

## Begin Selection

Age Range is of / has Movie.  
Age Rating is minimum of / has minimum Age Range.  
Age Rating is maximum of / has maximum Age Range.  
Award is of / has Movie.  
Colour is of / has Movie.  
Date minimum of / has minimum Date Range.  
Date maximum of / has maximum Date Range.  
Date Range is of / has Movie.  
Genre is of / has Movie.  
Language of audiotrack in / with audiotrack in Movie.  
Language of subtitles in / with subtitles in Movie.  
Language of original track in / with the original in Movie.  
Media is of / has Movie.  
Official Rating Range is of / has Movie.  
Official Rating is minimum of / has minimum Official Rating Range.  
Official Rating is maximum of / has maximum Official Rating Range.  
Person is composer for / has composer Movie.  
Person is actor for / has actor Movie.  
Person is director for / has director Movie.  
Region is of / has Media.  
Tag is contained in / contains Movie.  
Title is of / has Movie.  
Type is of / has Media.  
Request detail is of / has Request.  
Line number is of / has Request detail.  
Client created / made by Request.  
Client is subtype of / has subtype Business Entity.  
End date is of / expires at Request.  
Product request is of / has Request detail.  
Product is of / has Request detail.  
Price range is of / has Product request.  
Quantity of / with Request detail.  
Start date is of / posted at Request.  
Nationality is of / has Client.  
Date birthday of / born on Client.  
Title is of / has Client.  
Last Name is of / has Client.  
First Name is of / has Client.

## End Selection

## Begin Relations

Person.  
Movie.

Person is composer of Movie.  
 Person is actor of Movie.  
 Person is director of Movie.  
 Award.  
 Award is of Movie.  
 Tag.  
 Tag is contained in Movie.  
 Official Rating Range.  
 Official Rating Range is of Movie.  
 Official Rating.  
 Official Rating is minimum of Official Rating Range is of Movie.  
 Official Rating is maximum of Official Rating Range is of Movie.  
 Date Range.  
 Date Range is of Movie.  
 Date.  
 Date is minimum of Date Range.  
 Date is maximum of Date Range.  
 Year.  
 Month.  
 Day.  
 Day is of Date is minimum of Data Range is of Movie.  
 ((Day is of Date) and (Month is of Date) and (Year is of Date)) is minimum of Data  
 Range is of Movie.  
 Title.  
 Title is of Movie.  
 ((Day is of Date) and (Month is of Date) and (Year is of Date)) is maximum of Data  
 Range is of Movie.  
 Age Range.  
 Age Range is of Movie.  
 Age Rating.  
 Age Rating is minimum of Age Range is of Movie.  
 Age Rating is maximum of Age Range is of Movie.  
 Media.  
 Media is of Movie.  
 Type.  
 Region.  
 (Type is of Media is of Movie) and (Region is of Media is of Movie).  
 Colour.  
 Genre.  
 (Colour is of Movie) and (Genre is of Movie).  
 Language.  
 (Language is audiotrack of Movie) and (Language is subtitle of Movie) and (Language is the  
 original of Movie).

Request.  
 Request detail.  
 Request detail if of Request.  
 Product.  
 Product is of Request detail is of Request.  
 Line number.  
 Line number is of Request detail is of Request.  
 Client.  
 Client created Request.  
 End date.  
 End date is of Request.  
 Product request.  
 Product request is of Request detail.  
 Price range.  
 Price range is of Product request is of Request detail is of Request.  
 Quantity.  
 Quantity of Request detail is of Request.  
 Start date.  
 Start date is of Request.  
 Nationality.  
 Nationality is of Client.  
 Date birthday.  
 Date birthday of Client.  
 Title.  
 Title is of Client.  
 First Name.  
 Last Name.  
 (Last Name is of Client) and (First Name is of Client).  
 Contact Details.  
 Contact Details is of Client.

End Relations

Begin Constraints

Movie has at most one Colour.  
 Movie has at most one Official Rating Range.  
 Movie has at most one Date Range.  
 Movie has at most one Age Range.  
 Movie has at least one Media.  
 Media has at exactly one Type.  
 Media has at exactly one Region.  
 Official Rating Range has minimum at exactly one Official Rating.  
 Official Rating Range has maximum at exactly one Official Rating.  
 Date Range has minimum at exactly one Date.  
 Date Range has maximum at exactly one Date.

Age Range has minimum at exactly one Age.  
Age Range has maximum at exactly one Age.

Request is identified by (Movie) and (StartDate).  
Date is identified by (Day of Date) and (Month of Date) and (Year of Date).

Client has exactly one name.  
Client is with exactly unique Email.  
Client has exactly one Birthday.

Request expires on at most one Date.  
Request has at most one Maximum Price.

Request detail has at most one Request.  
Request detail has exactly one Line number.

Request contains at least one Request detail.  
Request detail has exactly one Quantity.  
Request detail contains exactly one Product.

End Constraints

Begin Script

```
@concatenate(x,y) {  
    return x + " " + y;  
}  
@requestDetailOfMovieInRequest(movie, request) {  
    foreach (requestDetails in request)  
        if (requestDetails.product == movie)  
            return requestDetails;  
}
```

End Script

Begin Mappings

```
map /Client/History/Request on Client of Request  
map /Client/Birthdate on Date of birth of Client of Request  
map /Client/E-mail on Contact details of Client of Request  
map /Client/Name on @concatenate(First name of Client of Request, Last name  
of Client of Request)
```

```
map /Request on Request  
map /Request/@MaximumPrice on Maximum price of Request  
map /Request/Date on End date of Request
```

map /Request/Movie/@Quantity on Quantity of Request detail of Request  
 map /Request/Movie on Movie  
 map /Request/Movie/Award on Award of Movie  
 map /Request/Movie/CriticalRatingRange/@minimumRating on Official Rating is  
 minimum of Official Rating Range  
 map /Request/Movie/CriticalRatingRange/@maximumRating on Official Rating is  
 maximum of Official Rating Range  
 map /Request/Movie/Tag on Tag contained in Movie  
 map /Request/Movie/DateRange/@minimumDate on Date maximum of Date  
 Range  
 map /Request/Movie/DateRange/@maximumDate on Date minimum of Date  
 Range  
 map /Request/Movie/AgeRange/@minimumAge on Age rating minimum of Age  
 Range  
 map /Request/Movie/AgeRange/@maximumAge on Age rating maximum of Age  
 Range

map /Request/Movie/Media on Media of Movie  
 map /Request/Movie/Media/@Type on Type of Media of Movie  
 map /Request/Movie/Media/@Region on Region of Media of Movie  
 map /Request/Movie/Colour on Colour of Movie  
 map /Request/Movie/Genre on Genre of Movie  
 map /Request/Movie/Language [@of="audiotrack"] on Language of audiotrack in  
 Movie  
 map /Request/Movie/Language [@of="subtitles"] on Language of subtitles in  
 Movie  
 map /Request/Movie/Language [@of="orginal"] on Language of orginal track in  
 Movie  
 map /Request/Movie/Title on Title of Movie

map /Request/Movie/Person[@role="Actor"] on Person actor for Movie  
 map /Request/Movie/Person[@role="Director"] on Person director for Movie  
 map /Request/Movie/Person[@role="Composer"] on Person composer for Movie  
 map /Request/Movie/Person[@role="Writer"] on Person writer for Movie

map /Request/Movie/Number/ on Line number of  
 @requestDetailOfMovieInRequest(Movie, Request)

End Mappings