## Sapienza Università di Roma

Facoltà di Ingegneria - Corso di Laurea Magistrale in Ingegneria Informatica

# **Service integration**

### **Elective in Software and Services**

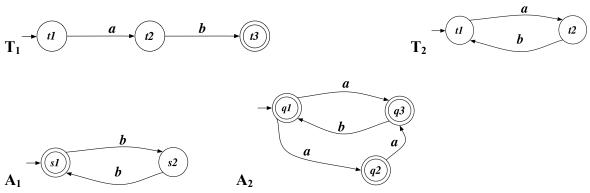
(Complementi di software e servizi per la società dell'informazione) 2009/10

#### 24/06/2010

Time to complete the assignment: 2 hours

# Part 1 (Composition Synthesis)

Given the following the available services  $A_1$  and  $A_2$  and the targets services  $T_1$  and  $T_2$ , check whether a composition realizing each of them exists, and if it does, produce the output relation of orchestrator generator.



## **Part 2 (Theoretical Question)**

Prove that the following well-known theorem holds.

**Theorem:** If two states *s*, *t* of two finite transition systems satisfy (make true) the same formulas of HenessyMilner Logic, then there exists a bisimulation between *s* and *t*.