

# TDT4136 - Assignment 6

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## Deliverables

At level 0 we obviously need to expand because the initial conditions don't satisfy the goal. At levels 1 we have to expand because having a short lawn and a wet lawn is mutual exclusive at that level. We don't have to expand at level 2 because all the conditions in the goal are present and are not mutex, and a solution can be found as shown in Figure 1.

The plan can be found by numbering the actions in decreasing order when you trace the actions from the goal prepositions from the deepest level back to the initial state. The actions in the same level can be done concurrently.

Solution to the gardening problem:

1. Mow the lawn
2. Use the sprinkler on the lawn
3. Use the watering can to water the flowers

Action 2 and 3 can be done concurrently. Another solution is to switch the order 2 and 3. 1 and 2 can then be done concurrently.

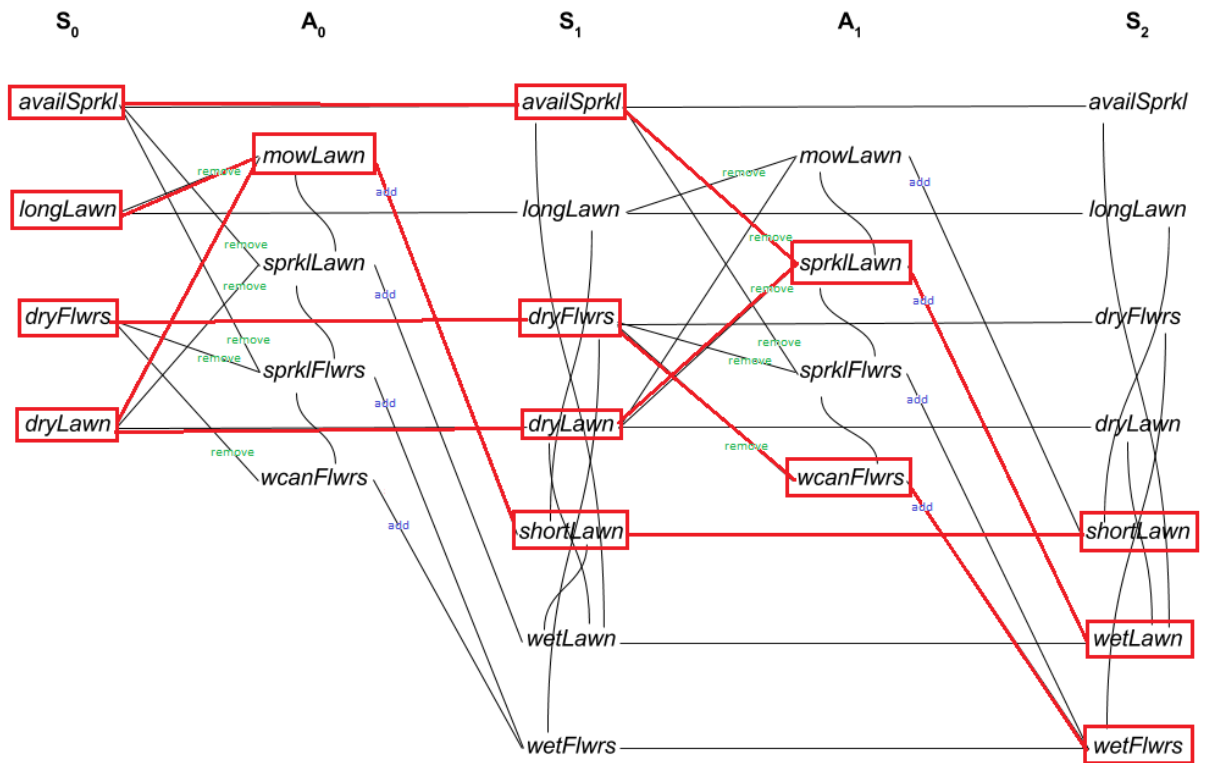


Figure 1: Curved lines between actions and propositions at the same level are mutex relations.