Banana Catching Processing Game

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# ABSTRACT

UPDATED—24 September 2017. This paper describes the process I underwent in successfully creating a game using Processing. The coding was done in Java and there are a total of 3 different classes. The game as I would like to call is called “How many bananas can you catch?”

## Author Keywords

Games; Basic Processing; 2D Transformations; Object orientated programming; Java; Collision detection;

# INTRODUCTION

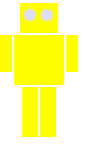
Have you ever wanted to be able to create a simple game in Processing? This paper is not exactly a tutorial but it tackles how I went about creating my own game in processing. The fundamentals I learnt in order to do so.

# INTRODUCTION

So, based on what I said earlier I used three different classes in total. The first main class is the Robot class which is the superclass to two other classes called Monkey and Bucket. There is only one object initiated with the Robot class. Monkey is the second class, which has a total of 8 objects in the program. There are 8 monkeys all in all. The last class is the bucket class. The bucket class has one initiated object. The bucket helps catch the banana’s. The bucket is controlled by the robot in a certain range. All in all, there is a total of 10 objects.

# Design of robot

The robot is made up of 6 rectangles along with 2 ellipses. The 2 ellipses serve as the eye of the robot, while the 6 rectangles serve as the rest of the bodyparts.

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**Figure 1. What the Robot Looks like**

# Design of the Monkey

The monkey is made up of 5 ellipses and 3 rectangles. The 5 ellipses consist of two for the eyes, two for the pupils and one for the head. The three rectangles, two are for the arms which are rotated at an angle of quarter pi and the last rectangle for the body of the monkey.

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**Figure 2. The appearance of the Monkeys in the game**

# Design of the BUCKET

Well the bucket was very simple to design. I added a stroke to it to give it the depth it needed. It consists of one ellipse and one rectangle. The ellipse at the top and the rectangle for the body.



**Figure 3. What the bucket looks like with stroke**

# How the banana works

So the banana starts out from off of the screen. It starts at negative 50 y out of the screen and it always starts at x position of 100. After that it is random from 0 to 900, not including 900.



**Figure 4. Image of enlarged Banana**

# How the game works

So basically, the game has 10 objects in total. 8 Monkeys that move randomly from left to right that are in different y coordinates. The bucket which appears when the mouse is close to the robot. The robot itself. The robot’s arms are always facing the bucket. There is also a mouse pressed interaction. The game restarts if you click on the screen after you lose all your lives. There was a score counter on the top left and a life remaining counter on the top right. The speed of the banana’s falling increases by a value of 0.1 and it caps at a speed of 6.1 you reach that speed at a score of 41. The base speed is 2.0 because anything slower is not really a challenge. As long as the bucket is close to the banana right before it falls the banana disappears and it randomizes to fall somewhere else along the x coordinate. Your score also increases by 1. When you reach 0 lives the game is over and you have the option to restart. It stops looping the draw function of Processing.

# Keyboard interaction

So, you move the robot left and right using the keyboard. If you use the area keys also known as coded keys the robot will glide until it hits the edge of the boundary whether the boundary is left or right. You may also use the ‘a’ and ‘d’ key which will only move the robot 5 spaces over if you press it once or you may hold it to constantly move the robot.

# REFERENCES

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