OUTPUT:

```
Node 0 is SOLVED.
Algorithm execution complete.
```

Post Lab Assignment:

1. What is the difference between A* and AO* algorithm?
2. Why AO* algorithm only works when heuristic values are underestimated?

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FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

AI Expt 6 Postlab

1. What is difference between A* and AO*

Ans:-

A*	AO*
① Not designed for handling changes.	① Specially designed to adapt changes.
② Primarily uses AND operation.	② Uses both AND & OR.
③ Consumes Less Memory.	③ Consumes More Memory.
④ Well-suited for static environments.	④ Well-suited for dynamic environments.
⑤ Explores Less no. of nodes.	⑤ Explores More no. of nodes.

2. Why AO* algorithm only works when heuristic values are underestimated?

Ans:- The admissibility property of the heuristic function in AO* is essential for ensuring the algorithm correctness and efficiency. It guarantees optimality by preventing the algorithm from prematurely discarding potentially optimality paths. Additionally, it ensures completeness by guaranteeing that AO* will find a solution if one exists in the search space. Finally an underestimated heuristic helps AO* avoid misleading information, leading to more efficient exploration of the search space.