

- 5th Case:

when $s_4 \neq s_3 \neq s_2 \neq s_1$ detect object



- 4th Case:

turn right by 180° & move forward
when $s_1 \neq s_2 \neq s_3$ detect obstacles



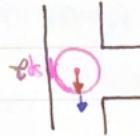
- 3rd Case:

turn right by 90° & move forward
when $s_2 \neq 0$ detect an obstacle



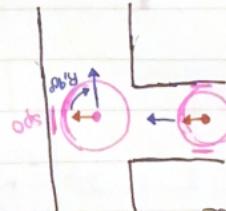
- 2nd Case:

when s_2 detects an obstacle
move forward.



- 1st Case:

when s_2 detects an obstacle,
robot turns to the right
by 90° & move forward.
This wave like maze has passage cases.

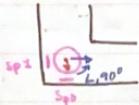


- 6th Case:



When sp2 & sp3 detect obstacle,
turn right 90° & move forward

- 7th Case:



When sp2 & sp3 detect obstacle,
turn left 90° & move forward.

- 8th Case:



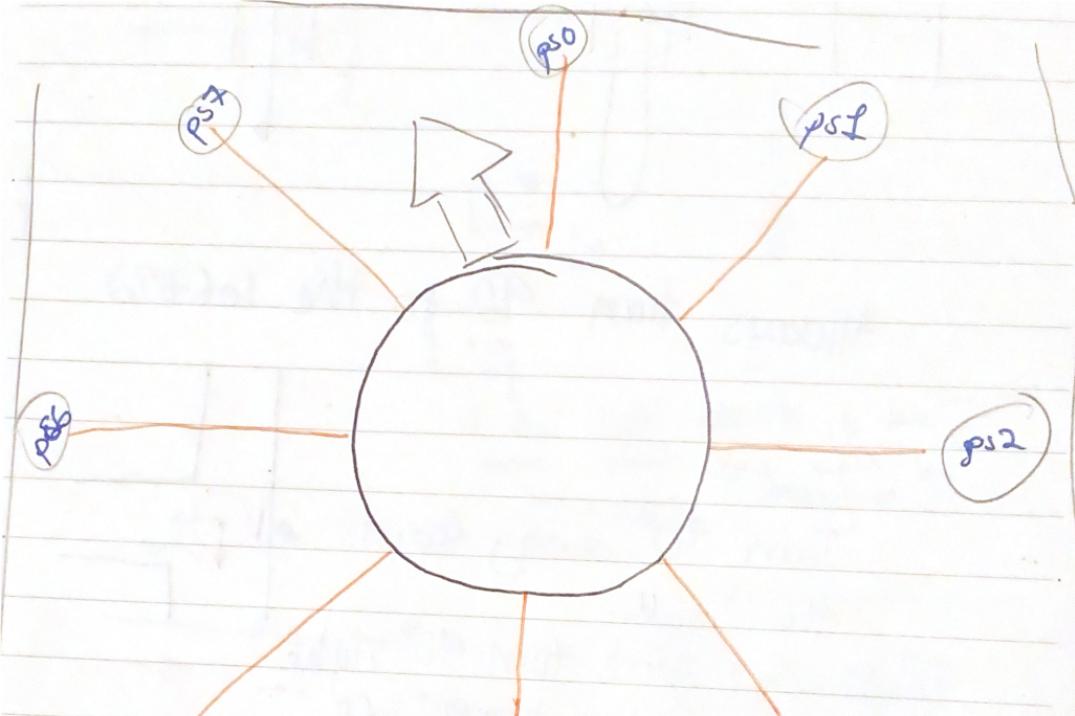
When no obstacles are detected,
turn 90° to the left &
move forward.

- The 2nd & 3rd Case complement each other as when a possible dead-end is skipped due to 2nd case, on the way back which will for sure be 3rd case, it will detect the dead-end.

- 9th Case



When sp2 & sp5 detect obstacles,
it moves forward.



ps5

ps4

ps3

ps2

ps4

ps1

ps0