CS380 Assignment 1

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1. Background

I made big triangle to express gradation of sunlight. I expect sun is at left-up, so I set right-up and left-down as yellow color, and set right-down as blue color to express there is shadow.

2. Fractal-like Object

I made snowflakes and snow tree.

I use Koch snowflake to make my snowflakes. I build snowflakes with functions “buildTriangle”, “buildSnow”, “addSnowObject”.

I use fractal tree to make my snow tree. I build tree with functions “buildSquare”, “buildTree”, “addTree”.

3. Natural animation

I made three animations.

First, falling snowflakes which bounce above the ground. They all have random rotation rate and x, y velocity. They change rotation direction when they bounced, and random modulus of elasticity get to each snowflake.

Second, drawing big tree first, and when big tree is completely been draw, draw small tree left. It is elapsed dependent so it works differently in different pc powers. It is showing tree drawing animation.

Third, tree’s color is keep changing for 0.05 sec period. I made list for these colors, this is also dependent from elapsed so it works differently in different pc powers.

4. Creativity

I want to express pretty snow tree under the sunlight when snowing weather. I make sunlight background, and falling and bouncing snowflakes, and two trees. I want to give mysterious feeling, and I think my thinking get in this project well.

Challenges

1. Keyframe-based 2D animation

I made animation of making big tree first, and then make next tree dependent to elapsed information. When big tree drawing is complete, it gives information to next tree to draw.

Also, I make bouncing snowflakes with data-saving, sustainable methods. I delete when snowflakes disappear from camera area, so data can be saved for this project.