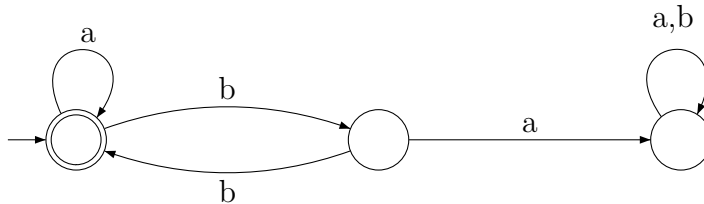


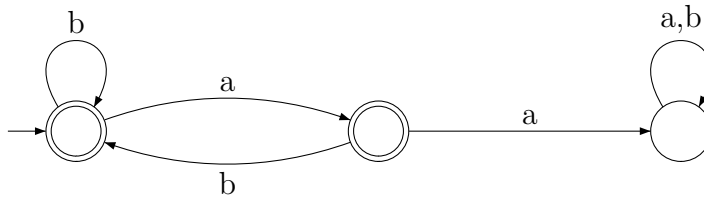
Homework 2

DUE DATE: **Wednesday, 2/22/2005**

Problem 1. Consider the following two finite state automata M_1 :



and M_2 :



- (a) Give examples for two strings that belong to $L(M_1)$ and two that don't.
- (b) Give examples for two strings that belong to $L(M_2)$ and two that don't.
- (c) Try to describe the language accepted by M_1 .
- (d) Try to describe the language accepted by M_2 .
- (e) Build a finite state machine that accepts $L(M_1) \cap L(M_2)$. That is, the new machine should accept exactly those strings that are accepted by both M_1 and M_2 .