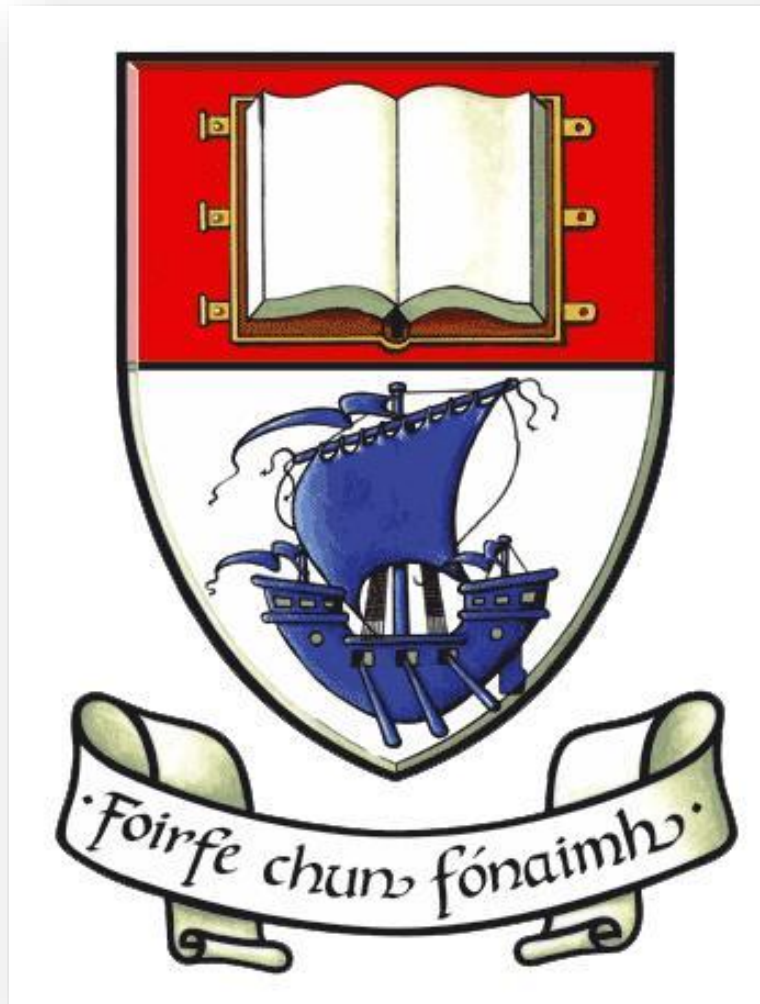


Waterford Institute of Technology



Project Implementation

FOOTBALL CLUB

(North Park FC)

TABLE OF CONTENTS:

