Get Me My Fruit!

Game Design Document

Designer/Programmer: Kevin Wong

ID : 3339323

Updated - October 2017

Game Overview

Get Me My Fruit! is a side scroller platform based game where the objective is, as you may have guessed is to collect all the fruit on the map. The concept of the game is based around collecting fruit in a bright atmospheric terrain environment. The fruit will be scattered throughout the level and supposedly “guarded” by creatures that resemble the fruit that they guard. In this game, you play an animated guy that is able to jump high across the terrain to collect this fruit. However, you are very weak and will die from one touch of the creatures. Can you avoid getting caught and still get all the fruit?

Game goals

The goal of the game is to obtain all of the fruit throughout the level: Berries, Orange, Apple, and Watermelon without dying. You have to explore the level to see how to get to the fruit, as well as finding the safest route. There are enemies defending each fruit, however they have a predictable routine. If you touch any enemies, you die since you are weak. You cannot swim, so if you land in water you will also die. However, you are able to jump really high.

Game story

One day, you were told to get someone “their” fruit. They were very demanding, and being the simple person you are, you decide to wander into the forest and collect the fruit. However, the forest was home to many different creatures that enjoy fruit that look like themselves. Now you have to avoid the creatures and get all the fruit from the forest. Can you do it?

Characters’ stories and attributes

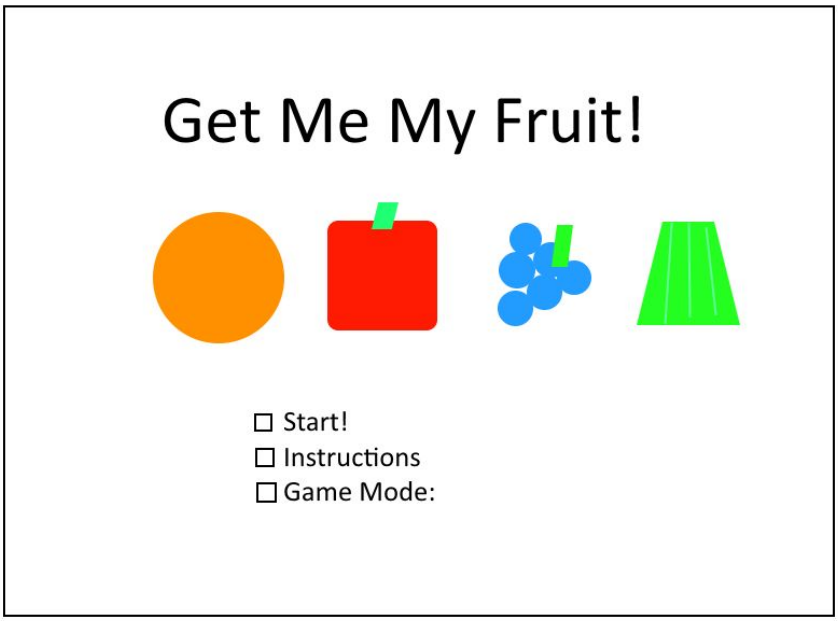
The main character is a simple guy. He does not have much distinguishing features and is weak. He cannot swim or fight. However, he can jump really high and is focused! The other characters in the game are creatures that live in the forest. They are attracted to fruit that look like them, so they “guard” the fruit against intruders.

Interactions of the player and the game

The player is able to walk on certain terrain with the force of gravity acting on the player. When the player jumps, he will initially move higher until a point where his upward acceleration is 0, at which point he accelerates downward to the ground. If the player lands in the water, the player will die because they don’t know how the swim. If the player touches a creature, they will die because the player is weak. The player is able to jump high, and once a fruit is collected, it will be displayed on the screen the dynamic status of fruit collected. The player is able to hit Esc at any time to exit the game. They can also hit Ctrl + h to bring up instructions or hit Ctrl + m to toggle the background music on and off. The player is able to toggle the difficulty of the game between “Easy” and “Hard” which controls the speed of the creatures.

Menu layout and style

The menu layout will start out with a generic title screen. Giving the option to “Start”, “Instructions”, and change “Game Mode” from “Easy” to “Hard” and vice-versa. The title page will also include pictures of the fruit to be collected, just to be more aesthetically pleasing and inviting.



The next screen will be the instruction screen with game info:

Instructions

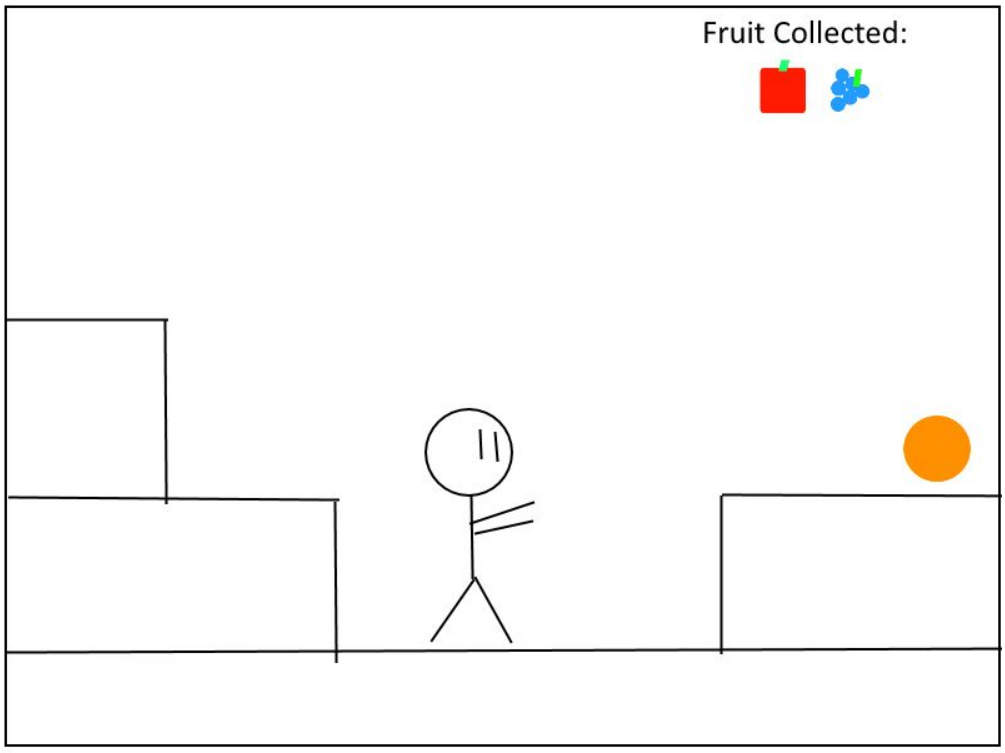
Game Info:

