

Week 6 Prolog Lab 2025.

Take the following graph and Heuristic table and implement them as a set of facts

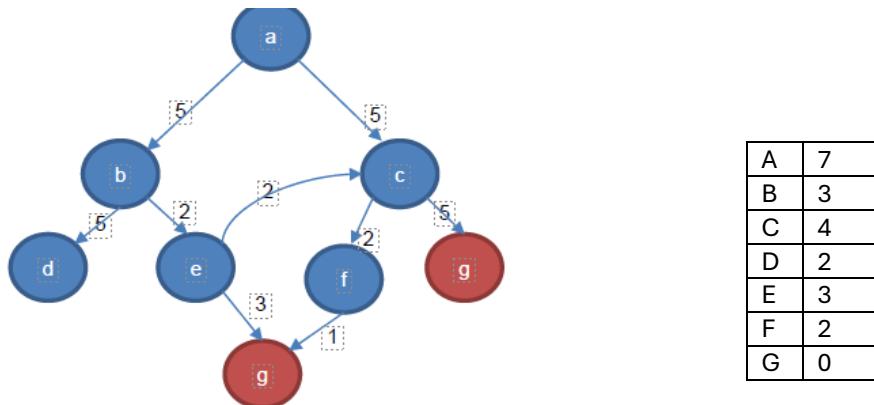


Figure 1 Search Tree representation

Using your Prolog fact representation and the code presented in the Lab, explain how each of the following searches would find the Goal Node G. Clearly show in your explanation the (1) The order in which the frontier is explored at each iteration (2) whether it finds the optimal path or not and why (3) the cost of expanding the frontier in terms of the nodes visited.

- (i) Heuristic best first search
- (ii) Cost based best first search (greedy search)
- (iii) A* search

Show your workings in The Informed Search OneNote Notebook provided