

## **APCSA Final Project**

**Period:** 1

**Group:** Yu Lu

**Group name:** pizzacool

**Project Title:** Radish

Description:

A Rhythm Game written in processing based on designs of Super Hexagon with static input designs from ddr and cytus

Player controls:

Notes instead come from all around the screen into the middle, with your mouse controlling a small radius to sort of parry the notes OR a set of a set of 8 directional keys to hit notes in 8 directions.

Lens Notes

- Emanate from random points on the screen perimeter.
- Travel in straight lines toward the exact center.
- Hit window is tight—timing and positioning both matter.

Central Safe Zone

- A small target circle (radius  $r$ , can be set) at screen center.
- If a note enters this circle, you're penalized (health loss or point deduction).

Full-Circle note

- Occasionally, a "wave" circle expands inward.
- When it hits the designated gray outline, you must have no notes in the safe zone—or take heavy damage.

Terms:

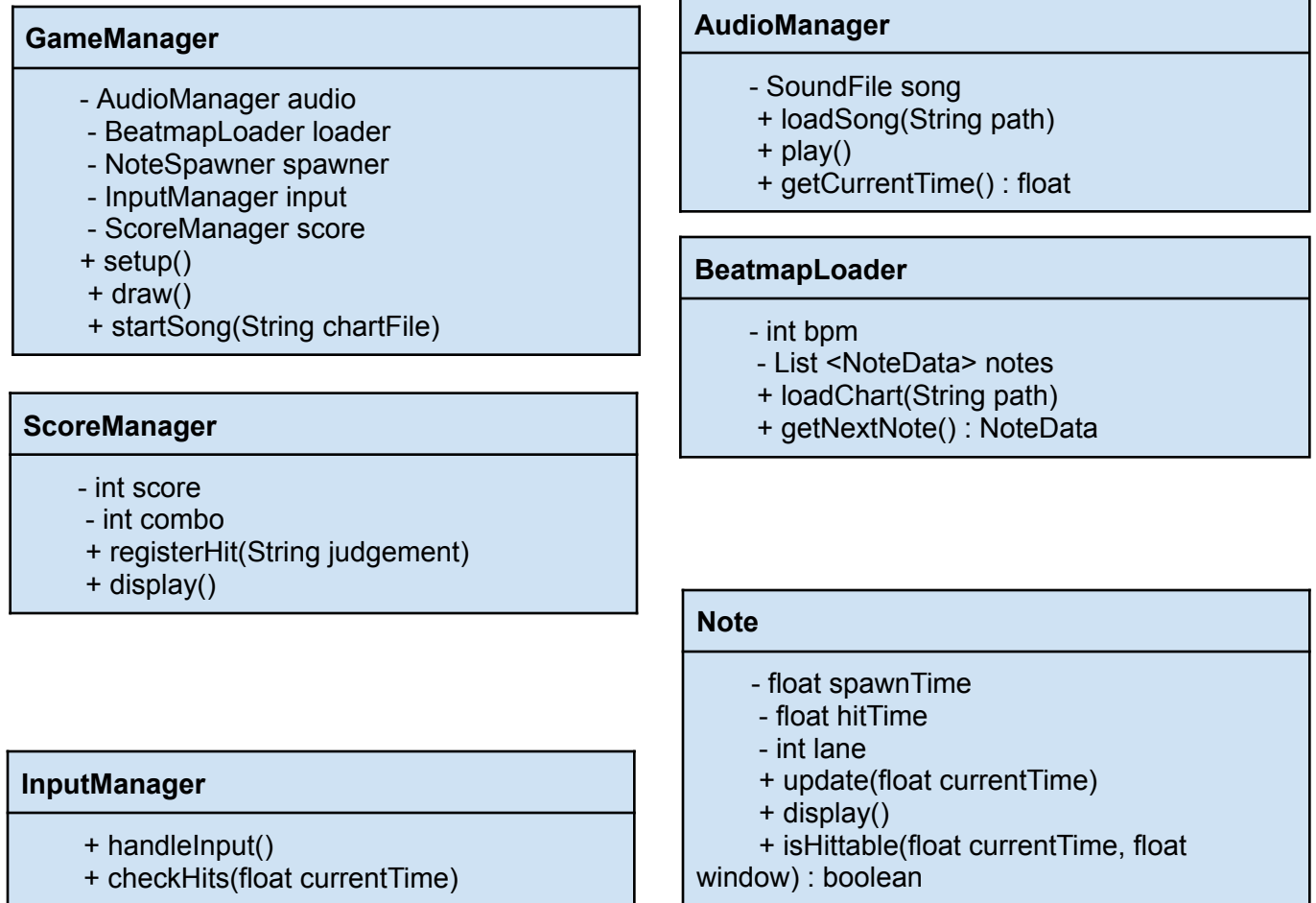
Lens note - regular note, with timing approaches the middle of the screen

Full circle note - Secondary note mechanic, a full circle that approaches the middle of the screen, timing should be separate from main notes?

Outline gray circle - timing outline for full circle notes

Breaking point - point at which the player will be punished for not hitting the note

## Essential UMLS



MVP (minimally viable product) :

- Get music playing (done)
- Make a basic background and map first
- Code the basic spawning function/class for the notes, should ideally contain 8 directions for them to spawn. The notes should be like a part of a circle (like a lens shape), they start off big around the edge of the screen then get smaller as they get closer to the middle (this will mimic a sort of falling or 3d effect)
- Code the basic full circle note spawning, same idea with the normal notes but they should instead stop after the outline gray circle radius
- Try to add timing to the notes somehow, how can i do this? Timing should ideally determine when the notes will approach breaking point

