

README

In this program, I used Conflict-directed Backjumping to realized the the function.

First, I defined a point class, the point class will record every point position, value and any possible choice in the next step which we need to calculate.

Then I have 3 check function, to check whether the value has been used in this current row, col and block. If it is used, return false, else return true.

There is a recursive function to realize Forward checking, you will assign a point a certain value, and try to find the answer based on it. If it works, then the program will call this function again and use another point as the parameter. Once the value can not satisfy the rule, it will assign it a zero as nothing happened, and try another value from the most recent successful situation.

Finally it is the solution function, its parameter is the sudoku, it will record each point in a points list, and assign them position and possible choice. When every point is stored in the points list, it will call the recursive function to find the answer.

Reference

<https://www.programiz.com/python-programming/methods/built-in/set>

https://blog.csdn.net/you_are_my_dream/article/details/54864775

<https://www.jianshu.com/p/fcd35b68c1e3>

<https://blog.csdn.net/littlethunder/article/details/9749509>