Model Checking Homework 1

Bug fix 2022-03-15: See yellow highlights.

Deadline: 17.3. 4:00pm
Sent solution to: modelchecking@iaik.tugraz.at

You are given the following program P:

```
l1: while y>0 do
l2:    x := x + 1
l3:    y := y -1
l4: end while
l5:
```

The initial value of x is 1 and the initial value of y can be 0, 1, or 2.

Task 1a. [5 Points]

- Write the formula S_0 that represents the set of initial states and the formula C that represents the transition relation of P.

Task 1b. [5 Points]

- Draw the Kripke Structure $M = (S, S_0, R, AP, L)$ that represents P.