



Safe Landing Post-Mortem

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Overview

Overall, I am really happy about my final project. It approaches almost everything I wanted it to be. There is definitely some adjustment on the journey from the proposal to this complete project. I challenged myself trying new techniques, overcame the obstacles and minimized redundant code. It is really an unique game that involved with two velocities controlled by windmill and gravity. Also, instead of using the “actual” gravity force and acceleration to make my game work from my proposal, I used the other approach which it is more efficient.

3 Obstacles

1. I can see programming is like the movie “Inception” which it has many layers. The programming work requires programmer to think logically that how to accurate execute the concept into the actual code in a practical way. It takes me a while to build the structure of how many classes I need, what should I put into my main class. To maximum the best usage and avoid redundancy.
2. Even my previous homework involved with rotation and spinning, it is still hard to make a windmill. Especially using some new features that I didn’t used before such as popMatrix, and many event handlers mixed in the main class through to the windmill class.
3. The balloon remove and collision(collided) with storm and hills took me a long time to get it work smoothly. One reason is I decided to use arraylist, I use the reference to set up the remove from arraylist. Another reason is the balloon house from two classes, which it doesn’t really matter with the collision detecting. The most struggling part is my balloons and storm were setting up randomly, hard to be very accurate the connection point with storm. So I considered the whole balloon house as an invisible moving rectangle box. The left and right bottom corner of the house needs to be checked for the collision with six hills each by each, it hits the first one. That’s game over(it will pop out the message”you hit the hill”).

New Techniques

From previous studying of array, I found out how easy to manipulate a large number of information storage by using array function. During programming my final project, I found out arraylist is more flexible and convenient to build storage without giving a fixed size of this array.

As user interface requirement, I use the text function add into Processing screen for game instruction and pop message delivery.

To complete the project as a real game, I tried the new techniques importing the minim library, loaded a background music elevating the enjoyment for the player.

Changes

First, I would like to try P5.js program my project, because I want to see how can I improve my interface to enhance better user experience such as having a intro, replay pop out dialog box etc.

Second, I can make it more graphic or add more animation. For example, having a crash image when the balloon house hit the hills or swirl itself when it hits the storm. Maybe having lighting from the storm etc.

Third, enhance my interface with an introduction page with “start the game” and “game over” replay page.

Flowchart of the final project

Please see following page.

Reference

1. ArrayList - <https://processing.org/reference/ArrayList.html>
2. Collision detection - <https://forum.processing.org/one/topic/collision-detection-in-an-arraylist-of-objects.html>
3. minim player - <https://www.youtube.com/watch?v=LcX36OxgZgg>
4. popMatrix - https://processing.org/reference/popMatrix_.html
5. Text - https://processing.org/reference/text_.html

