

ER Modeling Scenarios

CMPUT 291

Scenario for a Bus System

1. Bus lines stop at various locations.
2. Each bus line has a unique number.
3. There are two types of lines:
 - **core routes**
run every 5 minutes
 - **side routes**
run every 15 minutes
4. Each stop has a title, an identification number and a location given in map coordinates.
5. Each bus line visits a set of stops in a certain order at certain times.
6. Each bus in the fleet has a license number, a model and a binary variable indicating if it's in use or not.
7. The system keeps track of what bus is driving what route and what the last visited stop was.

Scenario for a Stock Exchange

1. Members trade securities.
2. Each security has a unique ISIN number, issuer and a description.
3. Securities can belong two one of two categories:
 - Stocks.
 - Bonds, which in addition to the above information also have a certain maturity.
4. Members have unique identifiers and names.
5. There are two types of members:
 - **Brokers** are trading on the behalf of their investors.
 - **Traders** are institutes or individuals trading on their own behalf.
6. For each trade the stock exchange records the time and the quantity and price of the security.