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Quiz-3

(a) If the robot has no knowledge of the environment then it will use the bug-based algorithm. B

In bug-based algorithm the robot knows the distance and the goal. So, the robot will move straight when it sees the goal. If any obstacles come in the path then the robot will move by the side of the object to reach the goal in a shorter distance. Then the robot will move again in a straight line when it crosses the obstacle.

(b) The simple OG Mapping Algorithm is an algorithm for Mapping and Exploration. We use this mapping model to construct the sensor model of a robot. Here, the robot will first initialize a grid ~~Grid~~ ~~Grid~~ grid. ~~as empty~~. Then it will update the grid as empty or occupied. then it will pick a next move and again update the grid. This process will work in a loop. By here, we have three parts in the cell and those are occupied, ~~empty~~ empty and unknown