Assignment 3 (5% of total grade)

Instructions

Turn in hard copy of your answers next time the class meets. Late submission of assignment will not be accepted, no exceptions!

Questions

1. What is a software connector? (1%)
2. You would like to model the architecture of a distributed software system. However, there are several important, but completely independent (orthogonal) concerns that need to be modeled. How would you model the architecture of the system? (1%)
3. Select the appropriate style from the available options for each of the following scenarios: (2%)
    a. A system in which scalability is very important
        - Client-Server or Peer-to-Peer
    b. A system in which the application logic (software components) may need to be dynamically updated
        - Object-Oriented or Implicit Invocation
    c. An interactive video game software
        - Pipe-and-Filter, Push-Based, or Object-Oriented
    d. An operating system
        - Layered, Blackboard, or C2
4. You are designing the architecture of a system according to the C2 architectural style. The four components are: GUI, Database, Clock, and DataRetriever. Note that the Database component has a time stamp data type that requires the current time. Let's assume that in your architecture you would like to place these components in four separate layers. In which layer would you place each software component? Justify your answer. The (lowest) bottom most layer is 1, while the top most (highest) layer is 4. (1%)