| | Student information | Date | Number of session | |
|---|---|---|---|---|
| **Algorithmics** | UO: 293615 | | | Escuela de Ingeniería Informática Universidad de Oviedo |
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| | Name: Gersán | | | |

# Activity 1. Measure Null Path

Time measurements:

| n | t_avg(ms) |
|---|---|
| 200 | 21.93 |
| 205 | 22.84 |
| 210 | 24.07 |
| ... | ... |
| 250 | 34.12 |
| 255 | 35.55 |
| 260 | 37.35 |
| ... | ... |
| 300 | 49.21 |
| 305 | 50.63 |
| 310 | 52.77 |
| ... | ... |
| 350 | 66.83 |
| 355 | 70.64 |
| 360 | 69.99 |
| .. | ... |
| 400 | 87.19 |
| 405 | 87.47 |
| 410 | 91.93 |
| ... | ... |
| 450 | 114.82 |
| 455 | 115.39 |
| 460 | 118.13 |

These were the times measurement results I got for calculating the null paths for these different sizes. Normally backtracking follows a complexity of O(n!), but due to the exercise asking for only one solution, my program stops when such solution is found (if so). Also, the fact that a tolerance [-99,99] is allowed, also affects the time, as this way more solutions will be found, and the execution won't take as long. As the weights are also randomized, the time will also seem affected slightly by it.

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