

	PROBLEMA 1	PROBLEMA 2	PROBLEMA 3
Iterative Deepening Search	Examined 64 Nodes. Iterative Deepening Search Solution: ['right', 'get_candle', 'right', 'put_candle']. Iterative Deepening Search Time: 0.002848386764526367 seconds	Examined 97306 Nodes. Iterative Deepening Search Solution: ['refill', 'right', 'right', 'get_bag', 'right', 'put_bag', 'left', 'left', 'get_candle', 'right', 'put_candle', 'right']. Iterative Deepening Search Time: 2.552614212036133 seconds	Examined 120228 Nodes. Iterative Deepening Search Solution: ['put_bag', 'right', 'refill', 'refill', 'right', 'right', 'get_candle', 'right', 'put_candle', 'left', 'left', 'get_desk', 'right', 'right']. Iterative Deepening Search Time: 4.5215277671813965 seconds
Breadth-First Tree Search Solution	Examined 72 nodes. Breadth-First Tree Search Solution: ['right', 'get_candle', 'right', 'put_candle']. Breadth-First Tree Search Time: 0.006258726119995117 seconds.	Examined 118239 nodes. Breadth-First Tree Search Solution: ['refill', 'right', 'right', 'get_bag', 'right', 'put_bag', 'left', 'left', 'get_candle', 'right', 'put_candle', 'right']. Breadth-First Tree Search Time: 5.324701547622681 seconds.	Examined 160326 nodes. Breadth-First Tree Search Solution: ['put_bag', 'right', 'refill', 'refill', 'right', 'right', 'get_candle', 'right', 'put_candle', 'left', 'left', 'get_desk', 'right', 'right']. Breadth-First Tree Search Time: 7.659287929534912 seconds.
Uniform Cost Search Solution	Examined 109 nodes 43 paths have been expanded and 40 paths remain in the frontier. Uniform Cost Search Solution: ['right', 'get_candle', 'right', 'put_candle']. Uniform Cost Search Time: 0.009505748748779297 seconds	Examined 3307 nodes 1462 paths have been expanded and 498 paths remain in the frontier. Uniform Cost Search Solution: ['refill', 'right', 'right', 'get_bag', 'right', 'put_bag', 'left', 'left', 'get_candle', 'right', 'put_candle', 'right']. Uniform Cost Search Time: 0.5799834728240967 seconds.	Examined 2350 nodes 1069 paths have been expanded and 313 paths remain in the frontier. Uniform Cost Search Solution: ['put_bag', 'right', 'refill', 'refill', 'right', 'right', 'get_candle', 'right', 'put_candle', 'left', 'left', 'get_desk', 'right', 'right']. Uniform Cost Search Time: 0.28685855865478516 seconds.
Heuristic Search with h1 Solution	Examined 74 nodes 29 paths have been expanded and 31 paths remain in the frontier. Heuristic Search with h1 Solution: ['right', 'get_candle', 'right', 'put_candle']. Heuristic Search with h1 Time: 0.00725555419921875 seconds.	Examined 2033 nodes 899 paths have been expanded and 363 paths remain in the frontier Heuristic Search with h1. Solution: ['refill', 'right', 'right', 'get_bag', 'right', 'put_bag', 'left', 'left', 'get_candle', 'right', 'put_candle', 'right']. Heuristic Search with h1 Time: 0.2741544246673584 seconds.	Examined 1547 nodes 715 paths have been expanded and 225 paths remain in the frontier Heuristic Search with h1. Solution: ['put_bag', 'right', 'refill', 'refill', 'right', 'right', 'get_candle', 'right', 'put_candle', 'left', 'left', 'get_desk', 'right', 'right']. Heuristic Search with h1 Time: 0.15833115577697754 seconds.
Heuristic Search with h2 Solution	Examined 32 nodes 12 paths have been expanded and 15 paths remain in the frontier. Heuristic Search with h2 Solution: ['right', 'get_candle', 'right', 'put_candle']. Heuristic Search with h2 Time: 0.001172780990600586 seconds.	Examined 1395 nodes 612 paths have been expanded and 270 paths remain in the frontier Heuristic Search with h2 Solution: ['refill', 'right', 'right', 'get_bag', 'right', 'put_bag', 'left', 'left', 'get_candle', 'right', 'put_candle', 'right']. Heuristic Search with h2 Time: 0.1483011245727539 seconds.	Examined 1146 nodes 518 paths have been expanded and 213 paths remain in the frontier Heuristic Search with h2 Solution: ['put_bag', 'right', 'refill', 'refill', 'right', 'right', 'get_candle', 'right', 'put_candle', 'left', 'left', 'get_desk', 'right', 'right']. Heuristic Search with h2 Time: 0.10745000839233398 seconds.

PROBLEMA 1

```
initial_state = { "robot": 0, "hand": None, "fuel": 15, "rooms": ['station', 'candle', 'null', 'null', 'null'] }
```

```
goal_state = { "robot": 2, "hand": None, "fuel": 5, "rooms": ['station', 'null', 'candle', 'null', 'null'] }
```

PROBLEMA 2

```
initial_state1 = { "robot": 0, "hand": None, "fuel": 15, "rooms": ['station', 'candle', 'bag', 'null', 'null'] }
```

```
goal_state1 = { "robot": 3, "hand": None, "fuel": 5, "rooms": ['station', 'null', 'candle', 'bag', 'null'] }
```

PROBLEMA 3

```
# Esempio di utilizzo 3 initial_state2 = { "robot": 0, "hand": "bag", "fuel": 5, "rooms": ['null', 'station', 'desk', 'candle', 'null'] }
```

```
goal_state2 = { "robot": 4, "hand": "desk", "fuel": 5, "rooms": ['bag', 'station', 'null', 'null', 'candle'] }
```