

Hands-On Session 1 (3/26)

AAA528, Spring 2025

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Due: 3/30 23:59

Problem 1 Implement a SAT solver. The input is a text file, in the DIMACS format, containing a SAT instance. For example,

```
p cnf 3 5
-1 -2 -3 0
1 -2 3 0
1 2 -3 0
1 -2 -3 0
-1 2 3 0

c (not 1 \\/ not 2 \\/ not 3) /\
c (1 \\/ not 2 \\/ 3) /\
c (1 \\/ 2 \\/ not 3) /\
c (1 \\/ not 2 \\/ not 3) /\
c (not 1 \\/ 2 \\/ 3)
```

Given the input file, the solver should output either SAT or UNSAT. If the result is SAT, it must also display a satisfying assignment. Submit the source code along with a report describing your implementation and preliminary evaluation on various instances. Refer to <https://www.cs.ubc.ca/~hoos/SATLIB/benchm.html> for a collection of SAT benchmarks.