

Business Rules – Constraints

- BR1 Every rentalShips or ownShips entry must have a Ships entry to associate it with.
Every rentalContracts Entry must have a rentalShip and a rentalCompany added to their tables respectively.
- BR2
- BR3 Every haveCrew entry must have a Ship to associate it with.
- BR4 Every wherePorted entry must have a Ship to associate it with.
- BR5 Every Crews entry must have a haveCrew entry to associate it with.
- BR6 Every carriageContracts entry must have a Customers entry to associate it with.
Every Missions entry must have both a carriageContracts entry and a Ships entry to associate it with.
- BR7
- BR8 Every haveStaff must only be added after a proper Ships entry has been assigned to the Missions entry.
Every haveStaff entry must only be added if the staff is available in the Missions entry date parameters.
- BR9
- BR10 Every Ships entry associated with the Missions entry must satisfy availability within the Missions entry date Parameters.
Every Ships entry associated with the Missions entry must satisfy same wherePorted or Ports entry in respect to the Missions entry date parameters.
- BR11
- BR12 Every haveStaff entry should satisfy the Qualifications of the Crews entry associated via haveCrew entry to the Ships entry which is in turn associated with the Missions entry.
- BR13 Every haveStaff entry must correspond to a Employees entry already present.
- BR14 Every containers entry must correspond to a Missions entry already present.
- BR15 Every Routes entry must correspond to a Missions entry already present.
- BR16 Every Points entry must correspond to a Routes entry already present.
- BR17 Every Ports entry must correspond to a Routes entry already present.

Business Rules – Derivations

- BR18 calculateTurnOver of the last 30 days is obtained by summing price cell of the Missions entries that have stipulationDate cell which has less than 30 days difference from now.
detectCollision is obtained by comparing likeliness in coordinates cell in Points entries corresponding to Routes entries corresponding to Missions entries that have intersecting startDate and endDate cell values.
- BR19
- BR20 missionLoad is obtained by summing the number of Containers entries associated with the Missions entry.
missionValidity is obtained by comparing missionLoad of the Missions entry to the tonnage of the associated Ships entry
- BR21
- BR22 checkPersonnelNo is obtained by summing the number of haveStaff entries corresponding to the Missions entry.