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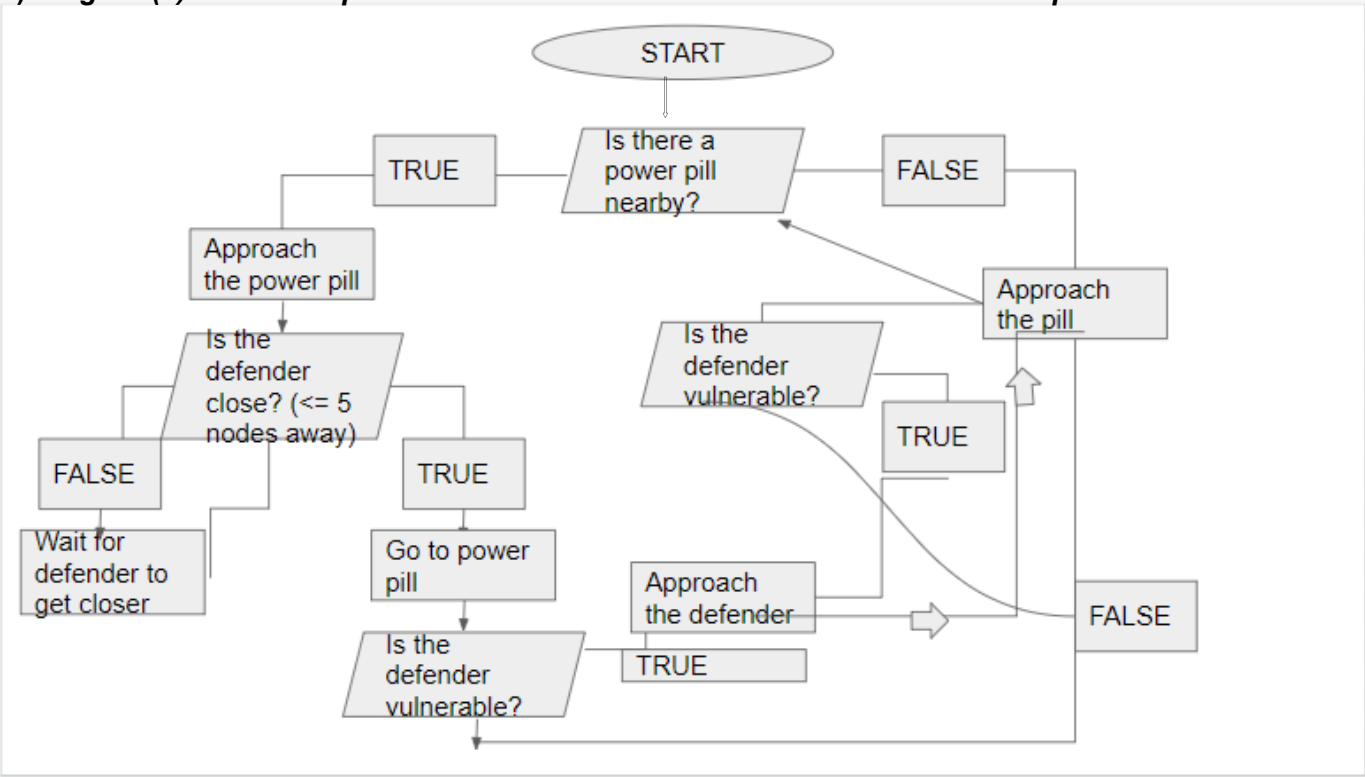
COP 3502C
Project 4 Post-Mortem

a.) *Diagram(s) and description of attacker behavior and methods with description*



The attacker first moves to approach the power pills. If there is a power pill, the attacker will move towards that power pill. As it is approaching the power pill, the code is determining the distance of the closest defender. If the defender is nearby and is vulnerable, the attacker will approach the defender. If the defender is nearby and not vulnerable, the attacker will approach the next pill or power pill. As the attacker approaches the power pill, the code is determining the distance of the closest defender; and until the defender gets close enough, the attacker will wait to eat the power pill that would make the defender vulnerable. Once there are no more power pills, the attacker will approach the remaining pills. However, if one of the defenders is vulnerable, the attacker will approach the vulnerable defender.

b.) *Identifications of successes and failures*.

In terms of determining how to make the attacker go toward the power pills and vulnerable defenders, I found that these components of the game were executed relatively well. The code would cycle through the power pills; and if there was a power pill available, the attacker would approach that power pill. While approaching that power pill, the attacker would consume normal pills, causing the score to increase. Once the defenders were close enough to the attacker that was near the power pill, the attacker would be able to eat the now vulnerable defenders that were close by. The initial pursuit of the power pills allowed for the attacker to approach the

vulnerable defenders, in which the score would increase more rather than solely approaching the remaining pills. The attacker would perform well until there were no more power pills. The score on my visual test was able to reach about 6000; however, I had trouble having the attacker avoid not vulnerable defenders while pursuing power pills and normal pills. The attacker would be focused on pursuing the vulnerable defender; yet even with a not vulnerable defender approaching the attacker, it would pursue the vulnerable defender. I attempted to mitigate this problem by checking to see the closest distance of the closest not a vulnerable defender in comparison to the attacker. I used this distance in reference to the attacker and tried to maneuver the attacker to reverse. I had this set of code to be executed if the defender is not vulnerable while the attacker is approaching a power pill or a normal pill. Overall, the successes occurred before all the power pills were consumed, and the failures occurred after the power pills were consumed, leaving the normal pills to be pursued while the defenders were less likely to be vulnerable.

c.) ***Reflection on project***

I found this project to be rather intimidating at first. The use of multiple classes and their behaviors was confusing at first; but with the tutorials and breakdown of the classes, their behaviors, inputs, and outputs, made more sense. I found that starting from the “bigger” methods to increase the score would be easier. I had the main approach of the game to consume the power pills and consume the vulnerable defenders. When trying to approach the “smaller” methods to increase the score (i.e. avoiding the defenders and eating the normal pills), I found it to be more difficult. While this aspect was more difficult, in terms of understanding how to access class behaviors, I was able to become more comfortable with the use of accessing different methods of varying class objects. The project enabled me to see that to access a certain method, the code needs to call the appropriate input, which may come from a different class.