Business Data Management and Analytics

Tutorial 8 – Potential Solution

Homework – Business Case Model 4

BIT Golf Club currently keeps all records using a paper based system. It wishes to update operations and use an Information System. The golf club operates a 9 hole golf course. Currently the golf club keeps the following records:
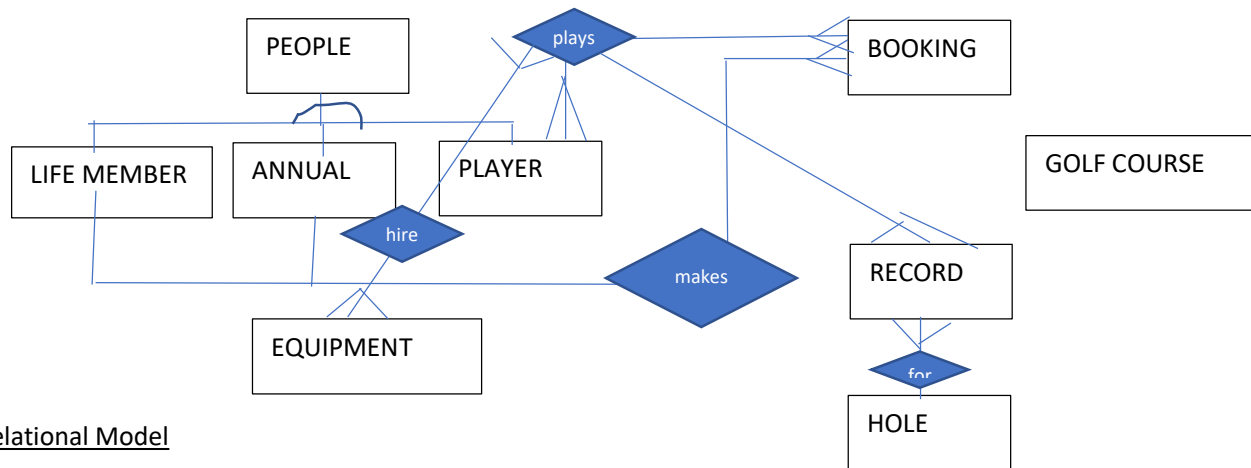
- Details of members (there are both annual and lifelong members).
- Bookings for golfing sessions. Only members are allowed to make bookings. When the booking is made, following details are recorded:
    - Date and starting time.
    - Number of players in the group (maximum 4).
    - Names of the players in the group
    - Number of golf carts that will be hired.
- Once the group has finished playing their round of golf, they record the score that each player obtained at each hole in the course.

Provide the following:

- Entity Relationship Diagram.
- Relational Model (showing fields, primary keys, foreign keys and concatenated keys).

ERD

Relational Model

Relational Model

PEOPLE	BOOKING	PLAY	RECORD	HOLE	EQUIPMENT
People no	Booking no	Play no	record no	Hole No	Equipment No
Name	Date of booking	Booking no	Score	Name	Name
Type (L/A/P)	Time of booking	People no	Hole no	Par	Price
	Member people no		Play no	**HIRE**	
				Hire No	
				Play no	
				Equipment no	

Assumption
- Member people no in booking can only be a PEOPLE type = L or A
- PLAYS only 4 PLAYERs MAX can be part of BOOKING
- Assume EQUIPMENT is paid for by the PLAYER than wants it….
- Each player plays for themselves a round of golf (no team groups)

*** This is ONE potential solution based on assumptions specified below ***

ERD
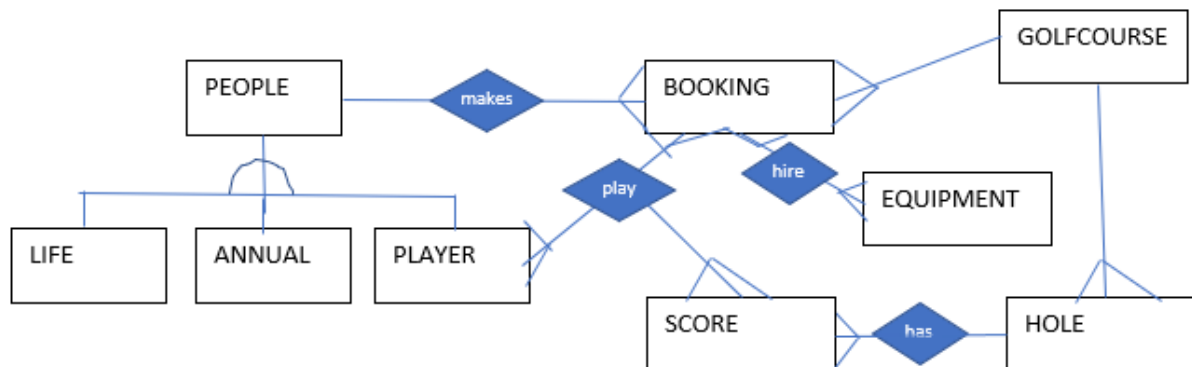
Relational Model

PEOPLE	BOOKING	SCORE	HOLE	PLAY	EQUIPMENT
people no	Booking no	Score no	Hole no	Play no	Equipment no
Type (A/L/P)	Date	Score	Name	Booking no	Name
First	Time	Hole no	Par	People no	Price
Last	GolfcartNo	Play no			Category
Email			HIRE		
Address			Hire no		
Phone			Equipment no		
			Booking no		

Assumption
- Only A and L PEOPLE can make a booking!!!
- All PEOPLE can be players
- A booking can only have 4 players

BOOKING	PEOPLE	GOLFACC	HIRECART	PLAYBOOK
Booking no	people no	Accessories no	Booking no+	Playbook no
Date of booking	Name	Name	Accessories no	Booking no
Time of booking	Mobile	Description		People no
No of players	Email	No of seats		
member People no	Type (A/L/P/S)	Handed (L/F)	HOLE	SCORE
staff People no		Type (GC/CL)	Hole no	Score no
			Par	No of hits
	COURSE		description	Hole no
	Course no		Course no	Playbook no
	Name			

Assuming: The application will only allow "A" or "L" people to make bookings; and "S" people are the only ones that can take a booking from a member. Anyone in the people table can be a player; the application needs to consider not double booking golf carts. A booking can hire both carts and clubs if needed, for carts you can select specific no. of seats required, for clubs need to select from left or right handed clubs. Assume all rounds of golf by a group booking start from Hole Number 1 through to 9 in sequential order.