Abstrak (english)

Cutting stock problem is crucial problem in manufacture industry. The main problem is about raw material which have big size and smaller size of piece which have to produce from raw material. CSP is problem with high level of difficulties. Finding right combination among numerous patterns was the greatest challenge to solve this problem.

Therefore, the purpose of this final task is to implement intelligence waterdrop algorithm that suitable for combinatorial problem that can give an optimum solution as the result in reasonable time. constrainted 2 dimensional 2-stage guillotine is type of CSP that will be solve in this final task. This algorithm have already implement in many other combinatorial problem with great result. Best feature from this system is ability to fix the solution and the system itself.

altough this algorithm can't give guarantee that the solution is the optimal one for every CSP problem. But in this experiment this algorithm can get optimal solution for all of the problem.

keyword : Cutting Stock Problem, guillotine, Intelligence Waterdrop