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Programming Logic

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In order for the scribbler robot to successfully complete the capstone requirements, it must effectively traverse a preset maze and the obstacles within it. The first requirement is that the scribbler robot must pass through every box in the maze. This would be done by programming the robot to perform specific movements that would keep it within the boundaries of the maze itself. The second requirement is that the robot must navigate around a square four times before exiting. This would be done using loop programs to loop certain movements and have the robot traverse the square.

The third requirement is that the scribbler must use the proximity sensor to know when to turn in the square. This would mean that the square would be outlined by obstacles to ensure that the scribbler stays within the square. The fourth and fifth requirements are for the scribbler to enter a “dead end”, circle around and leave by going forward instead of reversing. This would be achieved by the scribbler running a circle loop and going forward when aligned with the exit. The sixth requirement is to navigate the T section at the start of the maze at least at least one time each pass. This would most likely be incorporated in a secondary loop.

The seventh and final requirement is for the robot to navigate into the “parking lot” and stay in that position for at least five seconds. This would be done by adding a timed program telling the robot to stay still. Then the robot would reverse out of the parking lot and continue in the maze.