Hand-in Exercise 2 Problem solving and search
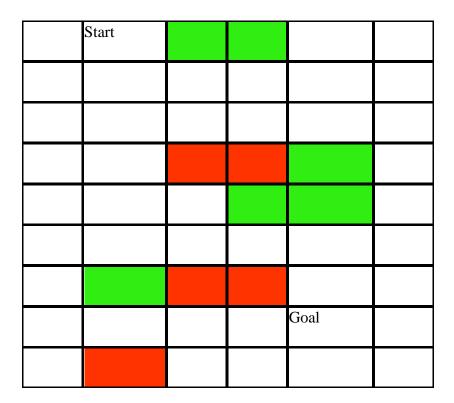
A robot cleaner is going to traverse a room. The white color represents a distance or cost of 1 on a straight floor. The green color represents a distance or cost of 2 ("a hairy rug"). The red color (" a piece of furniture") represents a distance or cost of 10. It means that traversing a red colored cell will imply a cost of 10 x the cost of a white cell (clean floor)

	Start				
			Goal		

a. Use depth first to find a path between Start and Goal. What is the cost of the path? Is it the shortest?

b. Create an A* algorithm that lets the avatar find the shortest path from Start to Goal. What kind of heuristic function will you apply for h(n)? For this task the terrain is assumed 3 dimensional (had a z axis too). The terrain could be characterized as shown below: