

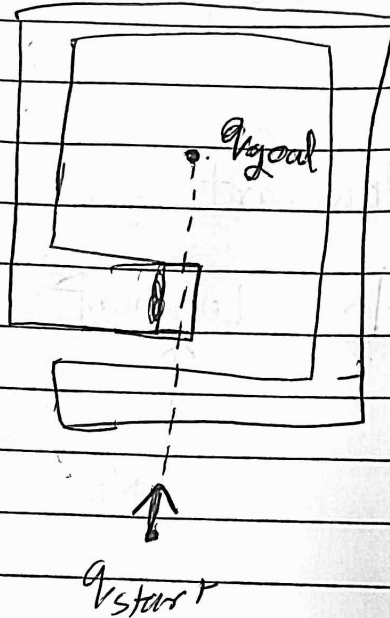
Q.4. → Bug 0 algorithm pseudo code

- (1) Follow the target
- (2) IF hit obstacle follow it in one direction. (In one direction)
- (3) Continue. until clear path to goal

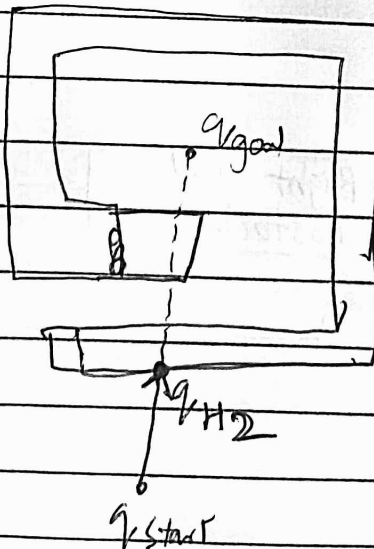
Bug 0 algorithm is not a complete Algorithm since it fails in certain scenarios.

→ Let q_{hit} be the point where it hits the obstacle at i^{th} step.
→ & $q_{leaving}$ point from obstacle at i^{th} step.

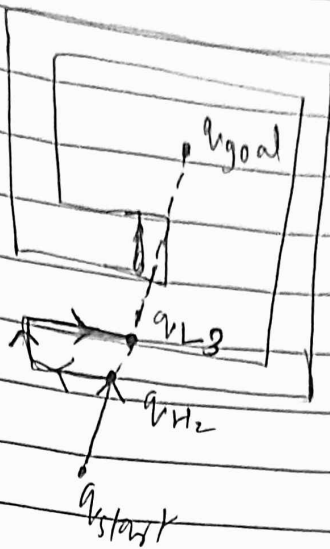
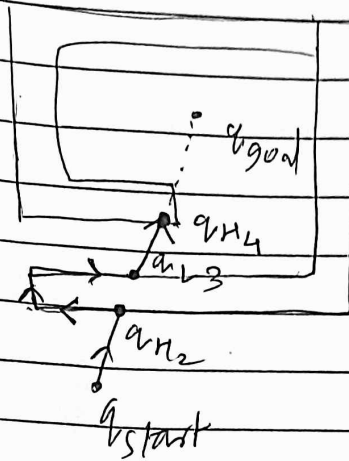
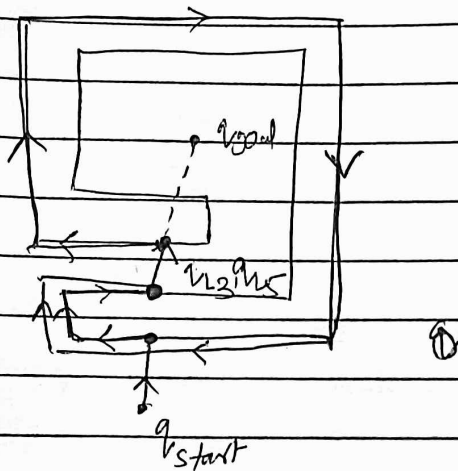
$i = 1$



$i = 2$



Hit obstacle
take a left

$i = 3$  $i = 4$  $i = 5$ 

We can see q_{L3} & q_{L5} are same position. & the since we are in same position in 2 more steps. This cycle repeats & we reach the same point & hence stuck in a loop and never reach the goal.
Hence Bug D is incomplete algorithm