

## Lab 6 Write-up:

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1. In general, the algorithm is as follows:
  1. First set the distance and prev of each node except the starting node's as 1000 and -1 respectively because they are not visited.
  2. Once this has been initialized, we now start visiting nodes
  3. We start at the initial node and look at all of its neighbors which are not obstacles. We add one to the distance value of the current node and set it as the neighbor's distance. If this calculated distance is less than the distance that is set for the node, it will replace its distance.
  4. The current node will be set as the the node which has the smallest distance and is unvisited
  5. This continues until all nodes are visited
- 2.
3. And 4.

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Dist:  
1000  4  1000  6  
1000  3   4   5  
1     2   3   4  
0     1   2   3  
  
Prev:  
-1    9   -1  11  
-1    5    6   7  
0     1    2   3  
0     0    1   2  
  
0 → 1 → 2 → 3 → 7 → 11 → 15
```

5. Roughly 5 hours total.