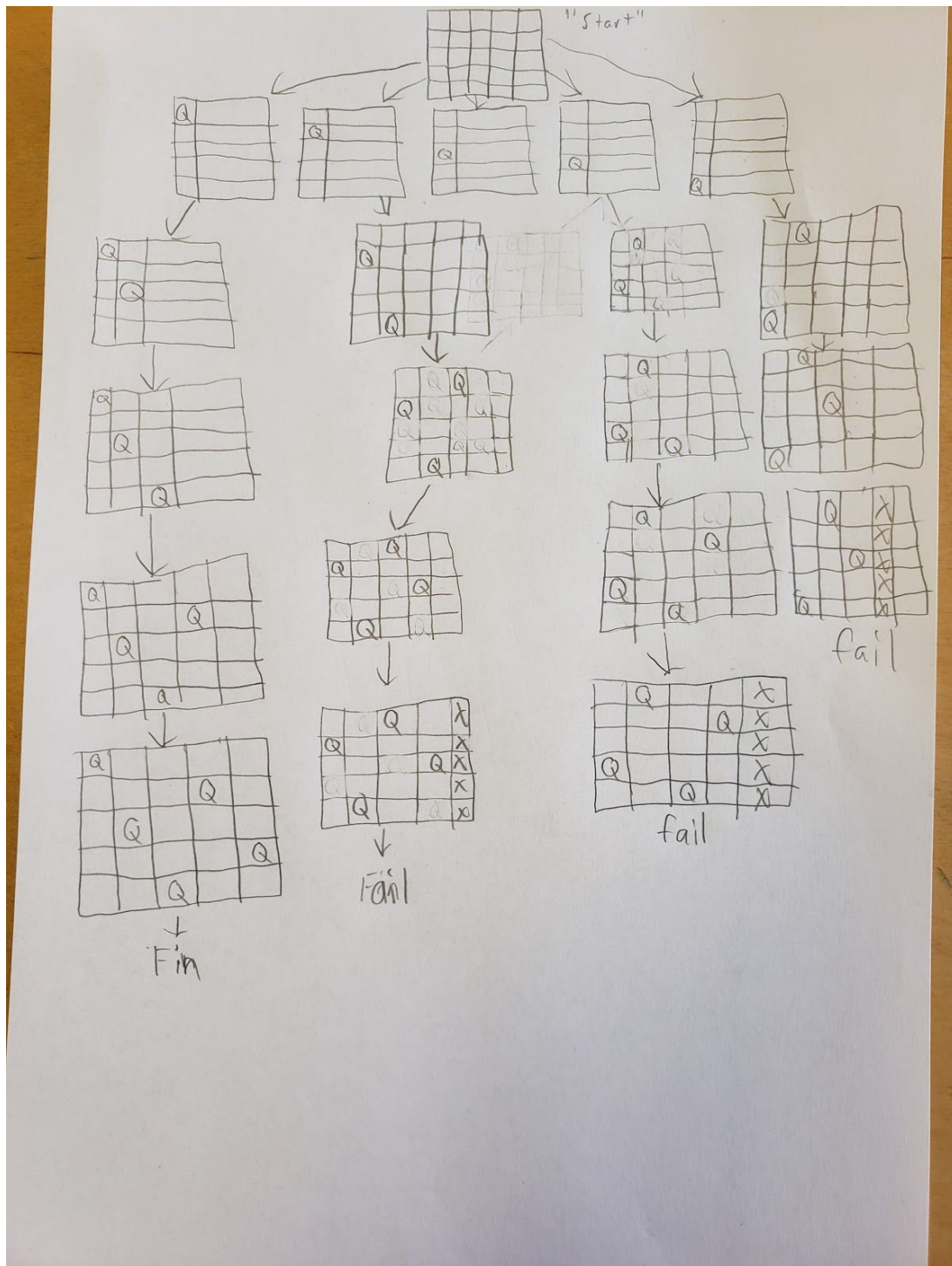
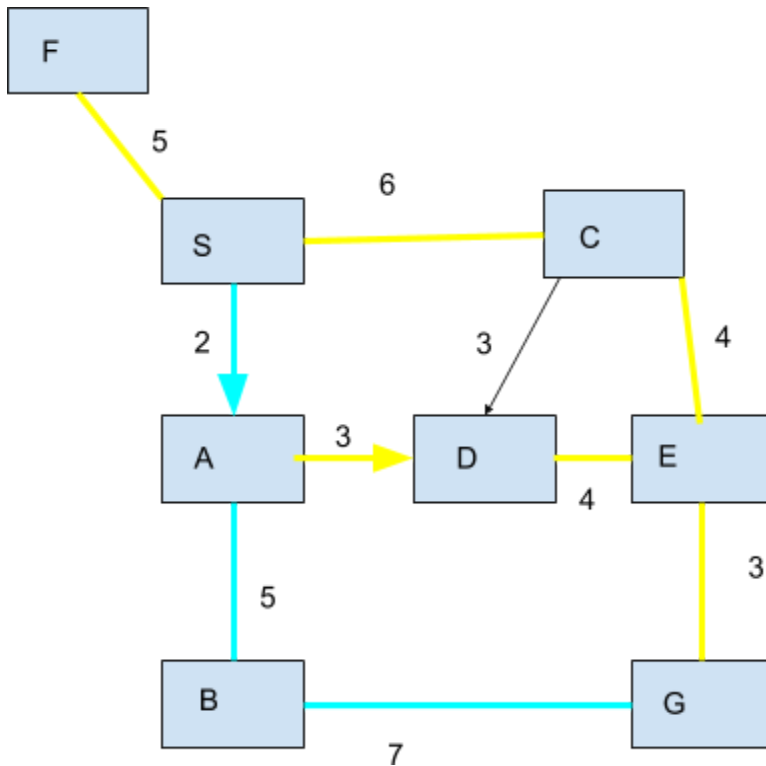