1. --------
2. --------
3. --------

Instructions:

1. -------
2. -------
3. -------

The game screen will feature the game covering the entire screen with an indicator on the top right hand corner of the fruit already collected.



Finally the final screen will just show text about the fruit collected before death, or a game winning screen of congratulations. It will include a Press ‘Esc’ to exit.

Music and Sound description

First off, credits for the background music go to DL Sounds from www.dl-sounds.com, as well as the sound effects from www.wavsource.com. The feel and objective of the sounds were to give the player a feel of a playful forest with a simple yet enjoyable feel. The sound effects for the jumps, fruit collection, game win were positive reinforcements to keep listening to the sounds. (Jumping w/ the sounds was rather pleasant). Whereas the sounds for losing, drowning, and touching a creature were to make the mistakes more evident while pulling the player back for more.

Description of the levels, their themes and goals

Once again, credit go to surt for the background/terrain images, Master484 for their fruit images, and finally GrafxKid for his enemy images. They are all found at www.opengameart.org. The goal of the graphics were to have a playful environment based around a simple, yet enjoyable main character (made by myself - Kevin Wong). The level design was based around the four corners of the map, retaining 4 different ways that the player had to act to get to the fruit/avoid danger. The Orange fruit (top left) relied on jumping precision, the Watermelon fruit (bottom left) relied on simple walking, the Berries (bottom right) relied on short jumps, and the Apple (top right) relied on tall jumps. In all cases you avoid a creature with different routines and patterns. The level was designed to help garner a simple yet satisfying gameplay with fun and simple graphics.

Features: Game modes and Creature routines

The game features two different game game modes. “Easy” and “Hard”. Easy makes the creatures move at a standard speed, whereas “Hard” makes the creatures move at a higher speed. The Creatures currently have a simple pattern near their respective fruit, however hopefully in the fruit, they may be designed like “AI” where it may be possible to have them act simple. But after their fruit is stolen, they may follow (within a range or forever), increase speed or change behaviour.

Updated Feature: Datafiles

One updated feature in this game is the use of Datafiles to store the bitmaps and wav files. In the previous version, the source files were out in the open, which left it vulnerable to modification, copying, and stealing. By using datafiles in the form of data.dat, we are able to secure a majority of our files while still delivering our product in an efficient package.

Updated Feature: AI

Another updated feature of the game is the use of AI on the 4 enemies. In the previous version, the enemies were limited to a predictable pattern with an option to speed things up in HARD or EASY mode. In this version we have encumbered different types of AI such as Fuzzy Logic, Deterministic Algorithms (Random Motion, Tracking, and Patterns), and Finite State Machines. The Finite State of the game is tracked primary on the position of the player relative to the enemy, and the amount of fruit collected so far. When there is no fruit collected, the

enemies move in the same predictable pattern as seen in the previous version. However, once a fruit is collected, the enemies exhibit a random motion within their pattern, allowing them to swap directions. This is randomly generated with a chance of 1/31 each cycle. Next, after another piece of fruit is selected, the enemies still act in a random motion as stated before, however once the player is close by, their attention and focus will change to try to “track” or destroy them. Finally, if another fruit is collected, the enemies will go in a “frenzy” and move slightly faster than they previously did, with all of the previous behaviours - making the game a little more difficult. Overall, this makes collecting the fruit in a certain order important because once the enemies pick up speed, some areas become near impossible to get past unless performed in the correct order.

Conclusion

In conclusion, learning how to use Mappy is a great tool that helps simplify map creation. At least, in a technical sense - after using these tools in addition to creating my own character sprite I realize just how difficult it is to create sprites and maps creatively. For level design, you want to create levels that are creative and make sure they fit your characters and game. For sprite design, the aesthetics may not match what you produce - I for sure spent a long time creating the main character sprites just because it didn’t look correct with body posture. In the end, learning tools can help simplify the process, but not help with creatively thinking of ideas. In addition, the methods of creating AI are very challenging in the sense that you have to essentially create another player in the game. You have to make sure you account for different cases (unless random, and even then..), ensure fairness (no god AIs), and carefully plan how they operate. Overall, I have huge respect to art and AI designers as it is very hard to creative quality work in quantity.

References

Sprites:

1. https://opengameart.org/content/beastlands
2. https://opengameart.org/content/good-fruits-m484-games
3. https://opengameart.org/content/platformer-baddied

Sounds/Music:

1. https://www.dl-sounds.com/royalty-free/fantasy-game-loop/
2. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/click_x.wav
3. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/splash2.wav
4. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/pluck.wav
5. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/shut_off.wav
6. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/yay_z.wav
7. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/fanfare_x.wav
8. http://www.wavsource.com/snds_2017-09-17_1751672946049674/sfx/boing2.wav