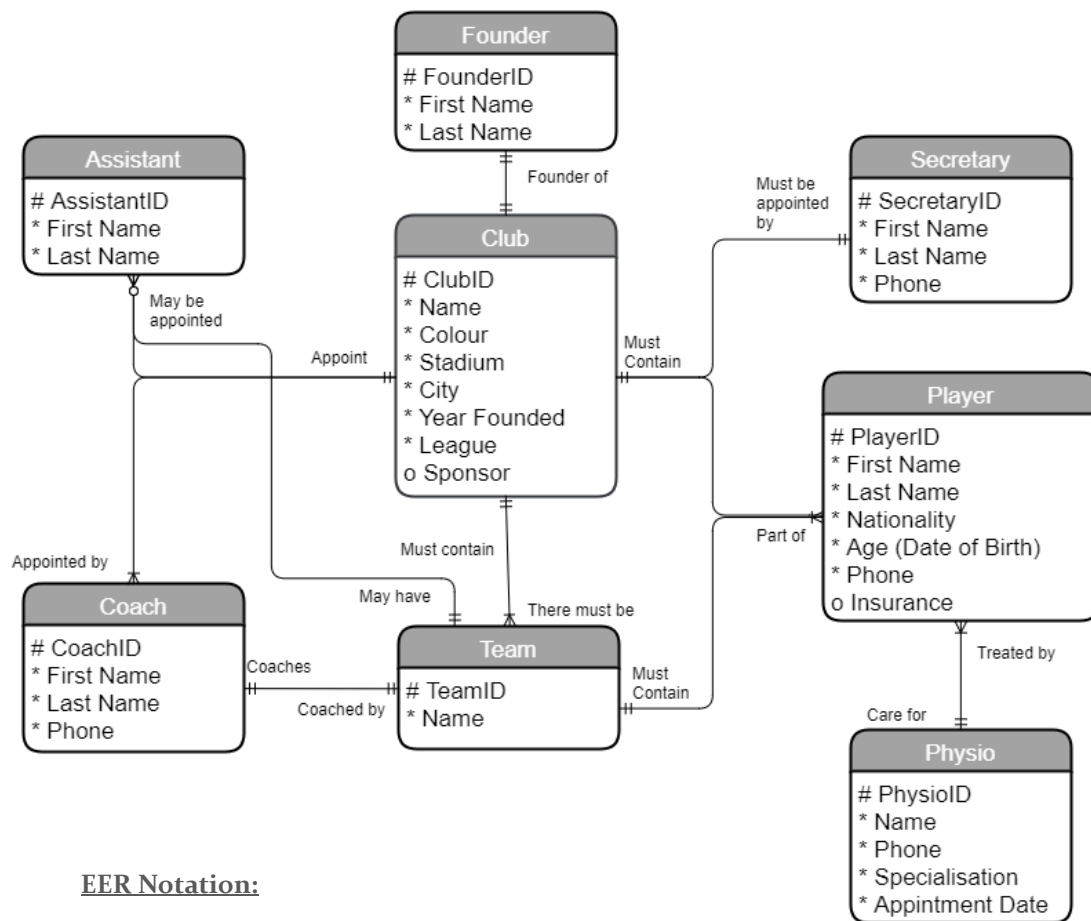
Topic	Page
Enhanced Entity Relationships Diagram (EER).	2
Introduction to Report.	3
Tables to be created.	3/4
Setup/Execution Statements.	4/5
Conclusion.	6

ENHANCED ENTITY RELATIONSHIP DIAGRAM (EER) [UPDATED]:

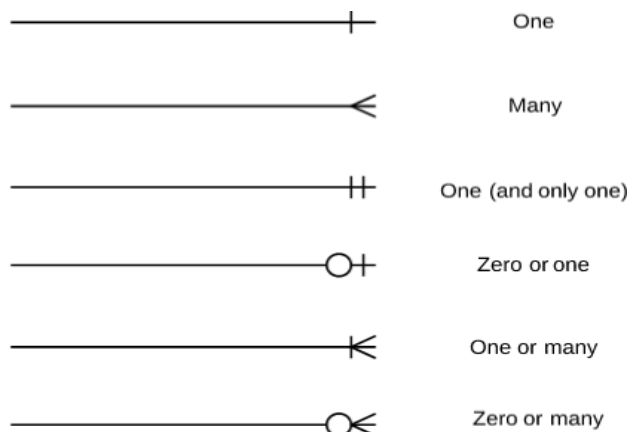
Comments were taken on board and the following adjustments were made.

Few changes were made with the EER Diagram.

- Link between Physio and Team removed. Physiotherapists are now separately assigned to players and no longer need a relationship with the team.
- Link between Secretary and Player has been removed. Was not required. Was not necessarily a relationship, more like a process.



EER Notation:



INTRODUCTION TO REPORT:

This is the Database Implementation of the EER diagram illustrated above. This document will illustrate what steps were taken to display the EER in relationship tables. At this stage the normalized tables, table mapping, SQL statements and SQL queries were implemented/created.

