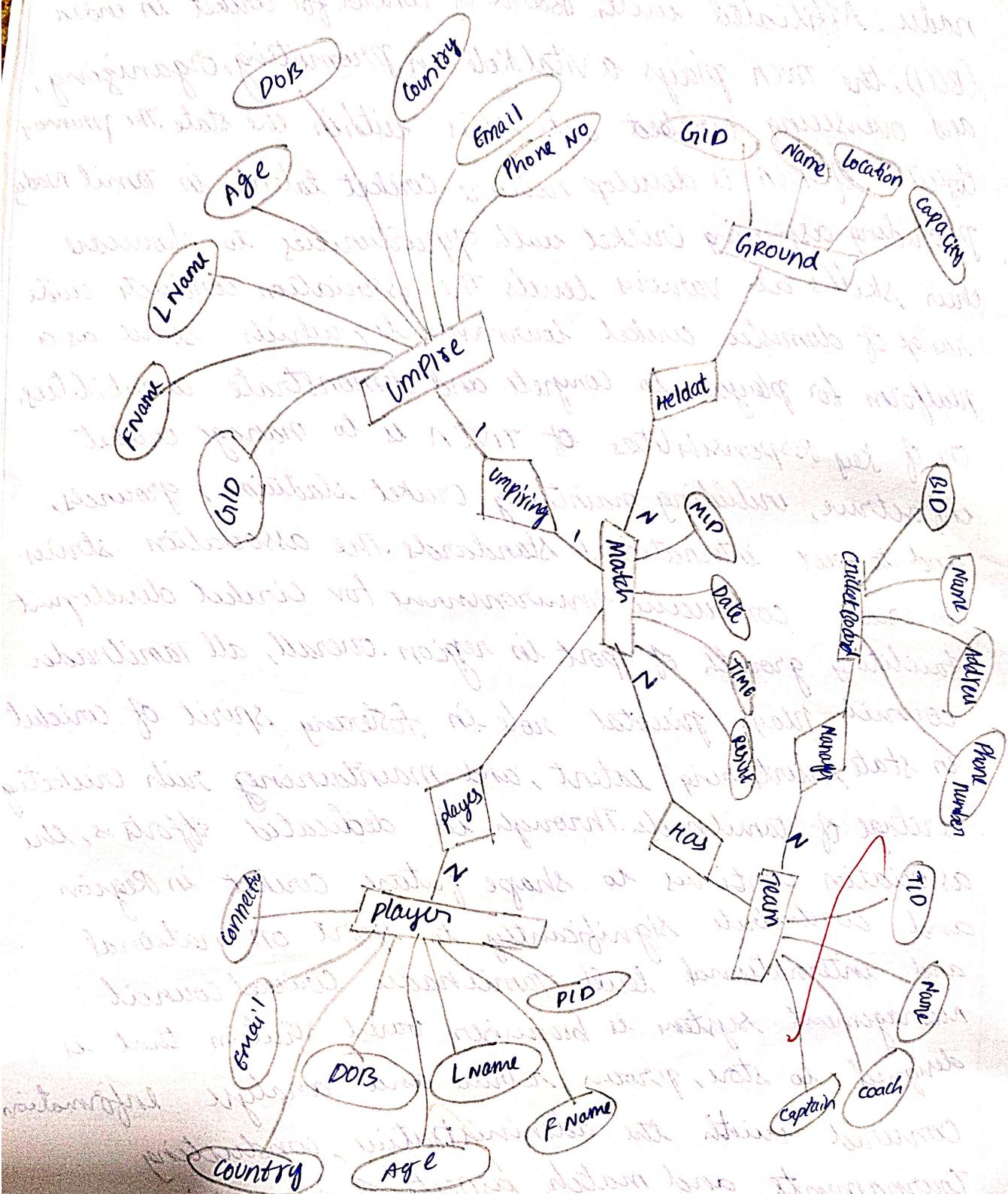


1.0 using Creately to develop ER diagram



Task 1: conceptual Design through FTR

Aims: using basic database design methodology and ex modeler; design Entity Relationship Diagram by satisfying the following sub tasks:

- 1.a Identifying the entities
- 1.b Identifying the attributes
- 1.c Identification of relationships, cardinality, type of relationship.
- 1.d Reframing the relations with keys and constraints
- 1.e using Create, develop ER/ER diagram.

1.a Identifying the entities

- 1.a.1 Cricket Board
- 1.a.2 Team
- 1.a.3 player
- 1.a.4 match
- 1.a.5 ground
- 1.a.6 umpire.

1.b Identifying the attributes

- 1.b.1 Cricket Board (Board ID, Name, Address, Contact - No)
- 1.b.2 Team (Team ID, Name, Coach, Captain)
- 1.b.3 player (Player ID, FName, LName, Age, Date of Birth, Playing Role, Email, Contact - no)
- 1.b.4 Match (Match ID, Date, Time, Result)
- 1.b.5 Ground (Ground ID, Name, ~~Address~~ Location, Capacity)
- 1.b.6 Umpire (Umpire ID, FName, LName, Age, Date of Birth, Country, Email, Contact - no)

1.c Identification of relationships, cardinality, type of relationships.

1.c.1 Board-Team Relationship: The Board will have a one to many relationship with teams since board can have multiple teams affiliated with it, but a team can only be associated with one board.

