S. M. AKASH

**LPG-TD run:**

|  |  |  |  |
| --- | --- | --- | --- |
| File | Number of Actions | Number of Conditional Actions | Number of Facts |
| prb1 | 30 | 0 | 15 |
| prb10 | 460 | 0 | 143 |

For prb10 :

Total time: 0.52

Search time: 0.02

Actions: 40

Execution cost: 40.00

Duration: 40.000

Plan quality: 40.000

**FF run:**

**prb1**

**0.00 seconds instantiating 38 easy, 0 hard action templates**

**0.00 seconds reachability analysis, yielding 15 facts and 30 actions**

**0.00 seconds creating final representation with 15 relevant facts, 0 relevant fluents**

**0.00 seconds computing LNF**

**0.00 seconds building connectivity graph**

**0.00 seconds searching, evaluating 10 states, to a max depth of 3**

**0.00 seconds total time**

**prb10**

**0.00 seconds instantiating 500 easy, 0 hard action templates**

**0.00 seconds reachability analysis, yielding 143 facts and 460 actions**

**0.00 seconds creating final representation with 143 relevant facts, 0 relevant fluents**

**0.00 seconds computing LNF**

**0.00 seconds building connectivity graph**

**0.00 seconds searching, evaluating 176 states, to a max depth of 3**

**0.00 seconds total time**

**Fast-Downward run:**

Heuristic: "hcea=cea()" --search "lazy\_greedy(hcea,preferred=hcea)"

**prb1**

**Plan length: 8 step(s).**

**Plan cost: 8**

**Expanded 10 state(s).**

**Reopened 0 state(s).**

**Evaluated 11 state(s).**

**Evaluations: 11**

**Generated 35 state(s).**

**Dead ends: 0 state(s).**

**Number of registered states: 11**

**Search time: 0.000525135s**

**Total time: 0.00177015s**

**Solution found.**

**Peak memory: 3288 KB**

**prb10**

**Plan length: 40 step(s).**

**Plan cost: 40**

**Expanded 130 state(s).**

**Reopened 0 state(s).**

**Evaluated 131 state(s).**

**Evaluations: 131**

**Generated 665 state(s).**

**Dead ends: 0 state(s).**

**Number of registered states: 131**

**Search time: 0.00695966s**

**Total time: 0.0143463s**

**Solution found.**

**Peak memory: 3684 KB**

Heuristic: --alias seq-sat-lama-2011

**prb1:**

**Actual search time: 0.00249441s [t=0.00656826s]**

**Expanded 226 state(s).**

**Reopened 49 state(s).**

**Evaluated 228 state(s).**

**Evaluations: 278**

**Generated 784 state(s).**

**Dead ends: 0 state(s).**

**Search time: 0.0079001s**

**Total time: 0.0100873s**

**prb10:**

**Actual search time: 0.00785875s [t=0.0200631s]**

**Plan length: 40 step(s).**

**Plan cost: 40**

**Expanded 130 state(s).**

**Reopened 0 state(s).**

**Evaluated 131 state(s).**

**Evaluations: 262**

**Generated 665 state(s).**

**Dead ends: 0 state(s).**

**Number of registered states: 131**

Found problem for prb10 file. Had to kill the run for lazy\_wastar(list(hff, hlm), preferred = list(hff, hlm), w = 5).

**prb2:**

**Search time: 0.00238672s**

**Total time: 0.00729067s**

(for just connecting hospitalA with hospitalB)

**Fast-Downward run:**

Heuristic: "hcea=cea()" --search "lazy\_greedy(hcea,preferred=hcea)"

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Number of patients | Ambulance Quantity | Plan length | Number of registered states | Peak Memory | Search Time | Total Time |
| 5 | 2 | 20 | 43 | 3552 KB | 0.00244465s | 0.00677204s |
| 10 | 2 | 40 | 133 | 4212 KB | 0.012749s | 0.0335533s |
| 20 | 2 | 80 | 463 | 7692 KB | 0.123651s | 0.243112s |
| 30 | 2 | 120 | 993 | 14928 KB | 0.596573s | 1.01216s |
| 40 | 2 | 160 | 1723 | 31212 KB | 2.36951s | 3.49477s |
| 50 | 2 | 200 | 2653 | 56320 KB | 7.98336s | 10.5018s |
| 60 | 2 | 240 | 3783 | 89392 KB | 18.1921s | 23.1611s |
| 70 | 2 | 280 | 5113 | 161980 KB | 37.0243s | 45.973s |
| 80 | 2 | 320 | 6643 | 233916 KB | 72.2687s | 87.3124s |
| 90 | 2 | 360 | 8373 | 332088 KB | 123.776s | 147.924s |
| 100 | 2 | 400 | 10303 | 476456 KB | 207.512s | 244.116s |

**LPG-TD run: (-speed parameter)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of patients | Ambulance Quantity | Actions | Duration | Search Time | Total Time |
| 5 | 2 | 20 | 12 | 0.001s | 0.02 |
| 10 | 2 | 56 | 44.000 | 0.02 | 0.02 |
| 20 | 2 | 124 | 94.000 | 0.16 | 0.14 |
| 30 | 2 | 156 | 128.000 | 0.596573s | 0.58 |
| 40 | 2 | 177 | 170.000 | 0.40 | 1.74 |
| 50 | 2 | 275 | 187.000 | 1.06 | 4.88 |
| 60 | 2 | 250 | 158.000 | 1.74 | 10.32 |
| 70 | 2 | 335 | 310.000 | 3.28 | 20.28 |
| 80 | 2 | 370 | 304.000 | 4.96 | 37.62 |
| 90 | 2 | 406 | 311.000 | 14.12 | 31.72 |
| 100 | 2 | 471 | 450.000 | 21.22 | 48.48 |

FF run:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Number of patients | Ambulance Quantity | Actions | Search Time | Total Time |
| 5 | 2 | 20 | 0.00001 | 0.00001 |
| 10 | 2 | 40 | 0.02 | 0.02 |
| 20 | 2 | 80 | 0.26 | 0.27 |
| 30 | 2 | 120 | 1.78 | 1.82 |
| 40 | 2 | 160 | 7.33 | 7.38 |
| 50 | 2 | 200 | 26.51 | 26.59 |
| 60 | 2 | 240 | 61.75 | 61.86 |
| 70 | 2 | 280 | 157.99 | 158.14 |
| 80 | 2 | 320 | 349.12 | 349.32 |
| 90 | 2 | 406 | 665.57 | 665.83 |
| 100 | 2 | 471 | 21.22 | 48.48 |