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Workgroup and Workflow Management Systems-Written Test of Feb 18th, 2016

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) Define the concepts of *cohesion* and of *coupling* within a business process model.

space reserved to your answer

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

(2) The Fellowship4All (F4A) is a project from the Ministry of Education (MoE) aimed at providing foreign students with university fellowships for attending master degree courses. Applications are collected via a web site, inserting the required data (`surname`, `name`, `citizenship`, `nation_of_origin`, `bachelor_degree`, `master_course`, `personal_income`) into a database table, namely `IncomingApp`.

A secretary checks if all the required documents are provided by the applicant: in case, the applicant is requested by e-mail to provide additional documentation. When all the required documents are available, one member of the commission checks the applicant's curriculum, by comparing the held `bachelor_degree` with the selected `master_course`. If the comparison fails, the application is rejected: otherwise, the application is approved.

Approved applications are then checked by an expert of the MoE and, according to the `personal_income` of the applicant, can be funded or not. A final notification to the applicant informs him/her about the result, which is stored by the external database table `Result`.

Provide a reasonable schema of the outlined process, according to the modeling formalism of WIDE. Please, suitably model all the *pre-conditions* and *post-conditions* of every task. Also provide a description of the external database tables.

(3) With respect to the process described in Exercise 2, provide an example of a database schema storing the process model.

space reserved to your answer - exercise 3

space reserved to your answer - exercise 2

(4) Describe the concept of *peer-to-peer* interoperability, as recommended by the Workflow Management Coalition.

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
