

# NoCo ver. 0.01

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- entrant of **Demo(NRS)** category
- **NRS: confluence of nominal rewriting systems**
- **written in Standard ML of New Jersey**

```
$sml @SMLload=noco.x86-linux sample.nrs
```

## Nominal rewriting [Fernández&Gabbay, 2007]

Rewriting systems with binding mechanism,  
based on *nominal approach*.

### Example.

$$(\forall x.P) \wedge Q \equiv \forall x.(P \wedge Q) \quad (x \notin \text{FV}(Q))$$

$$P \wedge (\forall x.Q) \equiv \forall x.(P \wedge Q) \quad (x \notin \text{FV}(P))$$

$$\mathcal{R} = \left\{ \begin{array}{l} x \# Q \vdash (\forall x.P) \wedge Q \rightarrow \forall x.(P \wedge Q) \\ x \# P \vdash P \wedge (\forall x.Q) \rightarrow \forall x.(P \wedge Q) \end{array} \right\}$$

- **confluence criterion:** T. Suzuki et al., “Confluence of orthogonal nominal rewriting systems revisited”, In *Proc. of RTA 2015*, pp. 301–317.