

NPTEL
NPTEL ONLINE COURSE
Discrete Mathematics
Logic
SAT Problem - Part 1
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Look at this big Boolean expression. I have an important question about it. By important I mean it is important in computer science and it is still considered a very hard question and we don't know a nice answer for it. The question goes like this. For this big Boolean expression is there an assignment that makes it true? You might say it's not a big deal. What is there in it? Come on let us try some manipulation, some assignments to the different Boolean variables and then try to see if something gives me a one. So you try, try, try, and you don't get. After a while you discard it by saying no there is no assignment which makes it one, or if some assignment makes it one you say yes this is the assignment which makes it one. So the question is given a big Boolean expression can you tell me if there is some assignment that makes the entire Boolean expression become true as in always we can try all possibilities.

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