**Use Case:** Convert ER model to AR model

The user (Primary Actor) will select elements from the Entity Relationship elements tab (where the elements are displayed to be dragged onto the action area) and drag-n-drop their selected elements on to the action area and create an entity relationship (ER) model of their choosing by linking the elements. They will then click the ‘Transform’ button and the system will render an abstract relationship (AR) model. The one alternative flow to a direct transformation, is if the user created an ER model that cannot be transformed into an AR model due to not fitting the transformation rules. In that case, the error will be reported in the error log below the action area. Another alternative flow is if the user created an ER model that can only be partially transformed into an AR model in which case whatever transformation cannot be performed, will be outputted in the error log below.

**Use Case:** Convert AR model to ER model

The user (Primary Actor) will select elements from the Abstract Relationship elements tab (where the elements are displayed to be dragged onto the action area) and drag-n-drop their selected elements on to the action area and create an abstract relationship (AR) model of their choosing by linking the elements. They will then click the ‘Transform’ button and the system will render an entity relationship (ER) model. The one alternative flow to a direct transformation, is if the user created an AR model that cannot be transformed into an ER model due to not fitting the transformation rules. In that case, the error will be reported in the error log below the action area. Another alternative flow is if the user created an AR model that can only be partially transformed into an ER model in which case whatever transformation cannot be performed, will be outputted in the error log below.

**Use Case:** Save model

Once the user (Primary Actor) performs the relevant transformation, they click the ‘Save Model’ button and the system will ask for a file name to save the model in a relevant format on the server. This allows the user to load the model when they come back onto the system at a later stage. The only alternative flow is if the transformation cannot be performed, as the system will not allow the user to save a model that cannot be rendered.

**Use Case:** Load model

If the user (Primary Actor) wants to load a previously transformed model, they click the ‘Load Model’ button and select a model from the file server that they want to load. The alternative flow to loading a model is creating one from scratch as detailed in the first use case.

**Use Case:** View error log

When the user (Primary Actor) performs a transformation, the success or failure of the transformation will be outputted in the error log that is located at the bottom of the interface. If the transformation is completed successfully and all transformation can be performed, the log will output ‘Transformed Successfully’. If only some of the transformations can be performed, the system will output which transformation cannot be performed and why not. If none of the transformations can be performed, the log will output all the transformations that cannot be performed and why not.