TABLE(S) TO BE CREATED:

PK = Primary Key

FK = Foreign Key

Founder (Founder ID, First Name, Last Name)

Founder

Column Name	Key Type	Optionality	Data Type	Size	Constraint	Description
founder_id	pk	*	NUMBER	6	1	Unique Founder ID
first_name		*	VARCHAR2	30		Founders First Name
last_name	fk	*	VARCHAR2	30	1	Fouders Surname

Club (Club ID, Club Name, Club Colour, Stadium, City, League, Sponsor, Founder ID (FK))

Club

Column Name	Key Type	Optionality	Data Type	Size	Constraint	Description
club_id	pk	*	NUMBER	10	1	Unique Club ID
club_name		*	VARCHAR2	30		Name of Club
club_colour		*	VARCHAR2	15		Clubs Colour
stadium		*	VARCHAR2	20		Stadium Name
city		*	VARCHAR2	20		Clubs City
league		*	VARCHAR2	20		League
sponsor		o	VARCHAR2	20		Club Sponsor
founder_id	fk		NUMBER	6	1	Founders Unique ID

Team (Team ID, Team Name, Club ID(FK))

Team

Column Name	Key Type	Optionality	Data Type	Size	Constraint	Description
team_id	pk	*	NUMBER	10	1	Unique Team ID
team_name		*	VARCHAR2	30		Name of Team
club_id	fk		NUMBER	10	1	Unique Club ID

The remaining tables will follow same procedure and be related using the Primary/Foreign Key constraints.

Below are the setup/execution statements. The full statements are available in the SQL Script supplied with this document.

■ Drop Table (example):

```
-- Drop Tables
-- Must enter seperately, and individually to run/execute.
DROP TABLE physio;
DROP TABLE assistant;
DROP TABLE player;
DROP TABLE coach;
DROP TABLE secretary;
DROP TABLE team;
DROP TABLE club;
DROP TABLE founder;
```

■ Create Table Statement (example):

```
CREATE TABLE club
(club_id VARCHAR2(10) CONSTRAINT club_id_pk PRIMARY KEY NOT NULL,
club_name VARCHAR2(30) NOT NULL,
club_colour VARCHAR2(15) NOT NULL,
stadium VARCHAR2(20) NOT NULL,
city VARCHAR2(20) NOT NULL,
year_founded VARCHAR2(4) NOT NULL,
league VARCHAR2(20) NOT NULL,
sponsor VARCHAR2(20) NULL,
founder_id NUMBER(6) CONSTRAINT Const_founder_id_fk
REFERENCES founder(founder_id) ON DELETE CASCADE NOT NULL);
```

- Insert Statement (example):

```
--One Club.  
INSERT INTO club  
(club_id, club_name, club_colour, stadium, city, year_founded, league, sponsor, founder_id)  
VALUES  
( 'NP_FC', 'North Park', 'Green', 'Northern Stand', 'Waterford', '1933', 'School Boy League', 'Umbro', 4);
```

- Where Clause/Select Statements/ Order(example):

```
-- Order By Clause : Display all players in order (based on their age).  
SELECT player_id, first_name, last_name, nationality, date_of_birth, phone, insured, team_id  
FROM player  
ORDER BY date_of_birth;  
  
-- Order By Clause : Display all players in order (based on their surname).  
SELECT player_id, first_name, last_name, nationality, date_of_birth, phone, insured, team_id  
FROM player  
ORDER BY last_name;
```

- Delete Data(Row) Statement(example):

```
-- Deleting a Row: (example)  
--Firstly select the row.  
SELECT player_id,  
first_name, last_name, nationality, date_of_birth, phone, insured, team_id  
FROM player  
WHERE player_id = 1;  
  
--Delete the row we just selected.  
DELETE from player  
WHERE player_id = 1;
```

- Check if Data exists Statement(example):

```
--Check if row exists, enter select statement again.  
SELECT player_id, first_name, last_name, nationality, date_of_birth, phone, insured, team_id  
FROM player  
WHERE player_id = 1;
```

CONCLUSION:

This database design and development overall, has proved to be successful as it has created many new learning outcomes for me going forward in databases. Creating the Enhanced Entity Relationship diagrams helped in designing the basic principles of the database I was trying to eventually create.

It may not be a fully fixed database in the sense it is in its simplest form, but we are currently learning bit by bit, and advancing progressively. This database is focused around the one football club, North Park FC, and most of the database implementation is based around this one type of entity. However, it can most likely expand out further and deal with multiple clubs, but it would certainly result in very large data management and storage. At this point, we are working on the basic principles and working our way up to building more extensive databases eventually.

Developing this database also introduced me to new language of command and designs which accompanied SQL. This is a new learning outcome and there is still more to be taken on board in the coming months, and developments to be made.