**Mapping approach**

We have four ISA hierarchies showing separate relation per entity set i.e.

*3 relations: Customer, Regular, Member*

Member: Every member is recorded in Customer. For Members extra information on the discounts is recorded in Members. (Must delete Member tuple if referenced customer is deleted)

Queries involving Customers are easy, those involving members require a join to get some attributes.

*3 relations: Accommodation, Snack, Seat*

Accommodation: Each reservation is supposed to have a seat booking which has the total cost with the seat\_id, number, row, and total cost. The total cost can also include the cost of the snacks chosen (this is an optional requirement on the total cost). Must delete seat tuple and snack tuple if the referenced accommodation is deleted

*3 relations: Snack, Drink, Food*

Snack: For snack, it can either be a Drink or Food. Snack contains the name, description, and id. Each snack must be at least one of these two, Drink or Food. (Must delete either Food or Drink tuple if referenced Snack is deleted)

*2 relations: Movie, Scheduled\_Movie*

Movie: Each movie is in the Scheduled movie. For a scheduled movie’s extra information i.e name, description, duration, and movie\_id is recorded in Movie. (Must delete a Scheduled\_movie tuple if a referenced movie is deleted)

Queries involving Scheduled\_movie are easy, those requiring extra information on the movie details require a join to get some attributes from Movie.