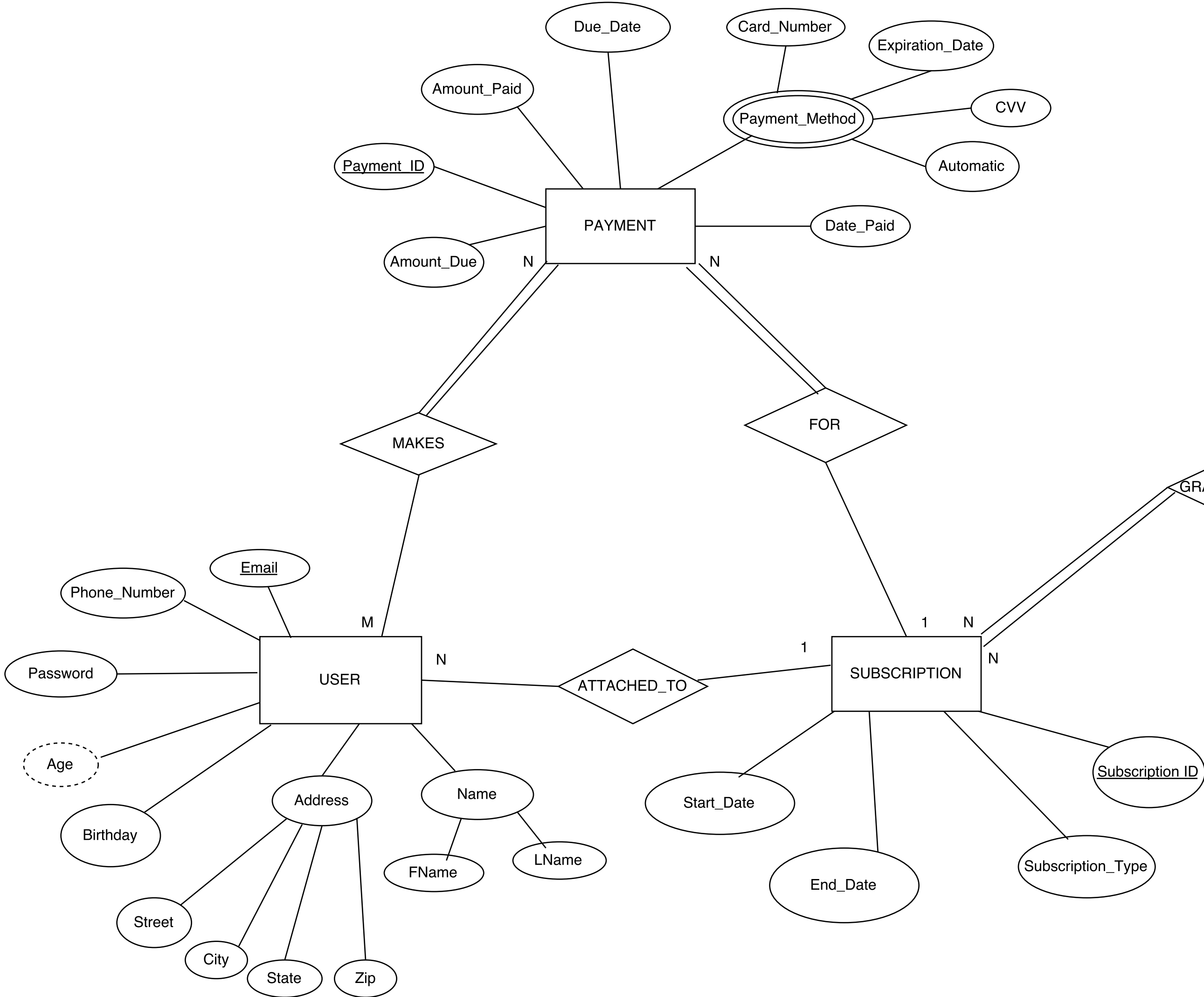
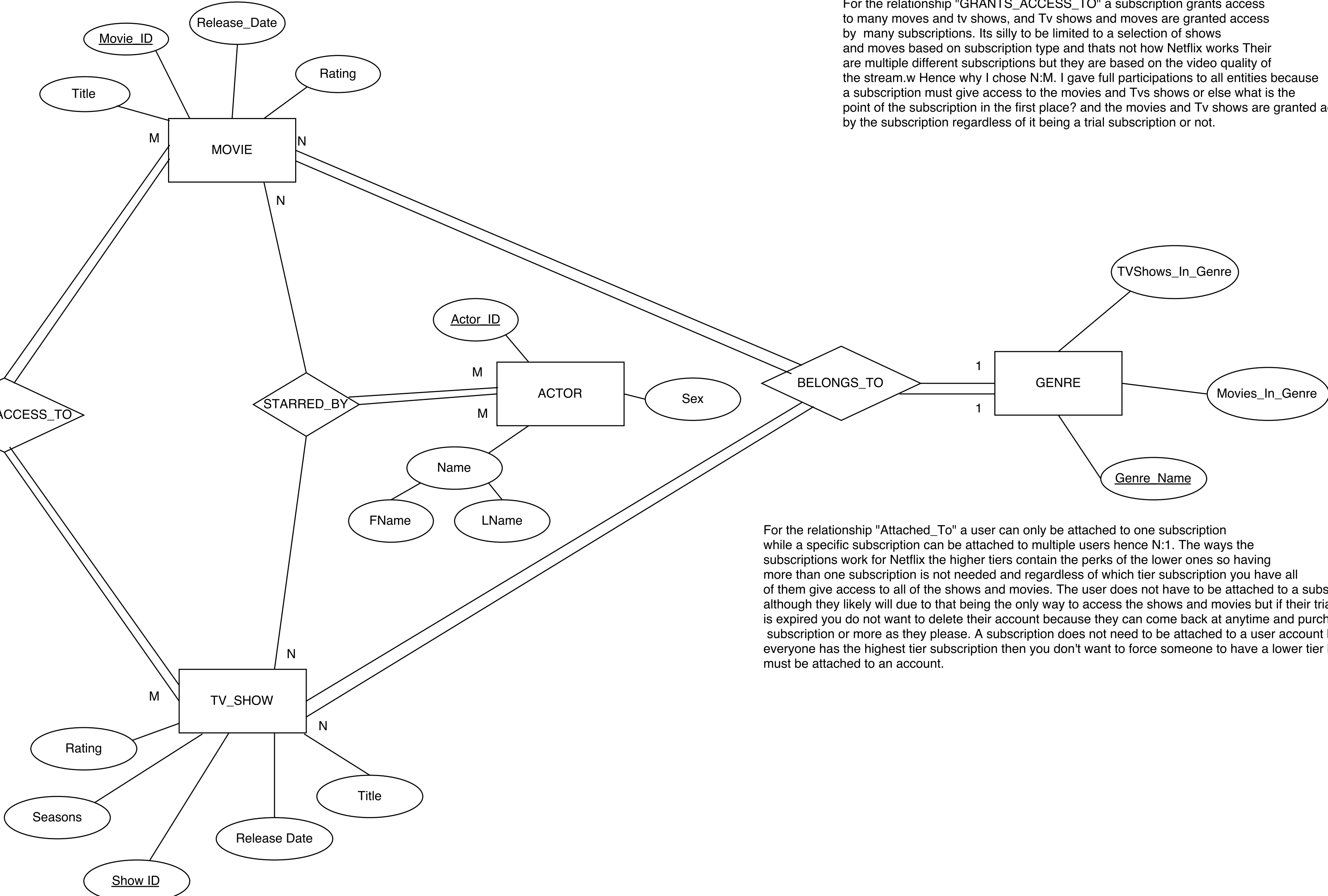


