

## Unity Game Phase 1: Caught in a Jam

February 11, 2019

SE 2250b

Sarah Tan (251007622), Lauren Kaminker (251019971), Anusha Samarabandu (251023782), Sarah Sawan (251030392)

### Introduction:

*Caught in a Jam* will be a 2-D game in which the player of choice moves through different levels of outdoor garden maze. The user is first allowed to pick a main character out of 4 fruit options. These options include a strawberry, blueberry, apple, and peach. Each option will have different values for their stats:

- **Strength:** How much damage the player can deal against the enemy. The higher the strength stat, the more damage the player can do. Strength can be increased by picking up sunshine items.
- **Defense:** How much damage a player will take when attacked. The higher the defense stat, the less their health bar will go down when attacked by an enemy. It is increased by picking up rare diamond items.
- **Health:** The player's health bar reflects the amount of damage they can take before they die and have to restart the level. The health decreases after each attack a player receives. Once the health level reaches zero, the player has failed and must restart the game. This stat will be displayed the entire duration of the game.
- **Rot:** Effectively a timer on the level. Each fruit option has a different rotting speed that increases as the levels progress. This rot bar will go down throughout the level according to the rotting speed. Once the rot reaches zero, the player has failed the level and must restart.

At the beginning of the game, there will be a level bar indicating the value of these stats under each character in the main menu option. The level bar will be out of 10, where 10 is the maximum value for a stat is the maximum value that can be achieved for it.

Characters	Strawberry	Blueberry	Peach	Apple
Strength	3/10	2/10	2/10	4/10
Defense	2/10	3/10	4/10	2/10
Health	10/10	10/10	10/10	10/10
Rot Rate	x1	x.95	x1.05	x1.25

### The Story:

The player begins the game as a type of fruit in a garden. It is trapped by a gardener who is planning to harvest the player and its friends. The player must find all the keys, defeat the gardener, and exit the garden before it rots. The player can also free their friends for additional points. The objective of the game is to pick up the key at each level and eventually defeat the gardener to get the final key. At each level, there will be different types of enemies with a variety of attacks and strengths. Any objects that affect the statistics of the player will be carried on to the next level, i.e. if the player collects sunshines increasing its strength to 5/10, its strength will

stay at 5/10 at the start of the next level. For this reason, it is encouraged that the player collects objects before picking up the key to ensure they are stronger for the following levels.

- **First Level:** Enemies are bugs moving around the game board trying to bite the player. If it touches the player, this will indicate the player has been “bitten” and its health will decrease. As the fruit picks up objects, it can throw or shoot that object at the bugs to kill them. The player does not need to kill all the bugs to move on to the next level, it just needs to collect the key and open the door. The player’s friend will be a standstill object in this level and points will be collected once they have been picked up. There is also an optional key that will unlock an area that has sunshine/diamonds to pick up.
- **Second Level:** A barrier has now been put in place to reach the friend. The friend will be entrapped and the player must pick up an axe object to break down the wall and collect their friend. The enemies are also caterpillars with an added kill tactic. They continue to move around trying to bite the player to diminish their health, but they can now throw/”spit” poison at the players from a distance. The poison will not reduce the player’s health, but it will slow down its speed. The player must be hit by the poison to be affected, nothing happens if the poison is stepped on. There is also an optional key that will unlock an area that has sunshine/diamonds to pick up. Once again, to exit the level, the key must be found to open the door.
- **Third Level:** The initial enemies for this level are bunnies. There is no garden key on the game board during this level. There is a friend to be freed behind a wall that must be broken, but this area is found in the optional key area. Therefore, both the optional key and an axe must be found to free the fruit friend. The objective is to kill all the bunnies, which will trigger the gardener entering the level. To get the final key, the player must defeat the gardener. The bunnies reduce health by jumping on the player. The player can kill the bunnies and the gardener the same way as the previous levels. However, the gardener will be much more difficult to kill than the bunnies.

At each level, the rotting time will reset to full. If the rotting time runs out at any level or the player’s health completely diminishes, the player dies and a “Game Over” text will pop up, with the players stats and a replay button to restart the game. If the player wins the game, a new scene will pop up, with all of their game stats and a replay button as well.

### **Character Progression:**

There are three tasks that the player can do that will result in sunshine and diamonds being dropped for the player to collect.

- **Defeating Enemies:** When the player defeats an enemy that is found in a level, ie. the bugs in Level 1, the enemy will drop a certain number of sunshines/diamonds.
- **Freeing the Other Fruit:** If the player decides to find and get the fruit friend found in the level, they will receive a certain number of sunshines/diamonds.

**Extra Hoard of Resources:** Every level, there is an optional key which will open a door to an area of the map that contains several pickup items.