* Advantages of the composite-structure method over true inheritance:
  + The effect of multiple inheritance can be simulated in OODBs that do not support multiple inheritance.
  + There is no potential combinatorial explosion in the # of subclasses that true multiple inheritance hierarchies could generate.
* Advantages of true inheritance over the composite-structure method:
  + Automatic inheritance of features; no need to implement strong-composition relations and no need for delegation functions.
  + Inheritance polymorphism, i.e., dynamic binding of function code

Main task of transaction manager

* **Concurrency Control**. Many database systems in operation today need to manage concurrent access to the database by multiple users. For example, a ticket reservation system must deal with multiple agents concurrently attempting to reserve tickets for the same concert, airline flight, etc. A college registration system must deal with concurrent registration requests for the same course. Improper management of concurrent operations could cause the database to have incorrect data, which, for example, would result in overbooking or underbooking of an airline flight. TM must ensure that incorrect data never result from concurrent operations while allowing as much concurrency as possible or, at least, a reasonable amount of concurrency.
* **Recovery from Failure**. Update operations on the database could fail because of unforeseen system malfunctions. A system failure could occur in the midst of a ticket reservation session or an ATM session requesting a withdrawal from a bank account. If the effects of the session up to the point of failure are not correctly handled, the database could end up with incorrect data and the agent that initiated the session could face improper outcomes. Examples: the ATM dispenses no money while the bank account gets deducted, or no ticket is reserved while the credit card gets charged (as well as their reverse effects like the ATM dispensing money but the bank account never getting deducted!).