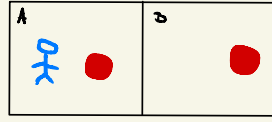


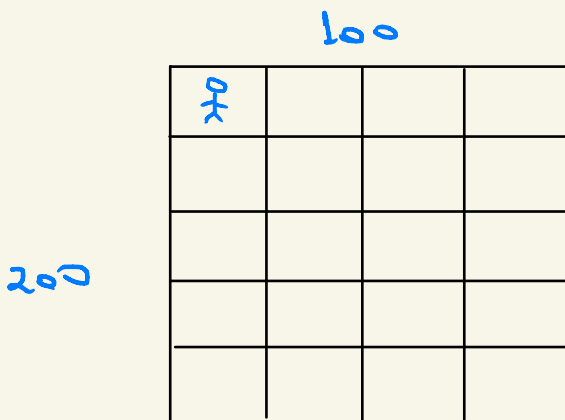
# Uninformed Search Algorithms

- Possibly A REVIEW from other COURSES
- MAIN DIFFERENCE:
- Naturally LEADS to heuristic SEARCH

# Implicitly Defined State Space



Question: why is this important?



How many states?

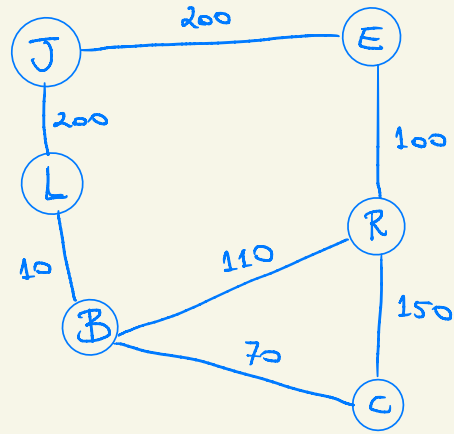
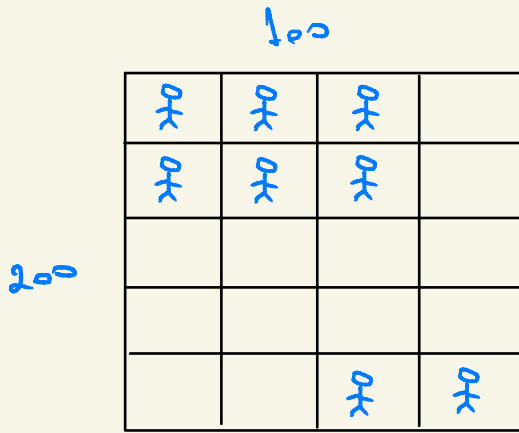
100

人	人	人	
人	人	人	
		人	人

200

How many states?

We will consider both implicit or explicit state spaces.



Properties WE CARE ABOUT

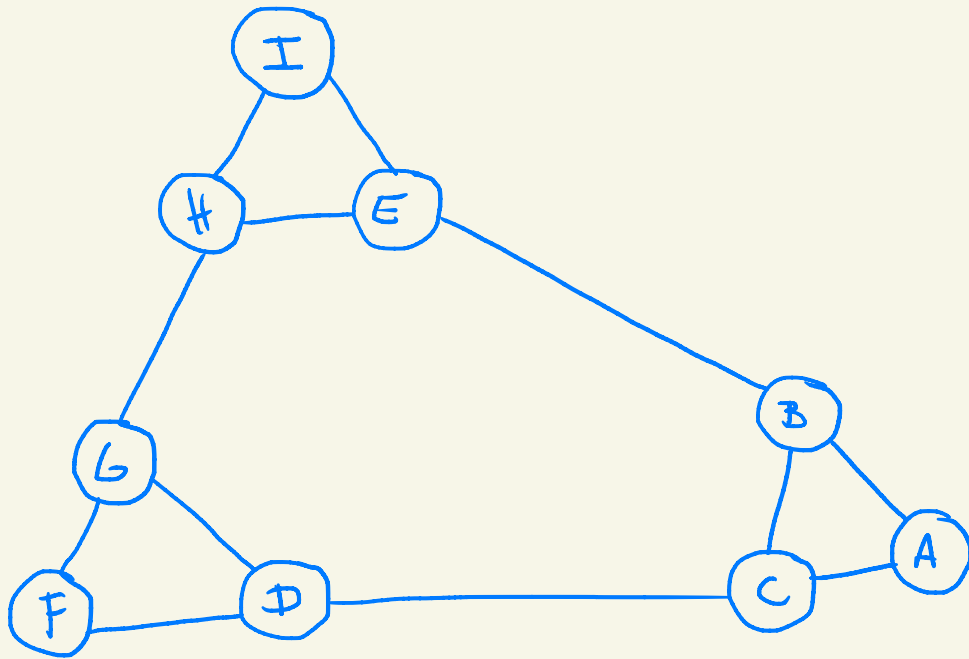
Complete:

Optimal:

Time Complexity:

Memory Complexity:

# Breadth-First Search (BFS)



BFS's SEARCH TREE

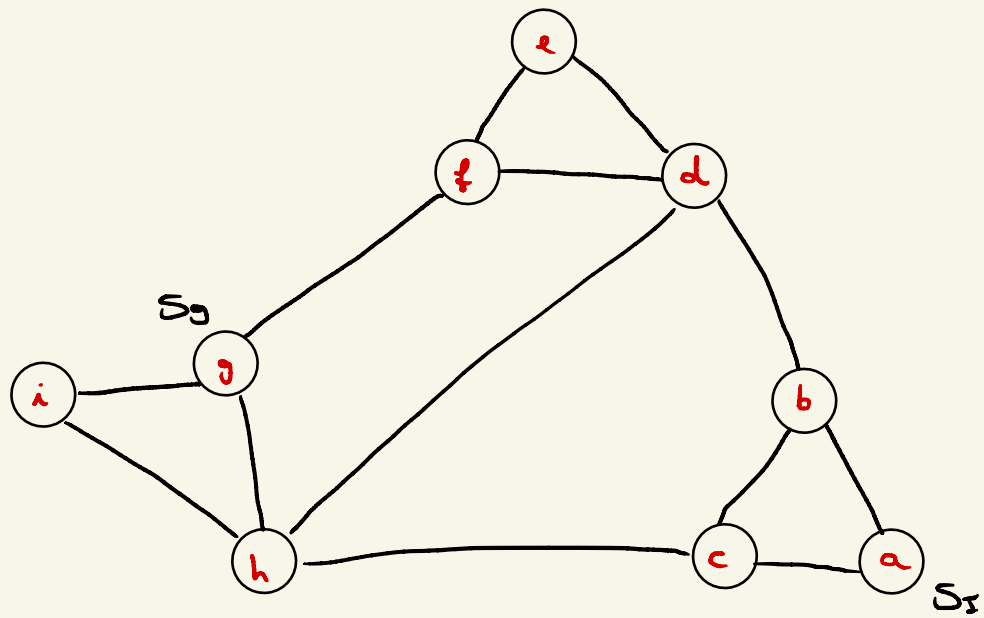
# How to implement BFS?

Two data structures:

1- OPEN List

2- CLOSED List

# Example



OPEN

CLOSED

## PSEUDO CODE

$D = f \text{ BFS}(S_i, S_g, T):$

Properties :

Quiz: Which solution path does BFS find in the problem below?

