Task-2 Generating design of other traditional database model.

4/8/25

Aim: Creating Hierachical/Network model of database by enhancing the sound abstract by performance tasks using forms of inheritance:

2.a Identify the specificity of each relationship find and form surplus relations.

2.b check is-a hierachy-thus-hierarchy & performs generalization and/or specilization relationship.

2.c Find domain of attribute & perform check constraint to applicable

2.d Rename the relations

2.e perform SQL Relations using DDL, DCL commads

* 2.a. Identify the specificity of each relationship.
one cricket board manages one or more Teams, but each Team is managed by only one cricked Board.
surplus Relation: No surplus relation is needed for this relationship since it already one-to-one.

Relationship: match involves team (many-to-many).
Specificity: one match can have multiple umpires. and each umpire can officiate multiple matches.

Based on specificity analysis, all the relationships in ER diagram are appropiately represented, and there are no surplus relations required for this

* 2.b: check is-a hirearchy/thus-a hierarchy and performs generalization and/or specialization.

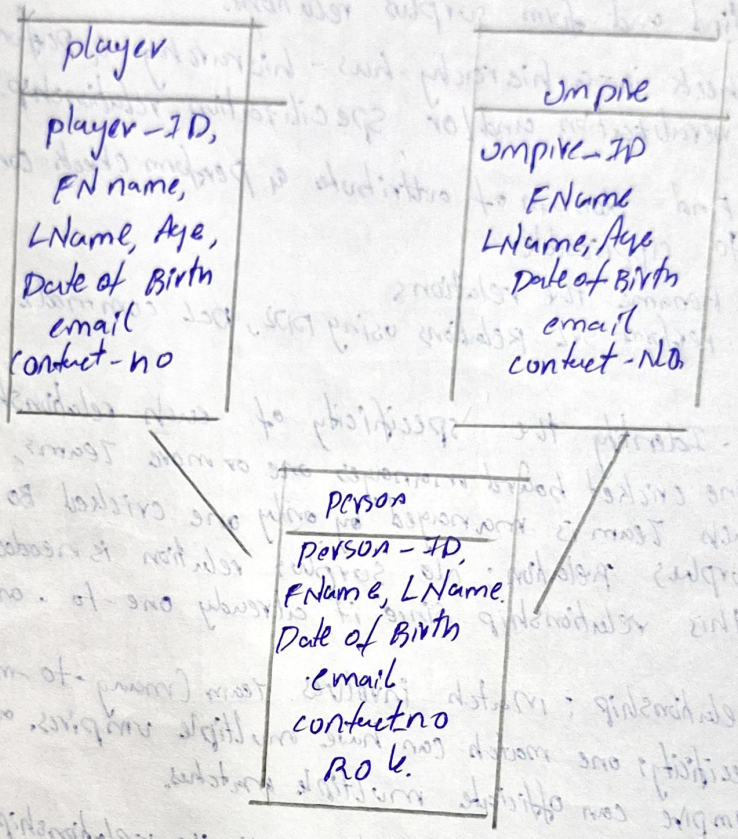
generalization,
In ER diagram for the Tamilnadu cricket board (TNCA) described earlier, we can identify potential generlizations based on common attributes or relationships entities.

Entities:
Player, umpire.

