

Extra Credit World Explanation

Pseudo code for Bug Algorithm

While robot not reached the goal:

If encounter an obstacle:

- ① If this is the first time encounter this obstacle at this position, then try going right and around the object.
- ② If this is the second time encounter the obstacle and same position as previous, then try going left and around the object.

Reached the m-line, obstacle is no longer encountered.

else if not encounter an obstacle:

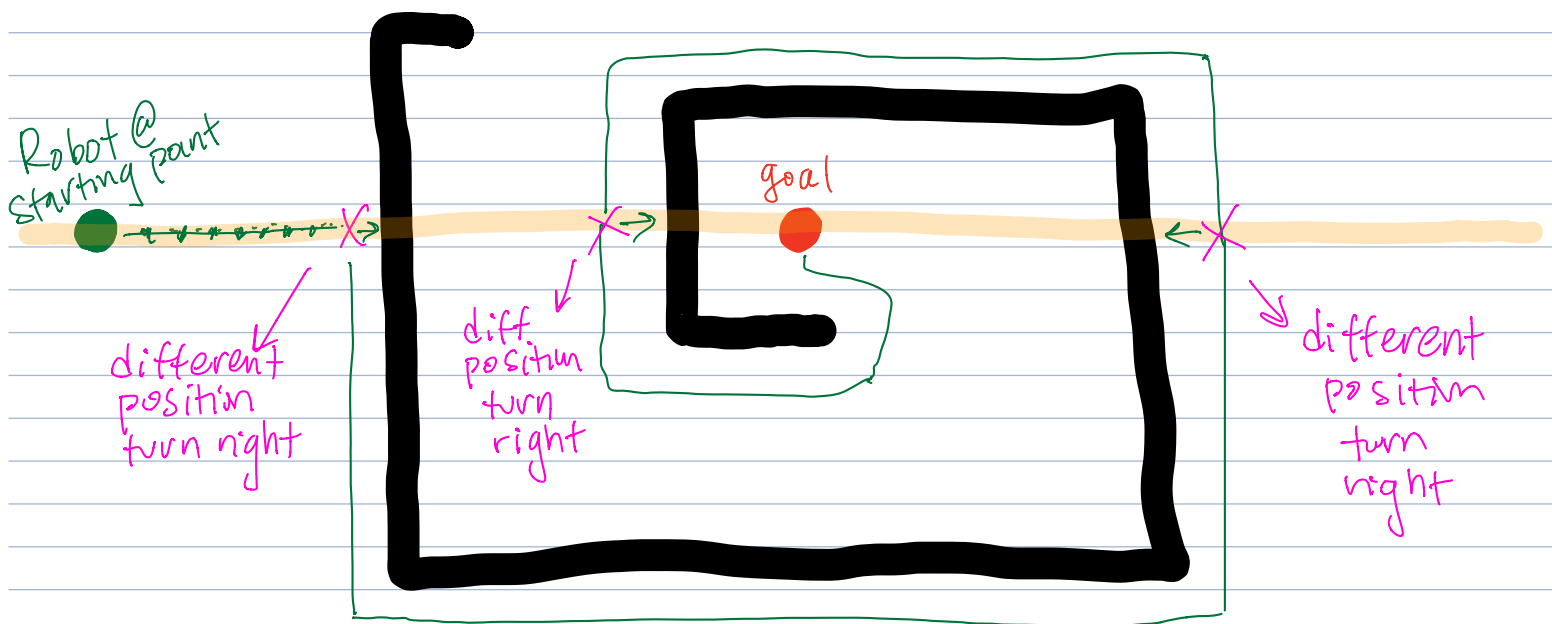
- ① Rotate towards goal
- ② Calculate the safest distance to travel
- ③ Each meter we travel, robot corrects itself back to m-line if it went tangent

If encounter an obstacle:

