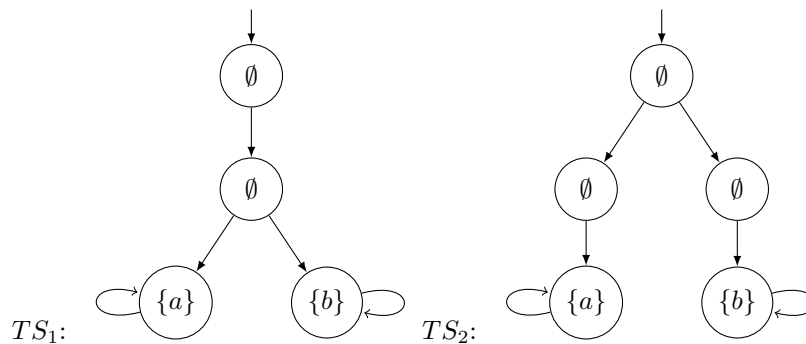# TP5 MVFA: model checking CTL properties

Today we will use NuSMV to check CTL formulas

1. Consider the following transition systems.

As we have seen in the previous TD, no LTL property differentiate these two transition systems (*i.e.* is true in TS_1 and not in TS_2 for instance). Model TS_1 and TS_2 with NuSMV and specify a CTL property true in TS_1 and not in TS_2.

2. We consider the famous problem of the Wolf, the Goat and the Cabbage.
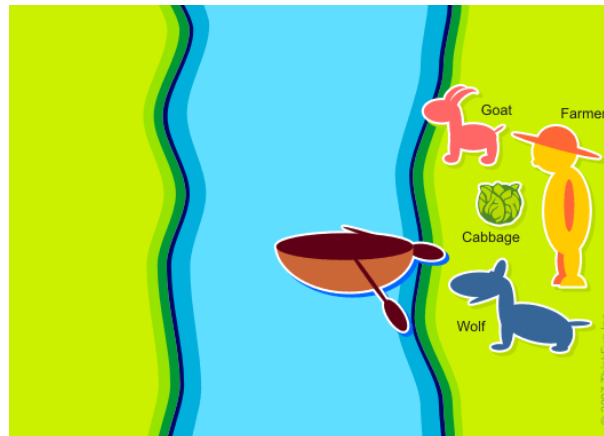
A farmer has to carry a wolf, a goat and a boat on the other side of the river. He can carry at most one of his loads at a time. If he leaves alone the goat and the cabbage, the goat will eat the cabbage. If he leaves alone the wolf and the goat, the wolf will eat the goat. Model this problem with NuSMV and verify with a CTL property that the farmer can transport the wolf, the goat and the cabbage safely.