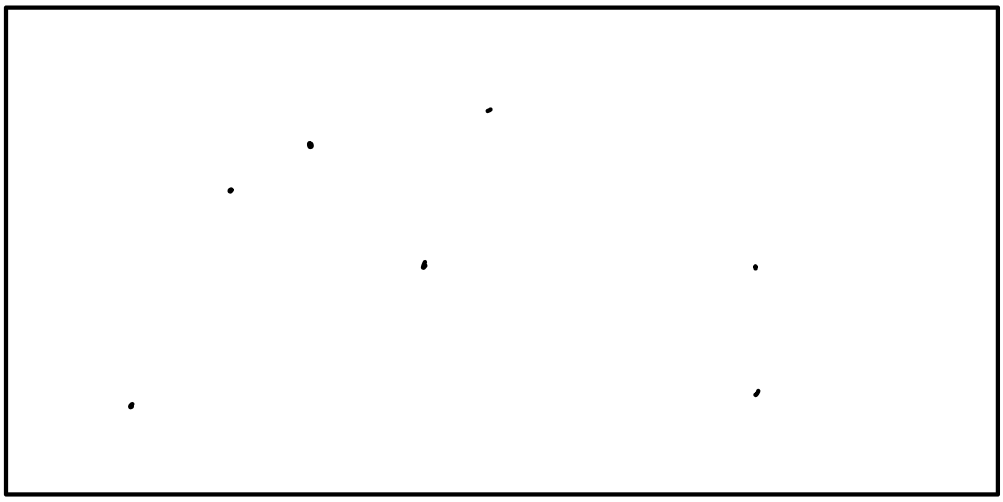
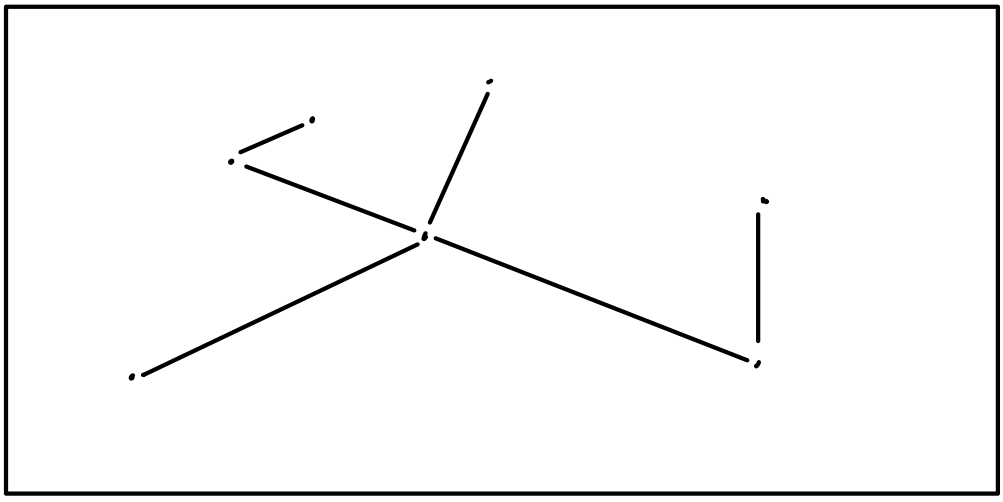
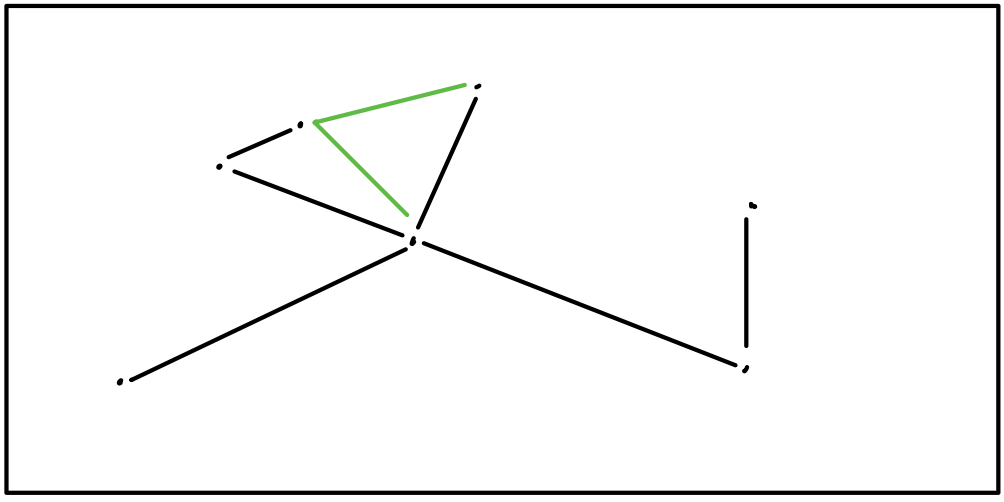
1) Place points randomly on a 2-D plane