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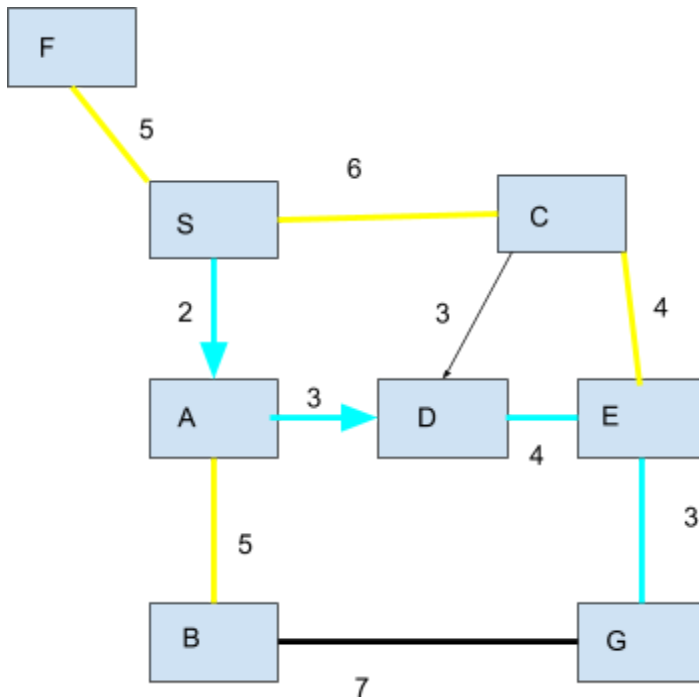
1. 5 queens problem