For the relationship "MAKES" the user does not have to make payments but payments have to be made by the user. The user does not have to make payments for a trial but if the user has a paid subscription they have to be the one who pays for it. Hence why I chose full participation for PAYMENT and partial for the USER. The cardinality is N:M because the user can make many payments and payments can be made by many user. You can't just have one user making all the payments and you can't have each user only making one payment.

For the relationship "FOR" the cardinality is N:1 because the payment will be for one subscription being that the user can only have one subscription at a time but multiple payments can be made to keep up a subscription over time such as a monthly subscription. The participation for PAYMENT is full because the user is not paying for anything other than a paid subscription that is if the user has a paid subscription which is why SUBSCRIPTION is partial participation. Because a subscription does not have to be paid for (Trial Subscription) it does not need to participate in the relationship.



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CSCI 355  
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For the relationship "Belongs-To", Movies and Tv Shows can only belong to one genre but a genre can belong to multiple Tv Shows and Movies hence N:1. Regardless of how many genres a movie or TV show can be there is only defining genre that the movie or show is which is why I chose this cardinality. In addition a genre must belong to a movie and a movie must fall into a genre which is why I chose full participation for the three entities.

For the relationship "Starred\_By" an actor must star in a movie or Tv Show but a Tv Show or movie does not have to have actors star in them i.e a nature documentary to which no actors are in hence full participation from actors but partial participation from Movies and Tv Shows. Movies and Tv shows can having many actors starring in them and actors can star in many movies hence N:M

For the relationship "GRANTS\_ACCESS\_TO" a subscription grants access to many moves and tv shows, and Tv shows and moves are granted access by many subscriptions. Its silly to be limited to a selection of shows and moves based on subscription type and thats not how Netflix works Their are multiple different subscriptions but they are based on the video quality of the stream.w Hence why I chose N:M. I gave full participations to all entities because a subscription must give access to the movies and Tvs shows or else what is the point of the subscription in the first place? and the movies and Tv shows are granted access by the subscription regardless of it being a trial subscription or not.

For the relationship "Attached\_To" a user can only be attached to one subscription while a specific subscription can be attached to multiple users hence N:1. The ways the subscriptions work for Netflix the higher tiers contain the perks of the lower ones so having more than one subscription is not needed and regardless of which tier subscription you have all of them give access to all of the shows and movies. The user does not have to be attached to a subscription although they likely will due to that being the only way to access the shows and movies but if their trial subscription is expired you do not want to delete their account because they can come back at anytime and purchase a month subscription or more as they please. A subscription does not need to be attached to a user account because if everyone has the highest tier subscription then you don't want to force someone to have a lower tier because it must be attached to an account.