The objective of this assignment was to test the performance of uninformed searches against an informed search. We ran tests for the A\* algorithm, breadth first and depth first with iterative deepening for three problems.

## The A\* algorithm:

The heuristic I used for this algorithm was the nearest neighbour heuristic. For each node, I would generate its children and calculate the distance from the parent to the child. I then sort the children by the value of their heuristics and the child with the shortest distance is the nearest neighbour. Therefore for each level of the search, the search will select the shortest path from that node to the next in the hopes that this would reach the shortest path in travelling to all the cities.

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| problem | time | distance | States expanded |
| wi29 |  |  |  |
| Dj38 |  |  |  |
| eil51 |  |  |  |