Course › Week 2 › Project... › p1_sea...

p1_search_glossary

Object Glossary

Here's a glossary of the key objects in the code base related to search problems, for your reference:

`SearchProblem (search.py)`
A SearchProblem is an abstract object that represents the state space, successor function, costs, and goal state of a problem. You will interact with any SearchProblem only through the methods defined at the top of `search.py`

`PositionSearchProblem (searchAgents.py)`
A specific type of SearchProblem that you will be working with --- it corresponds to searching for a single pellet in a maze.

`CornersProblem (searchAgents.py)`
A specific type of SearchProblem that you will define --- it corresponds to searching for a path through all four corners of a maze.

`FoodSearchProblem (searchAgents.py)`
A specific type of SearchProblem that you will be working with --- it corresponds to searching for a way to eat all the pellets in a maze.

`Search Function`
A search function is a function which takes an instance of SearchProblem as a parameter, runs some algorithm, and returns a sequence of actions that lead to a goal. Example of

search functions are `depthFirstSearch` and `breadthFirstSearch`, which you have to write. You are provided `tinyMazeSearch` which is a very bad search function that only works correctly on `tinyMaze.`

`SearchAgent`

`SearchAgent` is a class which implements an Agent (an object that interacts with the world) and does its planning through a search function. The `SearchAgent` first uses the search function provided to make a plan of actions to take to reach the goal state, and then executes the actions one at a time.