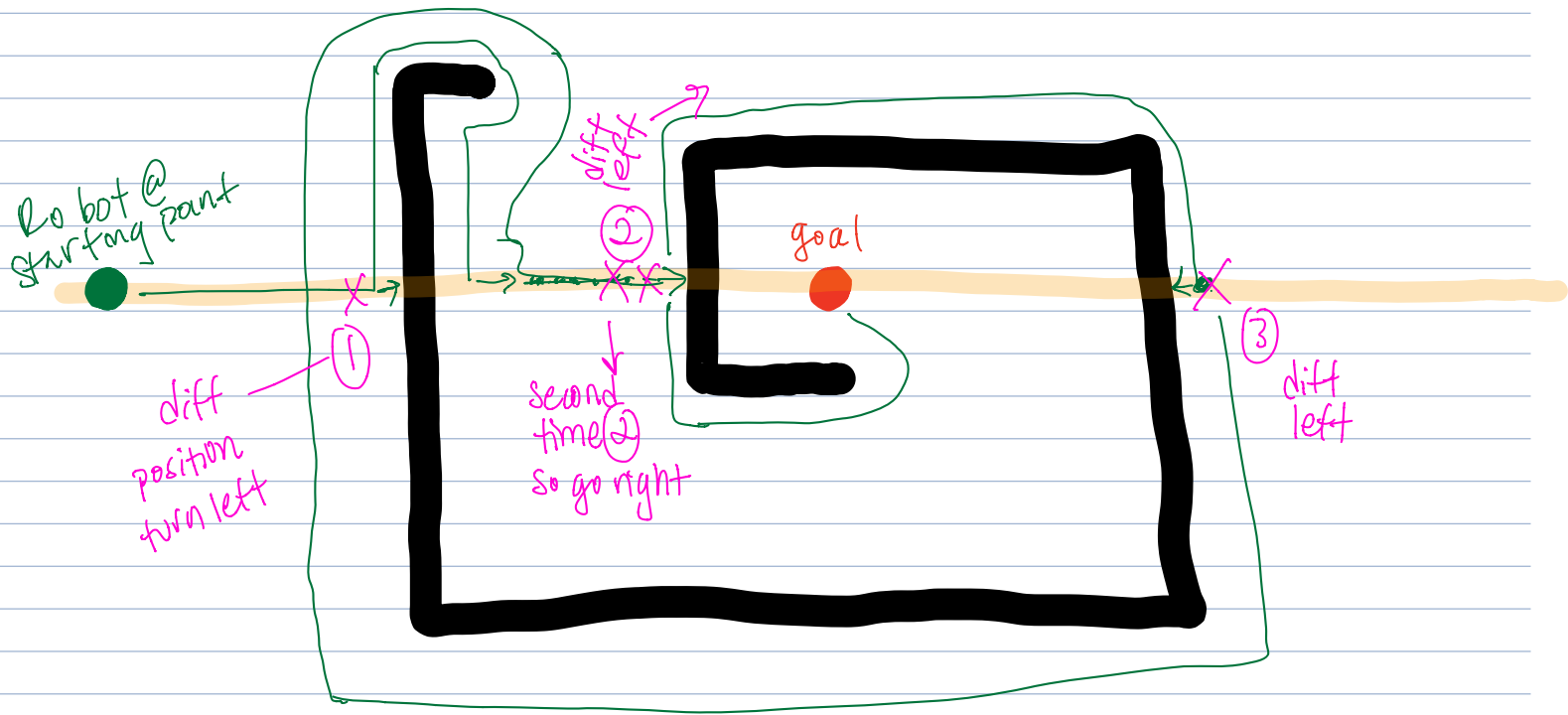
- ① check if it is the same as before
- ② If it is the same and robot did not try going left, then switch direction.
- ③ " and robot did try left, then it fails.
- ④ If it is not the same and robot did try left, reset it back to going right.

If we always chose to go right when encountering an object and left if second encounter.

* robot always faces the goal when it reaches m-line x = encounter obstacle
● = m-line



If we always chose to go left when encountering an object and right if second.



Keep track of obstacles in a list

list of obstacles = [1, 2, 3]

if the obstacle is in the list, switch direction.