Homework 10

Reading: (all materials are available off of the course website)

Lecture slides:
Object-Oriented Database,
CORBA

Problem on OO Analysis.

Create an object oriented analysis model in Coad notation for the DownTown Videos Rental System. Your model should include documentation (in English) on services and message connections.

The DownTown Videos Rental System

DownTown Videos is a chain of 11 video stores scattered throughout a major metropolitan area in the Midwest. The chain started with a single store several years ago and has grown to its present size. Paul Lowes, the owner of the chain, knows that to compete with the national chains will require a state-of-the-art movie rental system. You have been asked to develop the system requirements for the new system.

Each store has a stock of movies and video games for rent. It is important to keep track of each movie title to know and to identify its category (classical, drama, comedy, and so on), its rental type (new release, standard), movie rating, and other general information such as movie producer, release date, cost, and so forth. In addition to tracking each title, the business must track each individual copy to note its purchase date, its condition, and its rental status. User functions must be provided to maintain this inventory information.

Customers, the lifeblood of the business, are also tracked. DownTown considers each family to be a customer, so special mailings and promotions are offered to each household. For any given customer, several people may be authorized to rent videos and games. The primary contact for each customer can also establish rental parameters for other members of the household. For example, if a parent wants to limit a child’s rental authorization to only PC and PG-13 movies, the system will track that.

Each time a movie is rented, the system must keep track of which copies of which movies and games are rented; the rental date and time and the return date and time; and the household and person renting the movie. Each rental is considered to be open until all of the movies and games have been returned. Customers pay for rentals when checking out videos at the store.

Write down 3 typical use cases (scenarios) for the system and check if your model enables to execute these scenarios.

I suggest you hand in your solution (even if partial) to me before the final. I will not grade it, but merely give you feedback on it, so that you could study more effectively for the final exam.