Workgroup and Workflow Management Systems-Written Test of Sep. 22nd, 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 considered[1].

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 the main steps followed by the *workflow designer* in order to formally define a process model.

space reserved to your answer

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

(2) The Ipanema book shop plans to expand its business through the online market. Customers will be able to ask for and to buy books online through their personal account, after they registered (once only, providing full name, full address, SSN, and birthdate) and logged in the website.

Customer may access the Ipanema book shop website, searching books by author, title, category, or ISBN. All books come with a description, the price, some publication details, comments, and availability. Customers can add (or remove) one or more books from their shopping cart, and finally consolidate their shopping cart (*CheckOut*).

Next, the system computes the total amount due, including shipping fees and sale taxes, and the expected delivery time. The customer may approve the check, providing credit card data, or log out with no charge. An employee checks whether all the required books are in stock: the request is labeled as "checked" when everything is fine. If one or more books are missing, an order is issued to the *Purchase* department and the request is labeled as "in progress". The *Purchase* department is then responsible of controlling the new orders and of changing the request status to "checked" when the expected books arrive. Everyday, all the requests labeled as "checked" are charged to their customers, shipped, and their status changed to "delivered". Customers, upon receiving the books, may provide a feedback to the Ipanema book shop through the website in the next week.

(3) With respect to the process described in Exercise 2, provide an example of a reasonable local transaction (aka business transaction) performed by the *Purchase* department. Also provide the definition of the compensating transaction (and its component critical and non-critical transactions).

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space reserved to your answer - exercise 3

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space reserved to your answer - exercise 2

space reserved to your answer - exercise 2

(4) Synthetically describe the main advantages deriving from the use of a *supertask* when designing a process model.

space reserved to your answer

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This part for use by the teacher, only.

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