com/is/image/Scheels/4361950161\\_F](https://scheels.scene7.com/is/image/Scheels/4361950161_F)

(Goal is to place this in the level and have it miniaturized to thrust the player sideways, and also simplified to keep a simple art theme)

Wood blocks -

<https://cdn3.volusion.com/wunh2.w2vhv/v/vspfiles/photos/05-0108-2.jpg?1524575057>

(Some of these will be what the player will walk on, and some of these will be used as pushable objects to move on with the course)

Another wood blocks example -

<http://www.hobknobin.com/wp-content/uploads/2017/02/alphabet-wood-blocks-wooden-blocks-abc-blocks-guest-book-signing-baby-alphabet-toy-blocks-58ad28391.jpg>

(Same intentions with these references)

Foam blocks - [http://www.daycarefurnituredirect.com/i/17AM/1621-KB-12684\\_soft\\_blocks.jpg](http://www.daycarefurnituredirect.com/i/17AM/1621-KB-12684_soft_blocks.jpg)

(Same intentions with these foam blocks for pushing or remaining as static in the levels)

Sofa -

[https://cdn.shopify.com/s/files/1/1183/2594/products/CAP81-FB-3S-LGY\\_2\\_a3bb54c2-26e4-4b20-9d39-ca19463ec7f5.jpg?v=1533168775](https://cdn.shopify.com/s/files/1/1183/2594/products/CAP81-FB-3S-LGY_2_a3bb54c2-26e4-4b20-9d39-ca19463ec7f5.jpg?v=1533168775)

(I would like for this to be purple)

End Table -

[https://i5.walmartimages.com/asr/2e514f04-ca42-48af-9b21-f85e95553382\\_1.afd4b94864a3799ef40a213f8a3563df.png?odnHeight=450&odnWidth=450&odnBg=FFFFFF](https://i5.walmartimages.com/asr/2e514f04-ca42-48af-9b21-f85e95553382_1.afd4b94864a3799ef40a213f8a3563df.png?odnHeight=450&odnWidth=450&odnBg=FFFFFF)

(Part of the obstacle course for the player to hide behind)

Cabinet -

<https://secure.img2-ag.wfcdn.com/im/44089278/resize-h310-w310%5Ecompr-r85/2309/23091587/sumter-freestanding-2-door-accent-cabinet.jpg>

(I am aiming for this asset to be the endpoint for some levels)

Another cabinet example -

<https://www.bajawebfest.com/wp-content/uploads/2018/07/Wood-Storage-Cabinet-With-Doors.jpg>

(Another endpoint but not as big)

Chair -

[https://images2.roomstogo.com/is/image/roomstogo/product\\_silo~Cindy-Crawford-Home-Newport-Cove-Indigo-Chair.jpeg?\\$sku=newportcove&\\$type=chair&\\$fabric-color=indigo&\\$PDP\\_Primary\\_936x650\\$](https://images2.roomstogo.com/is/image/roomstogo/product_silo~Cindy-Crawford-Home-Newport-Cove-Indigo-Chair.jpeg?$sku=newportcove&$type=chair&$fabric-color=indigo&$PDP_Primary_936x650$)

(Part of the obstacle course for the player to behind of)

Interior example - <http://www.asset1.net/tv/pictures/movie/toy-story-1995/toy-story-12.jpg>

(Just an example of what the background of a level could look like)