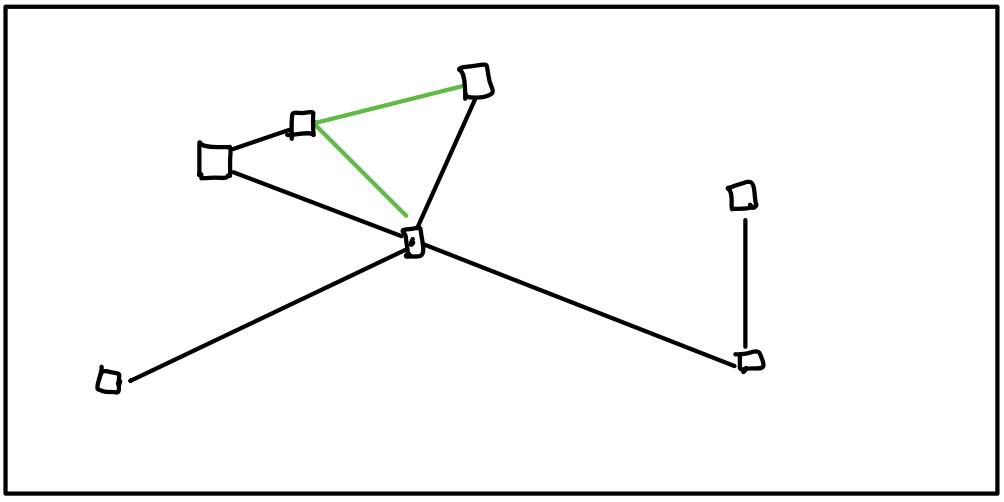
2) Create a minimum spanning tree using Prim's/Kruskal's algorithm



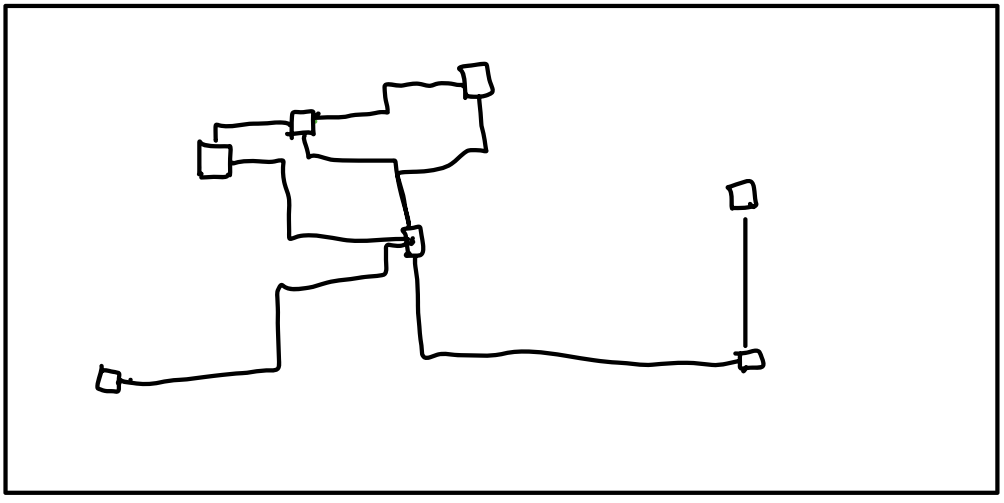
3) Use the remaining x smallest edges to introduce cycles to better simulate a building layout and allow the robot to make decisions on which path to take.



4) Build rooms around the vertices



5) Build hallways to connect the rooms using the edges.



7) The "Targets" for the robot would be the hallway block coordinates and room vertices

8) Each target will have a number attached to store times the robot traversed it.

9) The robot always selects the lowest number to ensure the map is fully explored.