

## Rent-A-Ride Domain Model Objects

### RentalLocation

Describes the necessary data about a rental location (a parking lot).

#### Attributes

name; type: text  
address; type: text  
capacity; type: positive whole number

#### Static relationships

vehicles (a RentalLocation is used to hold a number of Vehicles)  
reservations (a RentalLocation has a number of Reservations for vehicles there)

### VehicleType

Describes the necessary data about a type of a vehicle, such as a sedan or pickup truck.

#### Attributes

name; type: text

#### Static relationships

hasPrice (a VehicleType has a number of HourlyPrices, describing the rental cost)  
vehicles (a VehicleType has a number of Vehicles of this VehicleType)  
reservations (a VehicleType has a number of Reservations for this VehicleType)

### HourlyPrice

Describes the necessary data about a vehicle rental price for a certain duration in hours;  
A given VehicleType may have a number of HourlyPrices defined and each one describes the price per hour to be used if the rental duration is up to the given maximum number of hours (i.e., 72).

#### Attributes

maxHours; type: positive whole number  
price; type: positive whole number (expressed in cents)

#### Static relationships

vehicleType (an HourlyPrice has a VehicleType to which it refers)

### Vehicle

Describes the necessary data about a specific vehicle available for renting.

#### Attributes

make; type: text  
model; type: text  
year; type: positive whole number  
mileage; type: non-negative whole number  
registrationTag; type: text  
lastServicedDate; type: date  
status (one of: InLocation | InRental )

condition (one of: Good | NeedsMaintenance)

#### Static relationships

vehicleType (a Vehicle has a VehicleType)

location (a Vehicle is parked at a RentalLocation)

rental (a Vehicle has been used in a Rental)

### Reservation

Describes the necessary data about a rental reservation created by a customer.

#### Attributes

pickup; type: date and time (time in whole hours)

length; type: positive whole number (in whole hours)

canceled; type: logical (true | false)

#### Static relationships

location (a Reservation is made for a RentalLocation)

vehicleType (a Reservation is made for a VehicleType)

rental (a Reservation has been used to rent a Vehicle)

customer (a Reservation has been made by a Customer)

### Rental

Describes the necessary data about a specific rental by a customer. It involves a specific rented vehicle and is created on the basis of an existing reservation. It may have comments made by the customer.

#### Attributes

pickupTime; type: date and time

returnTime; type: date and time

charges; type: positive whole number (in cents)

timeExceeded; type: logical (true | false)

#### Static relationships

reservation (a Rental is based on a Reservation)

vehicle (a Rental involves a Vehicle)

comment (a Rental may have a Comment)

customer (a Rental is activated by a Customer)

### Comment

Describes a comment made by a customer in regard to the customer's rental.

#### Attributes

text; type: text

date; type: date and time

#### Static relationships

rental (a Comment is made about a Rental)

customer (a Comment is made by a Customer)

## Customer

Describes the necessary data about a customer of Rent-A-Ride. A customer may have a number of reservations and rentals.

### Attributes

firstName; type: text  
lastName; type: text  
userName; type: text  
password; type: text  
email; type: email  
address; type: text  
createdOn; type: date  
memberUntilDate; type: date  
licenseState; type: text (2 letter code)  
licenseNumber; type: text  
creditCardNumber; type: text  
creditCardExpiration; type: date  
status (one of: active | cancelled | terminated)

### Static relationships

reservations (a Customer has a number of Reservations)  
rentals (a Customer has a number of past Rentals)  
comments (a Customer makes a number of Comments)

## Administrator

Describes the necessary data about an administrator of Rent-A-Ride

### Attributes

firstName; type: text  
lastName; type: text  
userName; type: text  
password; type: text  
email; type: email  
address; type: text  
createdOn; type: date

### Static relationships

None

## SystemParameters

Describes the critical parameters of the Rent-A-Ride system.

### Attributes

membershipPrice; type: positive whole number (in cents)  
lateFee; type: positive whole number (in cents)

### Static relationships

None