1.c.2 Team Player Relationship: Teams and players have a many-to-many relationships since team can have multiple players, and player can part of multiple teams over time.

1.c.3 Match-Team Relationship: Matches will have many-to-many relationship teams, as match involves two teams, and team can participate multiple tasks.

1.c.4 Match-Ground Relationship: Matches will have a one-to-one relationship with grounds, as each match takes place in one specific ground.

1.d Reframing the relations with keys and constraint

1.d.1 Create Table Cricket Board:

SQL > CREATE TABLE CricketBoard (Board ID VARCHAR(10) PRIMARY KEY, Name VARCHAR(30), Address VARCHAR(50), Contact - NO number);

Table created

SQL > DESC CricketBoard;

Column	NOT NULL	NULL	TYPE
Board ID	NOT NULL		VARCHAR(10)
Name			VARCHAR(30)
Address			VARCHAR(50)
Contact No			NUMBER

1.d.2 Create Table Team:

SQL > CREATE TABLE Team (TeamID VARCHAR(10) PRIMARY KEY, BoardID VARCHAR(10), Name VARCHAR(30), Coach VARCHAR(30), Captain VARCHAR(30), FOREIGN KEY (BoardID) REFERENCES CricketBoard(BoardID));

Table Created.

SQL > DESC Team

Name	NULL?	Type
TEAMID	NOT NULL	VARCHAR2(10)
BOARDID	NOT NULL	VARCHAR2(10)
Name	-	VARCHAR2(30)
Coach	-	VARCHAR2(30)
Captain	-	VARCHAR2(30)

1.d.3 Create Table player:

SQL > CREATE TABLE Player (PlayerID VARCHAR(6) PRIMARY KEY, TeamID VARCHAR(10), Fname VARCHAR(30), Lname VARCHAR(30), Age NUMBER(5,2), DateOfBirth DATE, PlayingRole VARCHAR(25), Email VARCHAR(40), ContactNo NUMBER, FOREIGN KEY (TeamID) REFERENCES TEAM (TeamID));

Table Created.

SQL > DESC PLAYER

Name	NULL?	Type
PlayerID	NOT NULL	VARCHAR2(6)
TeamID	NOT NULL	VARCHAR2(10)
FName	-	VARCHAR2(30)
LName	-	VARCHAR2(30)
Age	-	NUMBER(5,2)
DateOfBirth	-	DATE
PlayingRole	-	VARCHAR2(25)
Email	-	VARCHAR2(40)
ContactNo	-	NUMBER

1.d.4 Create Table Match:

SQL > Create table Match (matchID Varchar(10), TeamID1 Varchar(10), TeamID2 Varchar(10), MatchDate Date, Time1 Number, Result Varchar(20), PRIMARY KEY (matchID), FOREIGN KEY (TeamID1) REFERENCES team (TeamID), FOREIGN KEY (TeamID2) REFERENCES team (TeamID));

Table created

SQL > DESC Match

Name	Type
MatchID	NULL ?
TEAMID1	NOT NULL
TEAMID2	NOT NULL
PTEAMID	NOT NULL
MatchDate	DATE
TIME1	NUMBER
RESULT	VARCHAR2(20)

1.d.5 Create Table Ground:

SQL > Create table Ground (GroundID Varchar(10) PRIMARY KEY, MatchID Varchar(10), Name Varchar(30), Location Varchar(30), Capacity Number, FOREIGN KEY (MatchID) REFERENCES MatchID);

Table created

SQL > DESC Ground

Name	Type
GNAME	NULL ?
GroundID	NOT NULL
MATCHID	NOT NULL
Name	VARCHAR2(30)
location	VARCHAR2(30)
capacity	Number

1.d.6 Create Table Umpire:

SQL > create table Umpire(umpireID varchar(10) PRIMARY KEY, PName varchar(30), LName varchar(30), Age number(5,2), Date of Birth date, Country varchar(30), email varchar(40), contact - no number);

SQL > DESC Umpire

Name:	NULL?	TYPE
UMPIRED	Not NULL	VARCHAR 2(10)
F NAME		VARCHAR 2(30)
L NAME		VARCHAR 2(30)
AGE		Number (5,2)
DATE OF BIRTH		DATE
COUNTRY		VARCHAR 2(30)
EMAIL		VARCHAR 2(40)
CONTACT - NO		Number

1.d.6 Create Table Umpire_Umpired:

SQL > create table Umpire_Umpired(umpireID varchar(10), MatchID varchar(10), GroundID varchar(10), FOREIGN KEY (umpireID) REFERENCES Umpire(umpireID), FOREIGN KEY (MatchID) REFERENCES Match(MatchID), FOREIGN KEY (GroundID) REFERENCES Ground(GroundID));

table created.

SQL > DESC Umpire

Name:	NULL?	TYPE
UMPIRED	NOT NULL	VARCHAR 2(10)
GROUNDID	NOT NULL	VARCHAR 2(10)
MATCHID	NOT NULL	VARCHAR 2(10)
EX NO.		VARCHAR 2(10)
PERFORMANCE (5)		
RESULT AND RIS (5)		
VIVA VOCE (5)		
RECORD (5)		
TOTAL (20)		
SIGN WITH DATE		

Result: Thus the database design methodology and ER model design diagram has been completed successfully.