Firstly, creating a 2-dimensional array which consist of 9x9 elements. Each element has a default value of 0 that shows there is a path, and if the value is -1 that shows these is an obstacle.

According to phase 1:

Starting point: (0,0)

End point: (9,9)

Obstacles: (9,7) (8,7) (6,7) (6,8)

The shortest path would have a minimum of 9 movements.

it has six directions.