**Exercise 2: Normalization (Golden Bar Theatre)**

Golden Bar Theatre in London maintains a database of ticket sales and a typical sample of the data is shown in the CSV file titled “Golden Bar Theatre Data” that you have been given. The following regulations apply to booking theatre tickets at this venue.

Booking is open to members only. There are four categories of membership, Blue, Bronze, Silver, and Gold. All members can reserve up to two tickets for a particular show. A show is defined by production, date, and time. Silver and Gold members can reserve up to two and three different shows respectively in the same production. All others can only reserve one show per production. The theatre is an open air venue and has just 64 seats, split in eight rows (A-H) of eight seats (1-8) each. It runs a short season in the months of July and August only.

Normalize the data given in the CSV file accompanying this spec. This should be completed to 3rd Normal Form. For each normal form you should write the rule that the data must obey to conform to this normal form. Identify Primary Keys and Foreign Keys for each of the resulting tables in every phase (Normal Form) of the process. Please show all entities (tables) for each Normal Form.

Using the normalised data, create a fully annotate ER Diagram, showing entities, attributes, Relationships, participation, cardinality, Foreign and Primary keys.