bogon:AIND-Planning danqiang$ python run\_search.py -p 1 -s 9

Solving Air Cargo Problem 1 using astar\_search with h\_ignore\_preconditions...

Expansions Goal Tests New Nodes

33 35 136

Plan length: 6 Time elapsed in seconds: 0.16563202399993315

Load(C1, P1, SFO)

Fly(P1, SFO, JFK)

Load(C2, P2, JFK)

Fly(P2, JFK, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 2 -s 9

Solving Air Cargo Problem 2 using astar\_search with h\_ignore\_preconditions...

Expansions Goal Tests New Nodes

1045 1047 9646

Plan length: 9 Time elapsed in seconds: 75.49434793399996

Load(C2, P2, JFK)

Fly(P2, JFK, SFO)

Load(C1, P1, SFO)

Fly(P1, SFO, JFK)

Load(C3, P3, ATL)

Fly(P3, ATL, SFO)

UnLoad(C3, P3, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 3 -s 9

Solving Air Cargo Problem 3 using astar\_search with h\_ignore\_preconditions...

Expansions Goal Tests New Nodes

6017 6019 53851

Plan length: 12 Time elapsed in seconds: 721.3902832580061

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Fly(P1, SFO, ATL)

Load(C3, P1, ATL)

Fly(P2, JFK, ORD)

Load(C4, P2, ORD)

Fly(P2, ORD, SFO)

Fly(P1, ATL, JFK)

UnLoad(C4, P2, SFO)

UnLoad(C3, P1, JFK)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 1 -s 10

Solving Air Cargo Problem 1 using astar\_search with h\_pg\_levelsum...

Expansions Goal Tests New Nodes

32 34 138

Plan length: 6 Time elapsed in seconds: 0.6882603130070493

Load(C1, P1, SFO)

Fly(P1, SFO, JFK)

UnLoad(C1, P1, JFK)

Load(C2, P2, JFK)

Fly(P2, JFK, SFO)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 2 -s 10

Solving Air Cargo Problem 2 using astar\_search with h\_pg\_levelsum...

Expansions Goal Tests New Nodes

168 170 1618

Plan length: 9 Time elapsed in seconds: 56.30425093500526

Load(C1, P1, SFO)

Fly(P1, SFO, JFK)

Load(C3, P3, ATL)

Fly(P3, ATL, SFO)

UnLoad(C3, P3, SFO)

UnLoad(C1, P1, JFK)

Load(C2, P2, JFK)

Fly(P2, JFK, SFO)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 3 -s 10

Solving Air Cargo Problem 3 using astar\_search with h\_pg\_levelsum...

Expansions Goal Tests New Nodes

940 942 8732

Plan length: 12 Time elapsed in seconds: 410.82027976200334

Load(C1, P1, SFO)

Fly(P1, SFO, ATL)

Load(C2, P2, JFK)

Fly(P2, JFK, ORD)

Load(C3, P1, ATL)

Fly(P1, ATL, JFK)

Load(C4, P2, ORD)

UnLoad(C3, P1, JFK)

Fly(P2, ORD, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C4, P2, SFO)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 1 -s 1

Solving Air Cargo Problem 1 using breadth\_first\_search...

Expansions Goal Tests New Nodes

43 56 180

Plan length: 6 Time elapsed in seconds: 0.03613748100178782

Load(C2, P2, JFK)

Load(C1, P1, SFO)

Fly(P2, JFK, SFO)

UnLoad(C2, P2, SFO)

Fly(P1, SFO, JFK)

UnLoad(C1, P1, JFK)

bogon:AIND-Planning danqiang$ python run\_search.py -p 2 -s 1

Solving Air Cargo Problem 2 using breadth\_first\_search...

Expansions Goal Tests New Nodes

3343 4609 30509

Plan length: 9 Time elapsed in seconds: 7.276634177993401

Load(C2, P2, JFK)

Load(C1, P1, SFO)

Load(C3, P3, ATL)

Fly(P2, JFK, SFO)

UnLoad(C2, P2, SFO)

Fly(P1, SFO, JFK)

UnLoad(C1, P1, JFK)

Fly(P3, ATL, SFO)

UnLoad(C3, P3, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 3 -s 1

Solving Air Cargo Problem 3 using breadth\_first\_search...

