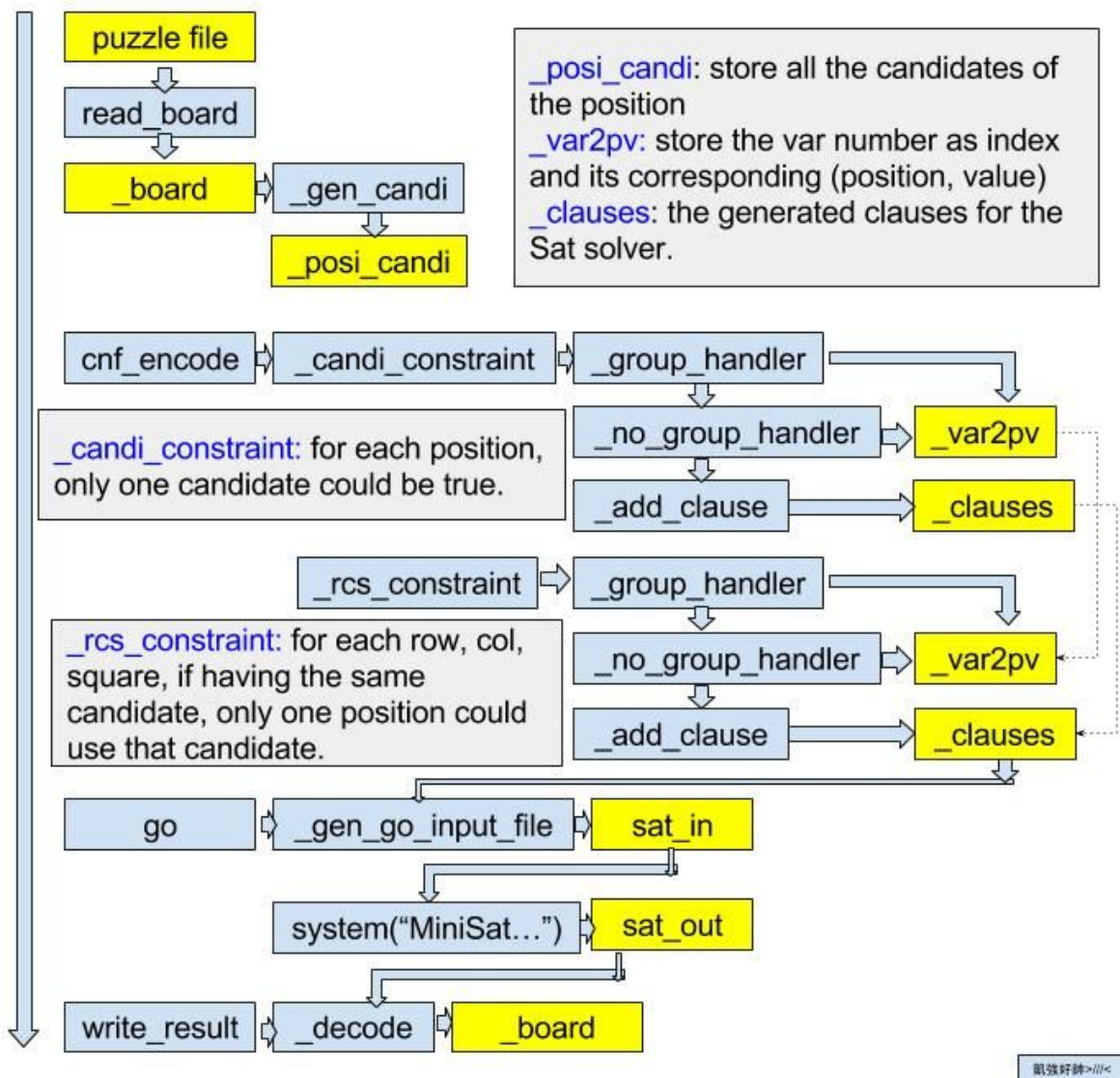


Homework 1 Report

0456008 翁慶年

1. Architecture of My Implementation



The blocks in yellow stand for variables.

The blocks in light blue stand for functions.

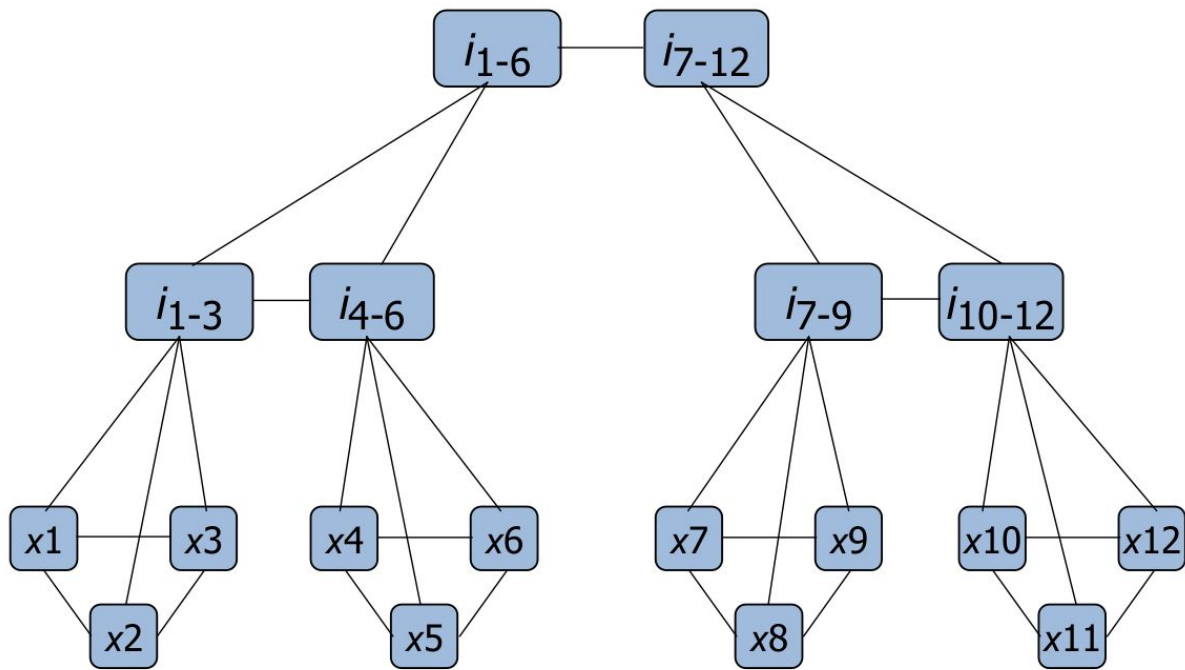
The blocks in grey stand for some notes about the functions or variables.

The flow of processing is from top to down, from left to right.

2. CNF Encoding Method

I use the method mentioned in the course slide "SAT Encoding for Sudoku Puzzles".

I also implemented Hierarchical Grouping to reduce the number of clauses.



3. How to

`./solver [Input Puzzle] [Output Puzzle] [MiniSatExe]`

In addition to [Output Puzzle], `sat_in`, `sat_out`, `var2pv`, `posi_candi` would also be generated. The first one is fed to [MiniSatExe] as input, the second is generated by [MiniSatExe], and the last two are just used to debug.