

# Type Sledder - Game Design Document

The following guide is the game design document for **Type Sledder**, a procedurally generated typing game with peaceful game elements inspired by **Alto's Odyssey**, **Waver**, and **Club Penguin's Sled Racer**. The goal of this game is to provide a fun typing experience where the play style isn't fully built upon one's typing skill, e.g. speed of typing for type racer, while leaning on typing as the central mechanic.

**Team:** Mark (myself) aka Dendrobyte

**Purpose for solo dev:** Learning Unreal and having individual design choices so I don't need to debate (even though I tend to debate with myself)

Thank you to <https://cs.unc.edu/> for publishing the template used for this document.

You can find the live document here: <https://bit.ly/typesledgdd>

You can find the repository with dev roadmap here: <https://github.com/Dendrobyte/TypeSledder>

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## Game Overview

### Concept

TypeSledder is, at its core, meant to be a typing game. The initial idea is to have a continuous flow of sledding down a hill while typing words (and characters, perhaps in code snippets) as you sled down a hill. There are obstacles to avoid but also advantages, such as speed ups, you can hit as you go down. The "map" of the game will be procedurally generated such that it is a continuous playthrough. There will be checkpoints (future idea?) where players can type a block of text and the flow of the game will restart. Or perhaps to prevent flow, it's just a slow-mo type of thing. Good way to put in lore?

### Audience

The audience is for those who are veteran typists and want a fun way to test their speed, but also people who like typing yet may not be "super fast". There is a benefit to typing fast, but you do not need to have a triple digit typing speed to enjoy the game- especially if/when difficulty options are added in.

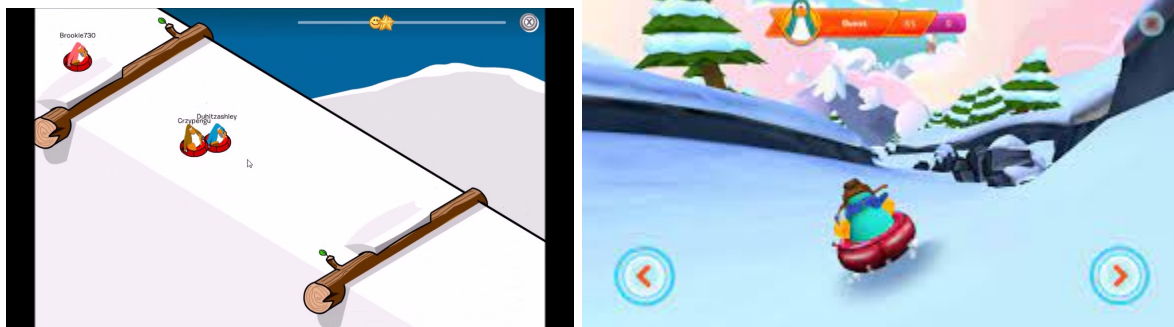
## Game Progression and Flow

The game progresses procedurally and it should be a constant flow of movement. Words will come into view of varying difficulty that allow a player to simultaneously type out the word but also have to choose what their best strategy is. While typing is the main mechanic, there will also be things to trip the player up, e.g. typo'd words that should not be typed correctly (but if they are it is a zero penalty).

## Look and Feel

The game's art will be, ideally, very "wintery" looking. Think *It Takes Two*'s winter levels or most games' winter vibes. The visual style will be of much lesser quality, however, since my artistic ability is lacking and too much detail may drag focus away from the player.

The style of the game is heavily inspired by *Club Penguin Sled Racer*, specifically the idea of having different lanes with different obstacles. The camera angle, however, will take from the mobile version of the game. The player will not be as free. The goal is not to move via arrow keys, but move along lanes by typing words as they show up in front of the player. For example, there will be text over a rock you need to move to avoid. The two options will be right and left, with potential advantages to thinking ahead should you choose the direction (e.g. right goes into another rock, left has a powerup). There will be four lanes and movement will be fast. A meter for slow-mo will likely help the game feel good, but I'm unsure how that would work since you need to be typing to play...



