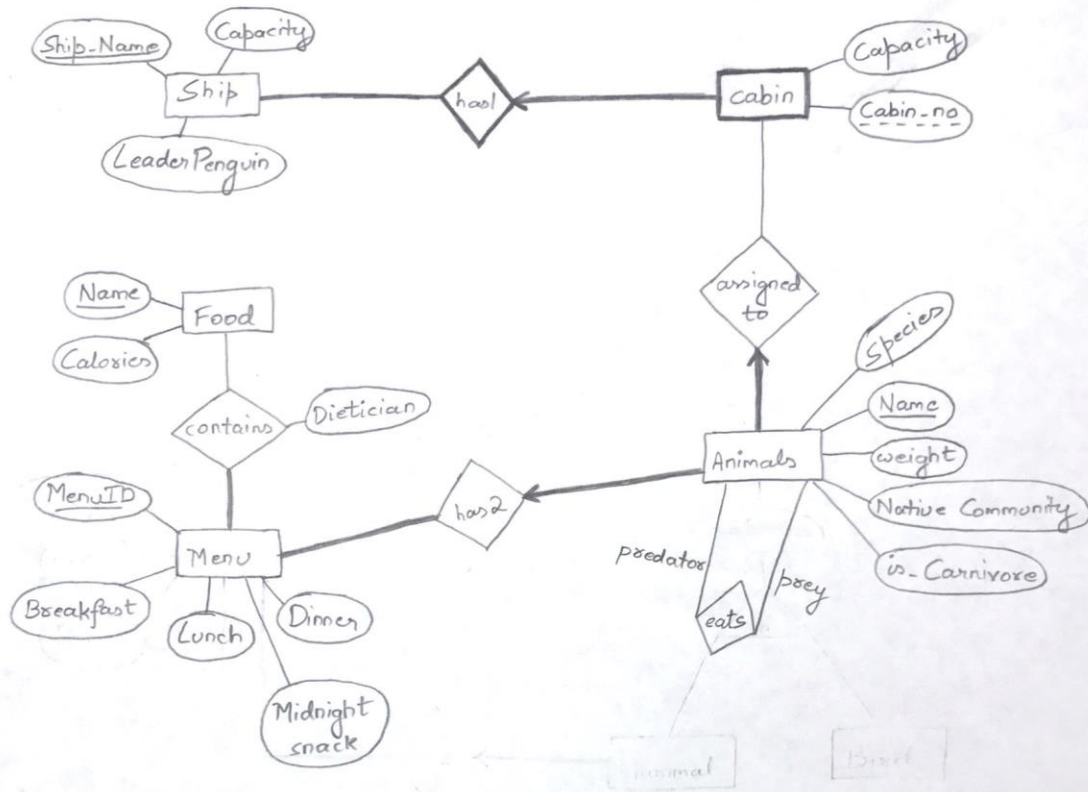# Project Assignment (Part 1)

Solution 1:

Assumptions:

When assigning menuID to a bird it is made sure that midnightSnack column is not empty.

One leader penguin is associated with each ship. So this attribute should not be null.

When assigning animals to cabins the capacity of the cabin and the ship should be checked.

When assigning animals to cabins the is_carnivore attribute should be checked.

Solution 2:

Ship(shipName : string, capacity : integer, leaderPenguin : string)

PK : shipName

Cabin(shipName : string, cabinNo : integer, capacity : integer)

PK : shipName, cabinNo

FK : shipName references Ship(shipName)

Animals(name : string, weight : integer, nativeCommunity : string, isCarnivore : Boolean, species : string, shipName : string, cabinNo : integer, menuID : string)

PK : Name

FK : cabinNo, shipName references Cabin(cabinNo,shipName)

   menuID references Menu(menuID)

Eats(predatorName : string, preyName : string)

PK : predatorName , preyName

FK : predatorName references Animals(name)

   preyName references Animals(name)

Menu(menuID : string, breakfast: string, lunch : string, dinner : string, midnightSnack : string)

PK: menuID

Food(name : string, calories : integer)

PK : name

Contains(foodName : String, menuID: string, dietician : string)

PK : foodName, menuID

FK : foodName references Food(name)

   menuID references Menu(menuID)