

Modeling Change: Time

Objectives

- Distinguish between using date as an attribute and DAY as an entity in a data model, depending on business requirements
- Solve the problem of keeping characteristics of a date by constructing a model that uses DAY as an entity
- Identify at least three time-related constraints that can result from a time-sensitive model
- Define and give an example of conditional non-transferability in a time-constrained model

Vocabulary

Directions: Identify the vocabulary word for each definition below.

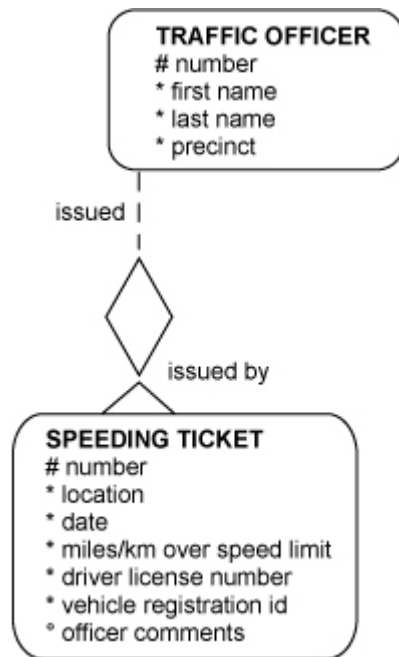
1. _____ A constraint or data restriction that results from the time dimension.
2. _____ Refers to a relationship that may or may not be transferable, depending on time.
3. _____ Property of a relationship where an instance of A is related to an instance of B, and the association cannot be moved to another instance of B

Try It / Solve It

1. Speeding Tickets

Each police officer may issue speeding tickets to motorists in an assigned area. Originally, the attribute date was modeled as part of the SPEEDING TICKET entity. However, the city police department wants to see if there is a relationship between weather and the frequency of speeding tickets -- do people drive faster on nice sunny days? Are there more tickets in hot weather or cool weather?

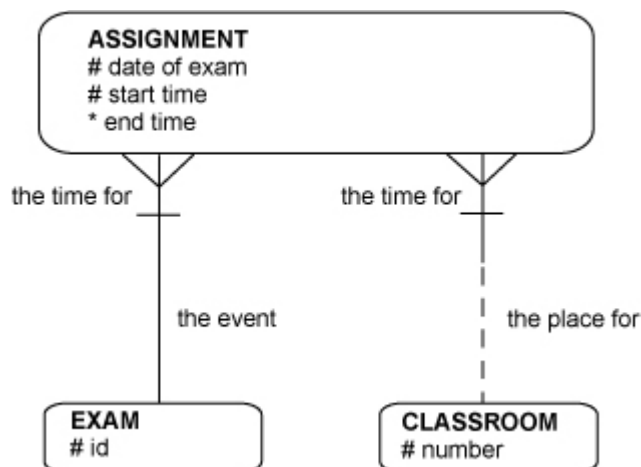
Modify the ERD to address this new requirement.



2. Examine the ERD that represents classroom assignments for different exams.

(1) Why is start time part of the UID of ASSIGNMENT?

(2) Name at least three time-related constraints. Indicate if the constraint represents conditional nontransferability. For example: End time must be later than start time.



3. (Optional Practice: Animal Shelter)

This practice is step 6 in the Animal Shelter project.