CS630_100 Study Guide for Test 2

Tuesday, March 25, 2014

The second test is taken primarily from the OODB, OOSE and OOM UML Slides One and Two through sequence diagramming. Questions will be posed based primarily on the slides sets and lecture content.

OO systems terms / concepts

Object-Oriented Database:
- OODB model characteristics versus traditional database models
- OODB Fitness for purpose vs. Relational
- Implications of "object-pointer" reference architecture
- Persistence approaches to method/operation implementation in OODB
- Object manager vs. Object server functionality in archetypal OODB realization
- OODB transaction vs. versioning models

Object-Oriented Systems Engineering:
- OOSE impact on complexity, flexibility, responsiveness and quality attribute of information systems
- Impact of standards on OO technology evolution and deployment
- OMG's role in OO evolution
- Impact of "classes, models, applications" information system architecture on software culture in organizations

Testing in the OODB and OOSE sections will consist of discussion questions intended to draw on the breadth of your understanding of the issues and implications.

modeling

complexity management

Be prepared to define and explain the tools for managing abstraction:

Abstraction (procedural vs data), Encapsulation, Inheritance, Association, Communication with Messages, Whole and parts, Classes and members, Scale, Categories of behavior: immediate causation, change over time, similarity of functions

object modeling ontology

Be prepared to recognize the tools for describing systems in the object-oriented paradigm:

- object - (identity, encapsulation)
- attribute
- data - (remembrance)
    - static
        - data attribute variable
    - dynamic
        - data attribute value
- behavioral
    - static
        - service
    - dynamic
        - method (operation)
- class - (instance, membership OF)
- relationships
- structural
    - inheritance - (override, parent class/child class, class hierarchy)
- behavioral
    - association - (composition, membership IN)
    - message passing - (sender, receiver, message, parameters)
    - polymorphism - (binding)

object modeling with UML

Be prepared to read and interpret or to draw UML class diagrams accompanying text model part descriptions.

The test will consist of a combination of any or all of the following: matching of terms and definitions, true / false questions, multiple-choice and short essays. Questions may include diagram fragments to test your knowledge of diagram syntax and meaning. Seventy-five minutes will be allotted for the test.

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