

Software Engineering :
A PBL Session

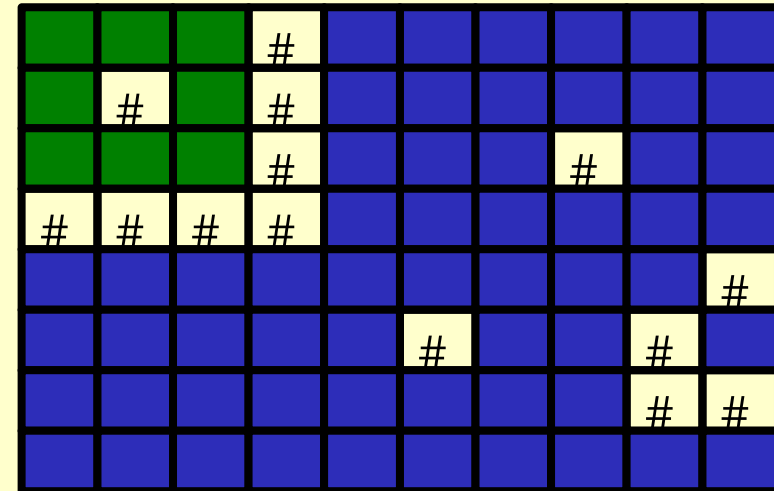
(L3-RobotProblemPart2)

The Robot Problem: Requirement 4 - paths

Before this final step, you are to exchange all documentation/models/code/tests with another team.

No team is to continue to work with their own system

Now the final requirement is a simple boolean function that returns whether all the spaces in a partition can be visited by a robot without that robot having to step on a space they have already stepped on. In the example above, the answer is **true** for the green partition.



QUESTION: is it true for the blue partition?

Develop this function for the system that you have just received. Do not communicate with any of the other team's members

The Robot Problem: Requirement 5 - statistics

Please start this requirement even if you have not managed to finish requirement4

Again, working with the other team's system, you are to run a set of simulations in order to calculate the probability that :

In a 10×10 grid, with each position having a probability of $\frac{1}{2}$ of being a wall, what is the probability that the number of partitions for robot2 is less than the number of partitions for robot1?

You are to calculate the probability – as best as you can – to 3 decimal places.