Expansions Goal Tests New Nodes

14663 18098 129631

Plan length: 12 Time elapsed in seconds: 37.79994688600709

Load(C2, P2, JFK)

Load(C1, P1, SFO)

Fly(P2, JFK, ORD)

Load(C4, P2, ORD)

Fly(P1, SFO, ATL)

Load(C3, P1, ATL)

Fly(P1, ATL, JFK)

UnLoad(C1, P1, JFK)

UnLoad(C3, P1, JFK)

Fly(P2, ORD, SFO)

UnLoad(C2, P2, SFO)

UnLoad(C4, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 1 -s 5

Solving Air Cargo Problem 1 using uniform\_cost\_search...

Expansions Goal Tests New Nodes

55 57 224

Plan length: 6 Time elapsed in seconds: 0.04134475901082624

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Fly(P1, SFO, JFK)

Fly(P2, JFK, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 2 -s 5

Solving Air Cargo Problem 2 using uniform\_cost\_search...

Expansions Goal Tests New Nodes

4852 4854 44030

Plan length: 9 Time elapsed in seconds: 11.381458515010308

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Load(C3, P3, ATL)

Fly(P1, SFO, JFK)

Fly(P2, JFK, SFO)

Fly(P3, ATL, SFO)

UnLoad(C3, P3, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 3 -s 5

Solving Air Cargo Problem 3 using uniform\_cost\_search...

Expansions Goal Tests New Nodes

18223 18225 159618

Plan length: 12 Time elapsed in seconds: 46.16268245600804

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Fly(P1, SFO, ATL)

Load(C3, P1, ATL)

Fly(P2, JFK, ORD)

Load(C4, P2, ORD)

Fly(P2, ORD, SFO)

Fly(P1, ATL, JFK)

UnLoad(C4, P2, SFO)

UnLoad(C3, P1, JFK)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 1 -s 7

Solving Air Cargo Problem 1 using greedy\_best\_first\_graph\_search with h\_1...

Expansions Goal Tests New Nodes

7 9 28

Plan length: 6 Time elapsed in seconds: 0.004830227000638843

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Fly(P1, SFO, JFK)

Fly(P2, JFK, SFO)

UnLoad(C1, P1, JFK)

UnLoad(C2, P2, SFO)

bogon:AIND-Planning danqiang$ python run\_search.py -p 2 -s 7

Solving Air Cargo Problem 2 using greedy\_best\_first\_graph\_search with h\_1...

Expansions Goal Tests New Nodes

990 992 8910

Plan length: 17 Time elapsed in seconds: 2.1625241299916524

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Load(C3, P3, ATL)

Fly(P1, SFO, ATL)

Fly(P2, JFK, ATL)

Fly(P3, ATL, JFK)

Fly(P1, ATL, JFK)

UnLoad(C1, P1, JFK)

Load(C1, P3, JFK)

Fly(P1, JFK, ATL)

Fly(P2, ATL, SFO)

UnLoad(C2, P2, SFO)

Fly(P2, SFO, ATL)

Fly(P3, JFK, SFO)

UnLoad(C3, P3, SFO)

Fly(P3, SFO, JFK)

UnLoad(C1, P3, JFK)

bogon:AIND-Planning danqiang$ python run\_search.py -p 3 -s 7

Solving Air Cargo Problem 3 using greedy\_best\_first\_graph\_search with h\_1...

Expansions Goal Tests New Nodes

5578 5580 49150

Plan length: 22 Time elapsed in seconds: 15.174364951002644

Load(C1, P1, SFO)

Load(C2, P2, JFK)

Fly(P1, SFO, ORD)

Load(C4, P1, ORD)

Fly(P2, JFK, ATL)

Load(C3, P2, ATL)

Fly(P2, ATL, ORD)

Fly(P1, ORD, ATL)

UnLoad(C4, P1, ATL)

Fly(P1, ATL, ORD)

Fly(P2, ORD, ATL)

Load(C4, P2, ATL)

Fly(P2, ATL, ORD)

UnLoad(C3, P2, ORD)

Load(C3, P1, ORD)

Fly(P1, ORD, JFK)

UnLoad(C3, P1, JFK)

UnLoad(C1, P1, JFK)

Fly(P1, JFK, ORD)

Fly(P2, ORD, SFO)

UnLoad(C4, P2, SFO)

UnLoad(C2, P2, SFO)