Software report

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1. Sudoku

* Problem definition

TODO

* CSP representation

TODO

* Solution

TODO

1. Maximum Cut

* Problem definition

The Maximum Cut problem is NP-complete, and it aims to partition a graph into two sets such that the number of edges that cross the cut is maximized (i.e., one end of the edge in each set). We will be trying to solve this problem version, however there is a more general version where the edges have a positive weight assigned.

* CSP representation

We can represent the MaxCut problem as follows:

* Variable: given a graph with a set of vertices , a variable will be assigned for each vertex.
* Domain: after a cut, a vertex can be part of a set , thus the domain for each variable is .
* Constraints: after a cut, a set of edges will be selected . Given a selected edge , then the vertices connected by it and must have variables assigned such that .
* Solution

The classical solution is TODO

* Backtracking:
* Problem Reduction ():
* Basic Search Strategy ():