

Model Checking Homework 6

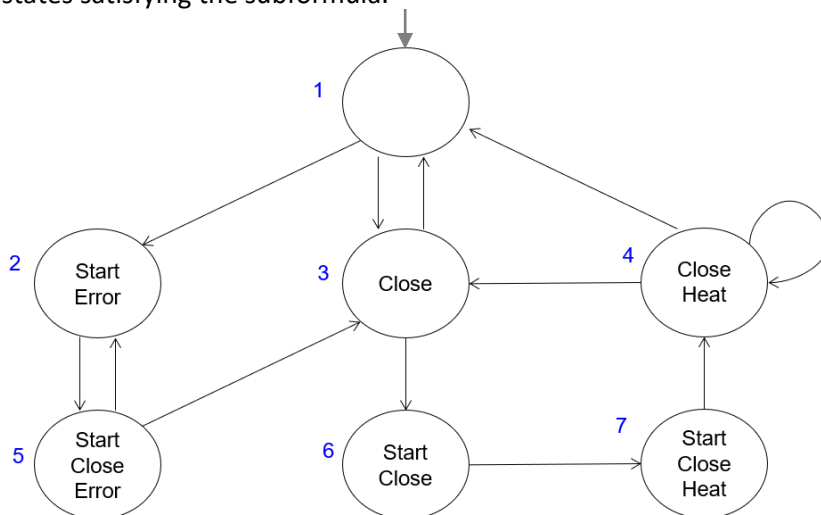
Deadline: 05 May 2022 4:00pm

Send solution to: modelchecking@iaik.tugraz.at

Explicit State Model Checking of **CTL**

Use the algorithm for explicit state model checking of CTL discussed in the lecture to decide whether the given Kripke structure M satisfies the two given CTL formulas f_1 and f_2 , i.e., check for $M \models f_1$ and $M \models f_2$.

Illustrate the execution of the individual steps of the algorithm by giving for all subformulas the set of states satisfying the subformula.



[5 Points] $f_1 = AG(start \rightarrow EF(heat \wedge close))$

[5 Points] $f_2 = EF(start \rightarrow (EF heat \rightarrow EF \neg close))$