



Politecnico di Milano

Facoltà di Ingegneria dell'Informazione - Polo Regionale di Como

via Anzani 42, 22100 Como

Tel.: 031-332.7332 Fax: 031-332.7321

prof. Giuseppe Pozzi - *Workgroup and Workflow Management Systems*

e-mail: giuseppe.pozzi@polimi.it

Workgroup and Workflow Management Systems-Written Test of Feb. 8th, 2010

Family name _____ First name _____ Politecnico ID # _____

Master Course in _____

Please, fill in this sheet carefully. All answers must be provided on this sheet, which must be returned at the end of the test. No additional sheet will be considered¹.

Rules. The examination is passed if the student obtains at least 13 points out of a total of 25 points available for this test, and the grand total of obtained points, including those obtained with a presentation or a project, is greater than or equal to 18. Use of books, handbooks, lecture notes is not permitted: only the sheets provided by the teacher can be used. All the questions must be answered, at least partially: tests in which even one question has not been answered will not be evaluated. Duration of the test: 2 hours.

Exercises

(1) Provide a reasonable description of the organizational model as depicted inside a WfMS. Provide also an example of such a model for a *CarRental* company, with at least 5 employees.

space reserved to your answer

¹**Remark.** Complete specifications whenever needed. Clarity and order will be taken into account for the evaluation.

(2) Whenever a citizen has to move from one city to a new one, he/she needs to look for a new flat. Several companies may help in offering their services to rent a new flat.

The RentAflat company wants to automate its process. A customer goes to one of the offices of the RentAflat company in the city where he/she has to move to, and searches for available flats, according to his/her needs: surface of the flat, number of bedrooms and bathrooms, garage, garden. After the customer finds a flat that fulfills his/her requirements, the agent sets up a date for an inspection of the selected flat. If the customer likes that flat, then the process continues: otherwise, the agent proposes an alternative flat which the customer may accept, remaining inside the same process, or may reject, ending the process.

If the customer likes the flat, a meeting with the flat owner is scheduled. The meeting is attended by the flat owner, the agent, and the customer. At the end of the meeting, the participants may agree on the terms or may disagree, immediately ending the process. The customer has to inform the agent within 3 days about the final acceptance of the agreement. If the customer agrees on the proposal, the contract is issued, and the agent stays waiting for the payment from the customer: next, the agent pays the fees required by the law and registers the contract at the Public Registration Office.

Finally, the customer receives a copy of the registered contract, the keys of the flat and he/she may now start to live in the new flat.

Provide a reasonable schema of the outlined process(es), according to one of the following modeling formalisms: WIDE model, Workflow Management Coalition model. Please, suitably model all the *pre-conditions* and *post-conditions* of every task.

(3) With respect to the process described in Exercise 2, provide an example of a reasonable information model on top of a relational DBMS. Also enrich stored data with the valid time attribute, providing an explanation for the values of the VT attribute.

space reserved to your answer - exercise 3

space reserved to your answer - exercise 2

(4) Describe the main software components you find inside a Workflow Management System and their related functionalities.

space reserved to your answer

This part for use by the teacher, only.

Ex. 1	Ex. 2	Ex. 3	Ex. 4	Total
