

**Anish Dubey**  
**Artificial Intelligence Hw-5**

**Q) Your source code?**

A) Included in the code folder

**Q) A short document describing how to compile and run your program**

A) ReadMe file included

**Q) The knowledge base for the builder-agent team assignment problem?**

A) Knowledge Base file included.

**Q) A transcript of running your program on the abstract Boolean problem (see below) and the multi-agent task-assignment problem (for the two queries shown above)?**

A) Abstract Problem: -> Transcript\_Example file included

Multi-Agent Task: -> Transcript\_MultiAgent file included

**Q) A table of number of nodes searched for each of these problems using a) backtracking alone, b) backtracking with the Unit clause heuristic, and c) backtracking and both heuristics ?**

A)

**Abstract Problem:**

DPLL mode	Node Searched
Backtracking Alone	56
Backtracking + Unit Clause heuristic	34
Backtracking + Unit Clause + Pure Heuristic	16

**Multi-Agent Task:**

**Fact: painter sander gluer joiner**

DPLL mode	Node Searched
Backtracking Alone	3292
Backtracking + Unit Clause heuristic	41
Backtracking + Unit Clause + Pure Heuristic	35

**Fact: cutter welder painter joiner recharger**

DPLL mode	Node Searched
Backtracking Alone	131
Backtracking + Unit Clause heuristic	17
Backtracking + Unit Clause + Pure Heuristic	17