KI Project B

Martijn Dekker 6013368
Egor Dmitriev 6100120
Cody Bloemhard 6231888

December 1, 2018

1 Exercise 1

1.1 ex1-a

The game state holds all the data that represents the game in the current time frame. bla bla bla.

1.2 ex1-b

The agent state holds all data that describes an agent in the current time frame. bla bla bla.

1.3 ex1-c

- A: II, Stack: Pile of dishes
- B: III, Queue: Roller coaster waiting line
- C: I, PriorityQueue: Emergency room waiting line

2 Exercise 2

2.1

3 Exercise 3

3.1 ex3-a

That means that if there exist a path to the goal you are searching for, it will return that goal.

3.2 ex3-b

It is complete because the algorithm will keep searching till it found the path to the goal location or till there are no more possible paths to stroll, which haven't been visited before. This would happen when the stack is empty and that can only occur if it has tried every possible path.

3.3 ex3-c

It will not always be the least cost solution. This is because it tries out a path and continues it till it ends, which can lead to the goal location. This first path it finds does not have to be the path with the least cost. And because it stops after finding a path it doesn't always find the least cost solution.

3.4 ex3-d

4 Exercise 4

4.1 ex4-a

It is complete because the algorithm will keep searching till it found the path to the goal location or till there are no more possible paths to stroll, which haven't been visited before.

4.2 ex4-b

Yes, because every step pacman can take is equal in cost the algorithm needs to find the path with the least steps. And because it looks into every path of depth k before looking into paths of depth ¿ k it will always find the least cost solution.

4.3 ex4-c

5 Exercise 5

6 Exercise 6

7 Exercise 7

8 Exercise 8

9 Exercise 9

10 Exercise 10

11 Exercise 11

12 Exercise 12

13 Exercise 13