

The Chaser Game

DSA Project 2023

Group Members:

- Maarij Imam
- Ayaan Ahmed

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.

Project Report:

The project uses the pygame library to visualize the graph, the player, chaser, and other multi-media elements in the project.

In this 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 also 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.