Maze Assignment

May 31, 2018

In this assignment you will put the things you saw in the past couple of lectures into practice. You will need to use loops, conditionals and increments.

Using the framework you have downloaded from github `https://github.com/HWURoboticsLab/Leaps_material`, you will now develop an Agent that can traverse the maze without the input of an user. The Agent is a point that will move through the maze. You will need to create a class that inherits the function `move()` from the class Agent as shown in slide 13 from L3_OOP1.pdf. However, you will have to implement the move function by using the `self.step(direction)` and `self.look(direction)` functions. Your Agent needs to continue to move until it reaches its goal. You can make use of the sample code given in L3_OOP2.pdf if you need it.

Tips:

- Use loops and conditions
- Look in the Agent class for useful functions.
- Think about what an Agent needs to do in order to move towards the end
  - what do you do when you go to an unkown place and do not have a phone or a map?
  - Do you make a random choice or are you always doing in one direction?
  - Do you look after you make a step or before?
  - do you keep track of your route or do you never think about turning back?

Recap:

- Build an Agent that traverses a maze as long as it has not reached its goal
- Implement the move function to make the Agent move through the maze.
- Use the `self.step(direction)` and `self.look(direction)` functions in the Agent class (**DO NOT COPY THESE FUNCTIONS INTO YOUR OWN CLASS**)
- Use the examples from L3_OOP1.pdf and L3_OOP2.pdf
- **USE LOOPS**

An example of your class is given below:

```
import Agent
class my_Agent(Agent):

    def move():
        # here comes your code
```