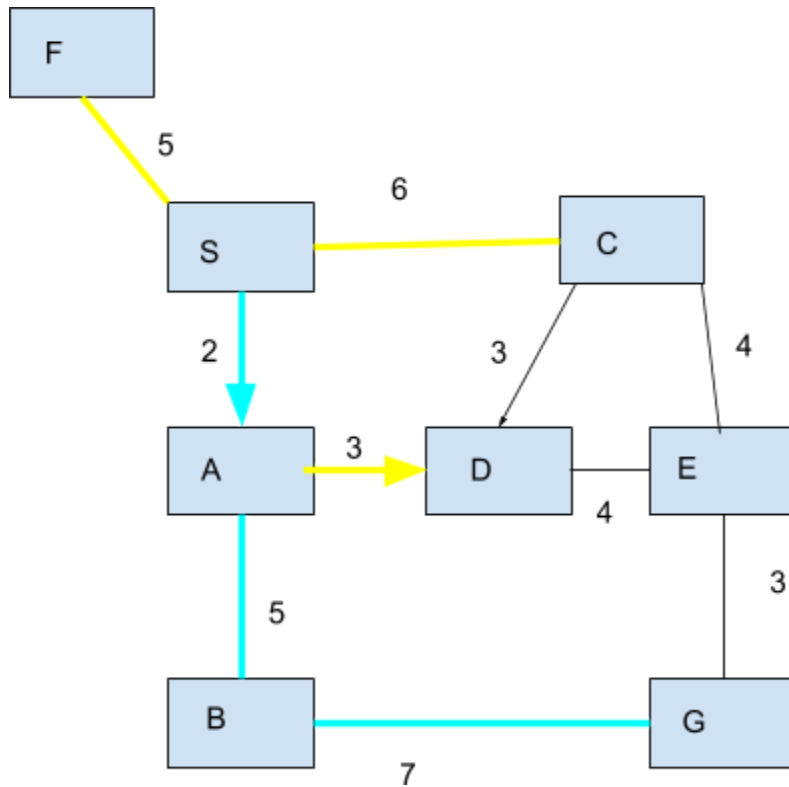
2. Blue lines indicate the solution path and the yellow lines show what nodes were visited but not traveled to. The cost is  $2 + 5 + 7 = 14$  units.



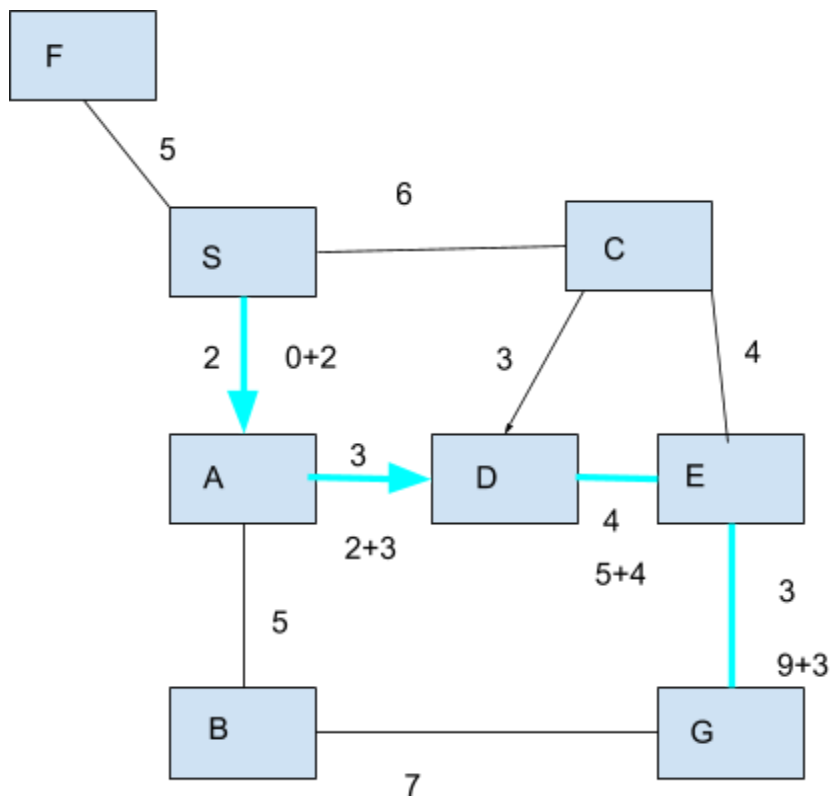
3. The solution is in blue and the cost of this search is 12 units.



4. 14 or 7



5. The cost is 12.



6. A dominant admissible heuristic function for this graph is  $h^*(n) = \text{current cost of the total path} + \min(\text{the cost of the path to add, cost of the estimated path to add})$ .