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Workgroup and Workflow Management Systems-Written Test of Feb. 17th, 2015

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) Describe which are the main advantages in using a Workgroup Management System system rather than a Workflow Management System.

space reserved to your answer

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

(2) The Municipality of NoLand wants to manage public elections for the major, automatically collecting votes from the residents, only.

Each voting machine reads the voting options (e.g. name of all the candidates, closing time for the poll station) and stays waiting for the elector to enter the poll station. Before voting, the elector must enter his/her Id data in the voting machine: if the elector is not authorized to proceed (his/her name is not included into the **Elector** external database table or his/her name is marked as “**HasVoted**” in that table), he/she leaves the poll station and the voting machine stays waiting for another elector.

If the elector is authorized, he/she enters the vote. If the elector does not confirm the vote, the polling station requires him/her a new vote, without requiring any further identification. If the elector confirms the vote, the polling station stores that vote anonymously, by inserting a tuple in the **Vote** external database table, updates that elector as “**HasVoted**”, and stays waiting for the next elector.

Provide a reasonable schema of the outlined process(es), according to the modeling formalisms of WIDE. 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 exception that closes the polling station if the closing time is reached.

space reserved to your answer - exercise 3

space reserved to your answer - exercise 2

(4) For the business process of exercise 2, provide an example of a reasonable UML use case diagram.

space reserved to your answer

This part for use by the teacher, only.

Ex. 1	Ex. 2	Ex. 3	Ex. 4	Total
4	12	5	4	25