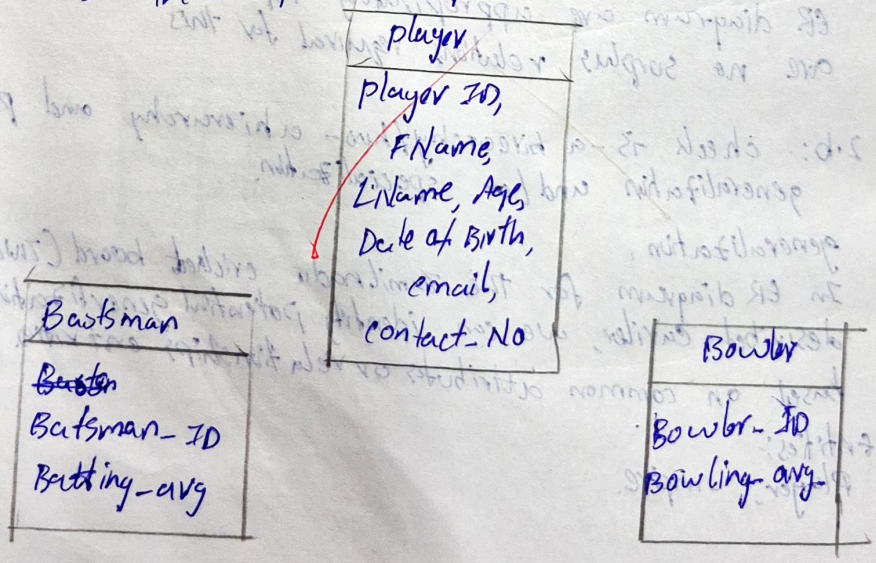
subclasses:

player: Inherited attributes from "person" and specific attributes like player-ID

umpire: Inherited attributes from "person" and specific attributes like umpire-ID.



Here's the modified ER diagram with specialization.



potential generalization:-

create a superclass called "person" to represent the common attributes, shared, by player and umpire. The 'person' entity would have following attributes:

Person - ID (primary key).
First - Name
Last - Name
Date - of - Birth
Age.
contact - Number
Email.

~~Subclass~~:
Specialization:- In context of Entity - Relationship (ER) diagrams, specialization refers to the process of subtyping within type. It allows, to represent entities. relation of parent entity.

In case of Tamilnadu cricket Board Association, lets the specialization of player entity into two subtypes. Batsman and Bowler. This specialization is based on specific roles players can have in cricket.

2.c Find the domain of attribute and perform check constraint to the applicable.

Finding the domain of "age" attribute.
The "age" attribute typically represents age of player. and should be a positive attribute non-negative integer. depending on how you handle the Birth date of players. For sake of simplicity. Lets assume it's a positive integer.

check constraint enforce the domain:
to enforce the domain on age attribute ensure that only valid values. suppose your database schema language is SQL - here's example of how you can check constraint:

SQL> ALTER TABLE Player ADD CONSTRANT check_con
CHECK (age >=20);

d : Rename the relations:

Renaming a table in SQL can be accomplished using ALTER TABLE statement with RENAME TO clauses. The specific syntax for renaming tables varies btw different management systems.

Table altered.

SQL > DESC umpire.

Name	Null?	Type.
UMPIRED		VARCHAR(10).
FNAME		VARCHAR 2(30)
LNAME		VARCHAR 2(30)
AGE		NUMBER (5,2)
DATEOFBIRTH		DATE
COUNTRY		VARCHAR (30)
EMAIL		VARCHAR 2(40)
PHONE_NO		NUMBER.

2.c Perform SQL Relations using DDL, DCL commands.

DCL stands for "Data" Control Language, which is a subset of SQL (structured query Language) used to control access to data database. DCL commands are responsible for managing user permissions, granting privileges, and controlling data security within database system.

1. Grant
2. Revoke

Grant:- The grant command is used to specific privileges to users or roles, allowing them perform certain on database objects (eg. tables, views, procedures). many SELECT, INSERT, UPDATE, DELETE, EXECUTE, and more.

SQL > Create user Raj identified by kumar;
User created.
SQL > grant resource to raj;
Grant succeeded.
SQL > grant create session to raj;
Grant succeeded.
SQL > conn
Enter user-name: raj
Enter password:
connected.
SQL > create table empCeno number, ename varchar(10));
Table created.
SQL > conn system/manager.
connected.
SQL > grant all on empire to Raj;
Grant succeeded.

Result:- Thus, the Hierachical model & Network model has been successfully created.

VEL TECH - CSE	
EX NO.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20/15
SIGN WITH DATE	8/