Maze Solver and Generator

In this project, you will design and implement a system to solve and generate mazes using three fundamental search algorithms: A*, Uniform Cost Search (UCS), and Best-First Search (BFS). This project involves creating a maze generator and implementing solvers to navigate through these mazes efficiently.

Methodology

Make sure your tool has the following:

1. **Maze Generation**: Create a maze generator that provides users with the option to either generate random mazes or manually design their own maze by adding walls, start points, and goal points through a graphical user interface (GUI)
    - The user may add up to two target
2. **Maze Solving Algorithms**: Implement three search algorithms to solve the generated mazes:
    - **A* Search**
    - **Uniform Cost Search**
    - **Best-First Search**

- As heuristic function allows the user to select between Manhattan distance, and Euclidean distance
  Display on the screen how many steps you need to reach the target, and the tested nodes