Software Engineering 1
Quiz 4 & 5 – Wed Dec 4, 2013
13 Questions – 15 points per Question

1. Match the model type with the correct description

Show the other systems in the environment   _A_   A. Context Models

Reveal how the system is being developed
and used in broader business environment   _B__   B. Process Models

Modeling user interaction, system to system
interaction and component interaction   __D_   C. Architectural Models

Illustrate the operational context of a system   __A_   D. Interaction Models

Show the system and its relationship other
systems   __C_

2. Match the System perspective with the correct description

model the organization of a system or the structure
of the data that is processed by the system   _B___   A. Interaction Perspective

Model the environment of the system   __D_   B. Structural Perspective

model the dynamic behavior of the system and
how it responds to events   _C___   C. Behavioral Perspective

model the interactions between a system and its
environment, or between the components of a
system   __A_   D. External Perspective

3. What types of models model the behaviour of the system in response to external and internal events?

Choose one answer.
   a. State machine models
   b. Event models
   c. Process Models
   d. Behavior models

4. What are the two types of stimuli for behavioral models?
Choose one answer.
   a. Requests and Events
   b. Interrupts and Data
   c. Data and Events
   d. Data and Requests

5. __generalization_ is an everyday technique that we use to manage complexity.

6. An _aggregation_ model shows how classes that are collections are composed of other classes.

7. Important architectural design decisions include: (select all that apply)
Choose at least one answer.
   a. What architectural styles are appropriate?
   b. Will development be plan-driven or agile?
   c. How will the system be decomposed into modules?
   d. How will the architectural design be evaluated?
   e. How should the architecture be documented?
   f. How will the system be financed?
   g. How will the system be distributed?

8. Uses of Architectural models include: (select all that apply)
Choose at least one answer.
   a. Documenting existing systems
   b. Documenting an architecture that has been designed
   c. Facilitating discussion about system design
   d. Refinining the system requirements provided by customers

9. __Architecture in the large__ is concerned with the architecture of complex enterprise systems that include other systems, programs, and program components

10. Disadvantages of the client-server model include: (select all that apply)
Choose at least one answer.
   a. May be management problems if servers are owned by different organizations.
   b. Each service is a single point of failure
   c. Client-server architectures are generally more difficult to design and maintain than other architectures
   d. Performance may be unpredictable because it depends on the network as well as the system

11. _Architecture in the small____ is concerned with the architecture of individual programs

12. An _architecture pattern_ is a description of good design practice, which has been tried and tested in different environments.

13. When large amounts of data need to be shared, what is the preferred sharing model?
Choose one answer.
   a. Shared data is held in a central database or repository and may be accessed by all sub-systems
   b. Each sub-system maintains its own database and passes data explicitly to other sub-systems.