

Final Project

A frog in the rice field

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cart 253 - Fall 2017
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summary

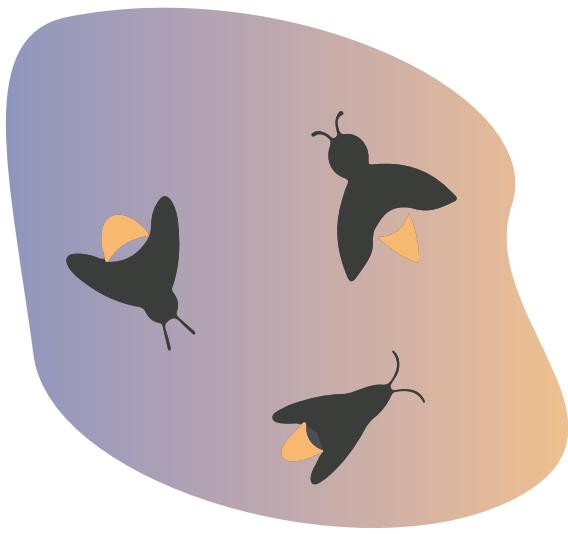
A game inspired by childhood memories of when I lived in a small village by the rice fields. Walking on summer nights, one could hear the frogs' choir and occasionnally see them jumping near the shallow water.

The user will take the role of a frog and attempt to eat the fireflies that will hover around it. They may move right and left and jump until a certain height using keyboard arrow keys and the webcam input to jump up.

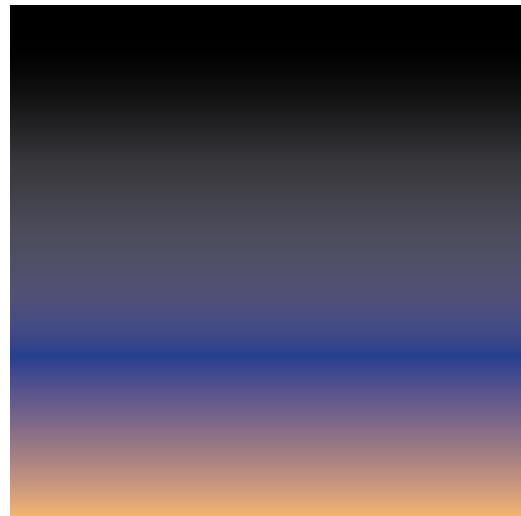
The difficulty in the game will arise due to the fireflies' random movement. As the night advances, the dark blue sky will become brighter and brighter into the sunrise until the fireflies will be harder to see in the daylight.

As the user catches more fireflies, orbs will accumulate as a row in the sky and excerpts of a stream of consciousness appear retelling of specific instances near the rice fields, or facts about frogs.

_media



Fireflies, royalty-free,
credit to Vecteezy



Gradient for sky



Tentative frog

Rice Field

Stream of consciousness every time you catch a firefly



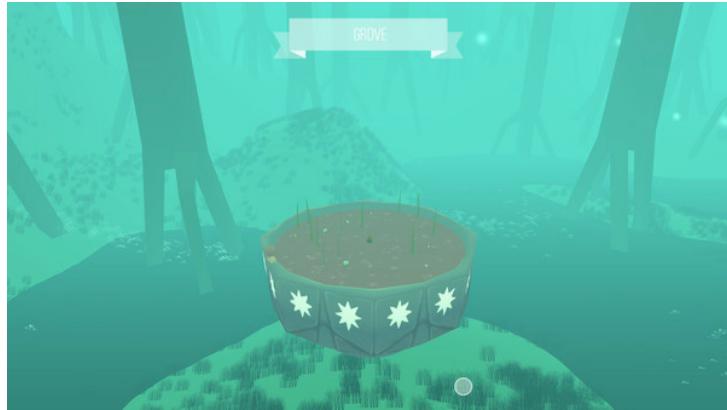
Gameover when sun rises
completely. (Also becomes harder)



Frog can move on x and y axis
(constrained)

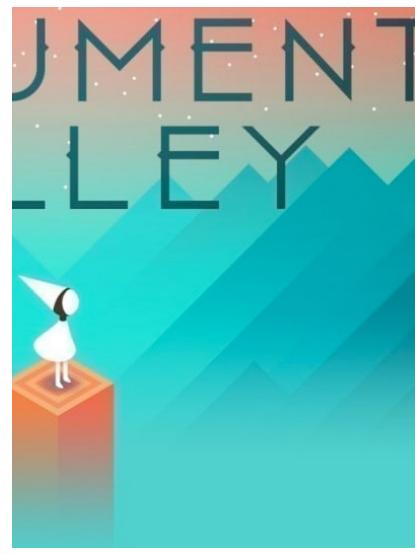
_inspirations

The common thread in these games is that it intends to create a soothing and calming environment where colors are soft and pastel and the interaction is exploratory or nurturing.



"Nurture a small pot of succulents that grow in real time. Viridi is a safe haven, a place you can return to for a moment of peace and quiet whenever you need it." (Ice Water Games)

Monument Valley is a surreal exploration through fantastical architecture and impossible geometry. Guide the silent princess Ida through mysterious monuments, uncovering hidden paths, unfolding optical illusions and outsmarting the enigmatic Crow People.



technical approach

The program will be run by using the following techniques:

_noise

_trigonometry move

_video colour tracking

_arrays

The fireflies will move with noise like shown in the pet example and will be created via a firefly class, thus seeming like creatures with their own will.

The frog will be its own class and steered laterally with keyboard keys. To jump, the user will have to physically move their head up or make upwards movements.

When the fireflies will collide with the frog, the fireflies will disappear, so there will be the need of a void collision.

The scoring point will use and array found in the firefly class or perhaps be its own class as well.

The sky will change gradually colour from a dark blue/light blue gradient to orange/white gradient. At the same time the fireflies will lose transparency.

technical research

There are various challenges that I am not sure how I will handle:

- 1.) *Making a gradient for the sky;*
- 2.) *Making a gradient whose RGB values change over time;*
- 3.) *Using the webcam input in a manner that it detects upward movements;*
- 4.) *Create a scoring system as its own class (and not inside another class);*
- 5.) *How to make an array containing strings of text appear on screen on a random sequence.*

Here are some of the references that might help me in the future:

<https://www.processing.org/tutorials/arrays/>

<https://forum.processing.org/one/topic/create-a-rectangular-gradient-two-colours.html>

<https://processing.org/reference/libraries/video/Capture.html>