Activity 1. Branching heuristic

At each step you pick the next unvisited node whose edge‑cost plus a cheap “best‑case” estimate of the remaining tour is smallest. (Is taking the “best” unvisited node given a heuristic).

Before descending, you check if the current cost plus that estimate still could meet your target (within the tolerance). If not, you prune that branch.

This “best‑bound” ordering and pruning makes you find a valid full tour much faster than pure backtracking.

Activity 2. [TITLE OF THE ACTIVITY]

|  |  |
| --- | --- |
| **n** | **t BB (ms)** |
| 20 |  |
| 25 |  |
| 30 |  |
| 35 |  |
| 40 |  |
| 45 |  |
| 50 |  |
| 55 |  |
| 60 |  |
| 65 |  |
| 70 |  |
| 75 |  |
| 80 |  |

The theoretical complexity