ASSIGNMENT3 : DPLL

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Used dpll algorithm to find the possible paths from (1,1) to (4,4)
Literals in my algorithm:
I have assigned the 1- 16 to Wumpus, 17- 32 to Pit, 33 -48 to stench, 49-64 to breeze.
Positive literals denote presence of Wumpus, Pit, Breeze, Stench and negative denote absence.
Knowledge Base was updated for the presence/absence of stench, breeze.
The knowledge base initially contained the sentences:

- No 2 cells have a pit/wumpus.
- If a cell contains stench then neighbouring cells might have a wumpus.
- If a cell contains breeze then neighbouring cells might have a pit.

Note: Called dpll to check if neighbours have Wumpus or Pit
Note: I have attached the dpll algorithm separately in “dpll.py” file

DPLL with 3 Heuristics:

Wumpus was present at (3,1) and pit at (2,2)

Heuristic	No of calls
Early termination :	Depends on value of t
Pure Symbols	Did not terminate
Unit Clause:	8920043
All 3 Heuristics:	373560

Clearly pure symbol is a slow heuristic and Unit Clause works relatively faster.

All 3 heuristics gives lesser dpll calls and the program takes < 1second to run.