

Make sure to add examples to test the functionality of each the procedures used to solve the task. Hand in the .pl file(s) for your solution

**Task 1.** We want to extend prolog with the possibility to reason over (a sub-set of) modal logic sentences. Therefore, we must be able to generate queries that reason about the the possibility of a sentence being valid at some point in the (future) model (using the  $\diamond$  operator), or at every point in the (future) model (using the  $\Box$  operator).