

Film Showings - Policy Change:

The management of the Cinema Guild Theatre Group has just approved two major **changes in policy**:

(a) To compete with cable TV, video rentals, and internet distribution, the theatre group has implemented a radical (courageous? daring? risky?) pricing policy. Under this new policy, the price paid in all theatres of group for each class of admission is **fixed for the time of day**.

(For example, admission for adults is always \$5.50 for showings before noon.)

It does *not* change for weekends or holidays.

The table of prices is to be stored in the database. Since the prices are for a time range, not for a single time, management has decided to add two data items: "From-Time" and "To-Time".

The prices charged for a showing will be decided by which time range the start time of that showing falls within. So, a double-feature showing that starts at 11:30 AM will be charged the prices from the 8:00AM to 11:59AM range, even though its second film will be shown in a later time range (afternoon).

(b) Under the new agreement with the projectionists' (people who run the film projectors) union, a report will have to be produced each month that shows which showings each projectionist was responsible for. It must also show the identity (title), approximate start time, duration, and order of each film shown in that showing. ("Order" means which film was shown first, which one second, etc.; the only film in a single-bill will have order as 1.) This will allow the union to verify work schedules and overtime payments.

To accomplish this, management has decided to add three data items: "Duration", "Projectionist", and "Order-in-Showing". The configuration of each theatre allows a projectionist to handle more than one screen room at the same time (i.e. more than one showing).

[Note that it is not necessary to store the start time of each separate film in a showing. The start time of the showing, plus the order and duration of each film, allows the approximate film start times to be calculated when the report is generated.]

Begin with the published solution to the Film Showings problem.

Given these policy changes (and only these changes), make the necessary revisions and show your new 3NF model.

(Create one model covering all of the original requirements and both policy changes (a) and (b).)