# Comprehensive Exam for Requirements Engineering Fall 2008

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The first question is mandatory and is worth 50 points. The remaining 4 questions are worth 25 points each. Answer the first question and then any 2 of the remaining 4 questions. Please mark below which optional questions you want graded. Use only the space provided. *Do not attach additional sheets.* 

Questions to grade (circle the appropriate number): 2 3 4 5 (If you leave this blank, questions 2-3 will be graded.)

A Statement of Work for a web-based system for grocery ordering.

Assume that we are developing the requirements for a web-based system that will allow customers to order groceries to be delivered at a certain time to a specified address or to be picked up from a specified store location at a specified time.

On the following pages, follow the directions to write 5 requirements for the Grocery Ordering System described above. Remember,

- A statement of a requirement shall be expressed with a "shall".
- Rationale refers to the reason that the requirement has been included.
- Fit Criterion refers to how you plan to determine whether or not the final system meets the stated requirement, i.e., how you will you demonstrate to the client's satisfaction that the requirement has been met?

#### 1-1. (10 of 50 points)

Write a functional requirement that ensures that each user's identity is authenticated prior to placing an order.

State the requirement

Explain the rationale

State the Fit Criterion

1-2. (	(10	of	50	points)
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Write a functional requirement that ensures that the order is sent to the correct physical store for fulfillment.

- State the requirement
- Explain the rationale

State the Fit Criterion

# 1-3. (10 of 50 points)

Write a functional requirement that ensures that the customer is notified immediately upon placing the order that an item is not available if it is out-of-stock at the specified store.

- State the requirement
- Explain the rationale

State the Fit Criterion

1-4. (	(10	of	50	points)	
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Write an availability requirement that will ensure that the online system will be available for the customer to use *most of the time*.

- State the requirement
- Explain the rationale

State the Fit Criterion

### 1-5. (10 of 50 points)

Write a usability requirement that will ensure that the web interface will be easy for the customer to use.

- State the requirement
- Explain the rationale

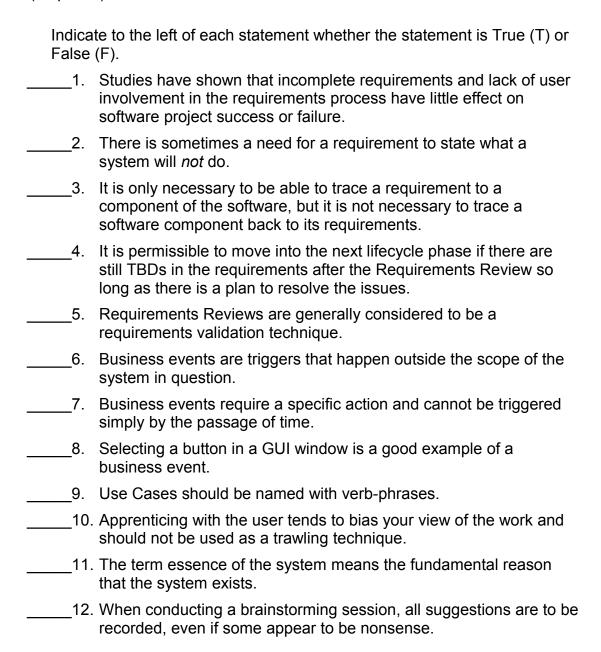
State the Fit Criterion

There are many techniques for eliciting (trawling for) requirements. Identify and describe 2 of them. For each technique, specify the conditions or circumstances under which the technique would be a valuable one to use.

**Grading**: (a) 4 points for each identification (8 points); (b) 4 points for each description (8 points); (c) 4 points for identification of conditions (8 points); (d) 1 point for grammar (1 point).

What are Use Cases and Domain Models? In using these approaches to capture and analyze requirements, what characteristics of the proposed system are represented by Use Cases and what characteristics are represented by Domain Models?

**Grading**: (a) 6 points for each definition (12 points); (b) 6 points for each set of characteristics (12 points); (c) 1 point for grammar (1 point).



**Grading**: 1 point for each correct answer plus 1 free point.

What is a requirements baseline? What is the purpose of placing requirements under configuration control? Describe a typical requirements configuration control procedure, i.e., what are the steps in modifying a set of requirements that are under configuration management?

**Grading**: (a) 6 points for definition of requirements baseline; (b) 6 points for identifying its purpose; (c) 12 points for explaining configuration control procedures; (d) 1 point for grammar (1 point).