## Gameplay

### Objectives

The player's objective is to get as far as possible on the course while being informed of their average wpm as they play. Statistics are a future goal, and entirely up for debate.

## Game Progression and Flow

The game is procedural and won't necessarily get harder. Perhaps at a future date there could be a mode that increases difficulty as you go, but the idea is to get into some sort of "flow state". For that, we would need a difficulty slider at the start that doesn't dynamically adjust, but for now it will be a constant difficulty. More difficult words will be for powerups, otherwise things in general will be for changing direction.

This continuous nature is inspired by **Alto's Adventure/Alto's Odyssey**, and the lack of difficulty increase makes it all the more fun, especially as you travel through key environments.

## Mechanics

### Game Rules

The explicit game rules can be fairly strict, given the fact this is a video game. The rules exist such that the player cannot stop, you are assigned specifically to lanes, etc. The most text that will be said will be typing to avoid obstacles and switching lanes.

Implicit rules involve any strategies plays may come up with, patterns that emerge, etc. **This section of the design doc should be thoroughly revisited.**

### Physics, Movement, and Objects

The physics of the game will be constant. In other words, the game will not be making particular calculations based on lane switching, collecting objects, etc. Speed and acceleration will thus be a constant function.

The movement will be locked to lanes on the hill. A player will quickly move between lanes by easing between them. The transfer itself should take no more than .5 seconds.

Objects along the lanes include obstacles, such as rocks, entities that the player can collect, such as power ups (which can be collided with or, if greater than one lane away, a word can be typed out to collect it), and ice patches (to speed up the player and give them a 'shield').

### Power-ups

Powerups that can be collected are as follows:

- ☐ Magnet: Attracts powerups (and coins?) to always be within one lane closer
- ☐ Shield: Protection from rocks for X seconds
- ☐ Arrows: Lets a player control via arrow keys / wasd for X seconds

### Actions

The player controls will be through typing, although a potential power up would be to use the arrow keys / WASD for 5 seconds or something. By typing out words of obstacles and power-ups, the player will be able to move to different lanes depending on these notions.

The words will be decided from a random list of words. For an MVP product, there will simply be “easy”, “medium”, and “hard” words. Perhaps all words are medium and hard and a powerup makes them all one level easier (hard → medium, medium → easy).

## Options

The base options of this game will start out with simply the ability to pause, exit, or restart. When pausing, the screen will be blurred (or changed) so that one cannot see the obstacles that lay beyond.

For future additions, and intended additions, there will be a difficult option for both speed of movement/word placement as well as ones that require one to be a faster typist- although they cannot be adjusted in-game and must be done between attempts.

This simply tweaks the gameplay so that a player can get the optimal fun out of it- not too easy, not too hard, with a constant difficulty. Perhaps a future iteration of the game might “adapt” to a player’s speed and adjust accordingly, e.g. Kid Icarus Uprising’s difficulty slider (set to 8, for example, and when you die you restart at a lower difficulty; higher the difficulty, more rewards are available).

The only thing that will be saved for this game will be the player’s best attempts, calculated by simple things such as duration (e.g. 1 point per meter in game, which is technically constant?), obstacles avoided, tricks (?), powerups collected, etc.

## Story and Narrative

There most certainly should be one at some point, motivating your way down the mountain, but I can’t quite think of one at the moment (nor is it the main intention).

## Game World / Characters

Uhhhh not gonna worry about these ones for now for the MVP. Game world is described above.

## Levels

### Each Level

As mentioned a few times now, the game will be procedural and thus there will be no direct change of level. Difficulty sliders will be in the menu, but will not change the gameplay as it goes on.

