The Chaser Game

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1 Task Distribution

- Maarij Ahmed - worked on Dijkstra's algorithm and the game visualization using pygame.
- Ayaan Ahmed - worked on level designing and also graph design/ implementation.

2 Project Report

As explained in the proposal, the project uses the pygame library to visualize the graph, the player, chaser, and other multi-media elements in the project. We were able to implement an undirected graphing system. The graphing system was made using nodes that contain the pixel coordinates according to screen size.
We also implemented Chaser AI using a modified Dijkstra's algorithm(that uses a priority queue) to find the shortest path to the player and take one step whenever the player decides to move.We added a function that allows the chaser to see the player and slow them down but it currently doesn't affect the game's shape or form. The players being slowed causes the player to be caught easily in the current graph. However, by making the graph we could implement this feature to make the game more challenging.

3 Conclusion

In conclusion, we were successful in creating the game with chaser working as intended as we hope without any bugs. However, we felt like the graph could've been implemented better.