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Lab11 - Game Theory in Robotics

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Become familiar with pursuit-evasion scenario
Be able to establish a greedy policy for pursuit-evasion problem
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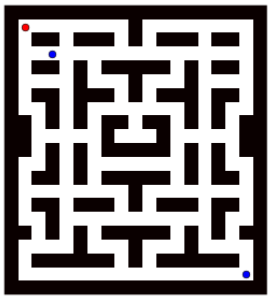
Implement and verify the functionality of greedy policy for pursuit-evasion problem **(2 points)**
Lab resources
Lab sripts: lab11 resource files

Pursuit Evasion

A problem in computer science where a set of pursuers is trying to catch a set of evaders.



Greedy Policy

In greedy policy the next-best state is selected in each discrete step of the game simulation without considering longer prediction horizon. Usual policies incorporate distances between individual agents as follows:

- For evaders select the most distant node to all pursuers
- For pursuers select the closest node to the closest evader

Tasks (2 points) - Lab11G

1. Implement a greedy policy according to the above-described rules
2. Note, you can improve the performance of the algorithm by employing more efficient distance function calculation method (e.g. Floyd-Warshall)
3. Submit archived `player.py` and `planner.py` classes into the BRUTE upload system