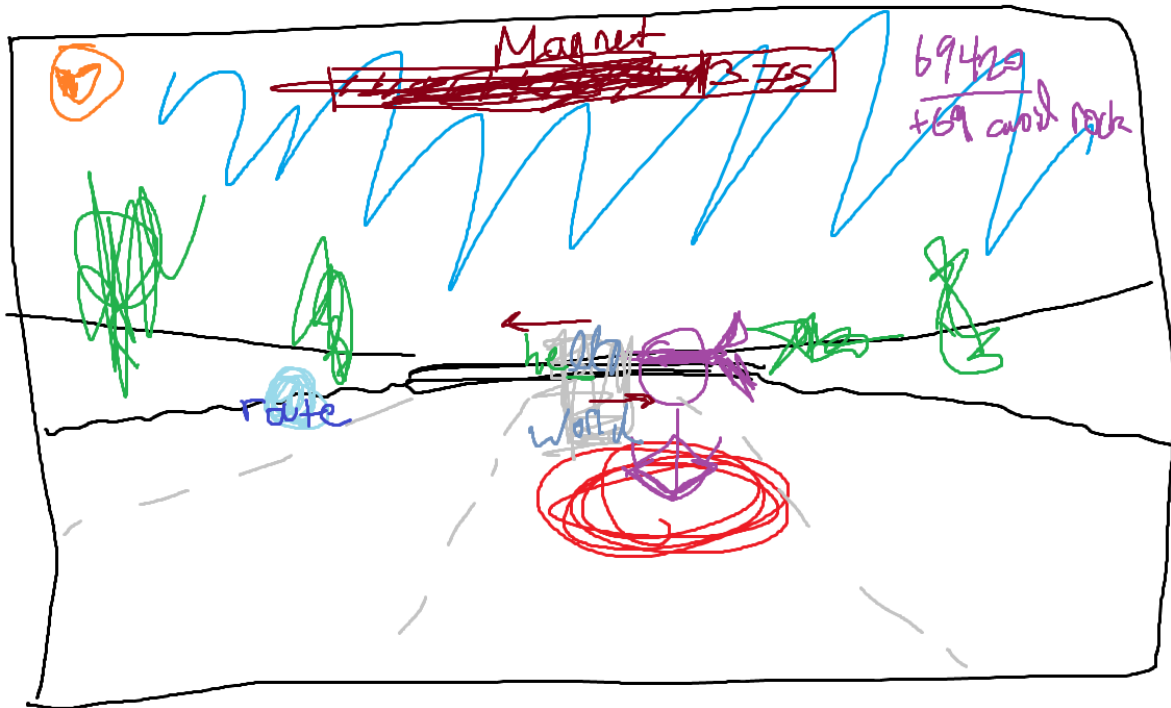
## Introductory Material

Taking from **Alto**, the introductory will simply occur on first playthrough and you will have to reach a certain point and perform all the actions. You play the game and it slows you down while it explains it.

## Interface

### Visual HUD and Menus

The game will be very minimal in terms of overlay. On the top right, one will have their score and anything that recently adds to it (that isn't just a constant increase or something). Perhaps it will also show the last checkpoint as well. On the top left it will show any/all powerups a player has acquired and in the middle will be a progress bar. The progress bar will only show for a shield, certain powerups, etc. You can find a detailed diagram below.



For upgrades, the menu will offer a chance to buy upgrades for various powerups. This will **not** be present in the MVP game, as that requires coins (or perhaps points can convert into currency? Then I'd need other incentives).

## Camera

As we can see in the above diagram (shockingly well?) the camera perspective will be behind the player. As they switch lanes, they will stay center screen so that further lanes don't have a scarily screwed perspective to them. The camera will simply be a spring arm component on the actor component.

## Control System

As labeled, the controls will be solely typing (unless a powerup says otherwise). That's it, chief

## Audio

For music, the track will be one that simply loops for the MVP and fades in and out. I'll make something small in Ableton. There will be another tone that plays when the player goes into slow-mo or something like that.

As for the sound effects, we'll have straightforward and predictable effects. A ding for powerup collection, a slide sound for switching lanes, a crash for a rock, a break when a rock is hit by a shield.