

National Chung Cheng University
Department of Information Management

Midterm Exam. for Systems Analysis and Design

Date: Dec. 17, 2014

1. Please briefly draw and discuss the whole picture/framework for system development process based on the lecture on the class, including planning, analysis (three types of system requirements, structuring system requirements and so on), design, and implementation. 10%
2. System development methodology by itself is not ready to build an application system. What is the other important knowledge/expertise that system developers need to know in order to well finish their job? Please discuss it by a simple example. Please answer it in English. 10%
3. Please describe Rapid Application Development (RAD) in system development, in particular for developing larger system projects, as our discussion in the class, how it greatly shortens the time of system development, and what is the major concern for using this method. 10%
4. Interview method, including individual and group interview, is an important way to acquire user requirements in the SDLC. Please discuss how you effectively plan and design the interviewing procedure with a simple example. 10%
5. Given an example of fast food restaurant (Like McDonald) as indicated in the textbook, it is planning to build a simple information system for store management, including the management of employees, order, inventory, and so on. SDLC is then used to build this information system. You are system analysts and responsible for the important task. What is the JAD (Joint Application Design) session for eliciting the user requirements of this information system? Your discussion includes the definition of this approach and some specific questions for deriving functional and data requirements from their users or managers. 15%
6. Continuing from the previous question, please discuss the process of structuring user requirements using Data Flow Diagram (DFD) in terms of the previously elicited functional requirements? The DFD may be presented in a quite detailed or deeper level for our understanding. 10 %
7. Continuing from Question 6, please discuss the process of structuring user requirements using Entity Relationship Diagram (ERD) in terms of the previously elicited data requirements, including cardinalities (1:1, 1:N, or M:N relationship and attributes? 10 %
8. Continuous from Question 8, please transform the ERD, which you just found out

from the previous question, into relations/Tables with the third normal form (3NF).
10%

9. As DFD and ERD are two complementary aspects for structuring process and data requirements in the step of system analysis, please find their corresponding roles in the two diagrams in terms of their components with a detailed reason. 10%
10. In practice, what is the most difficult step in the SDLC for building an application system based on your judgment? Please discuss it in terms of the comparisons among these different steps in the SDLC. Please answer it in English. 10%