

INTRODUCTION:

A database management system (DBMS) is a computer software other application that interacts with ends-user, other application and the database itself to capture and analyze data. A general-purpose DBMS allows the definition, creation, querying, update and administration of database.

In our project (CRICKET CLUB MANAGEMENT SYSTEM) was created by the concept of DBMS. So the main purpose of our project is to know about the basic concept of database management system.

Scenario: In a cricket club management system there is a founder or chairman who want to build a cricket club. Chairman has a unique id. His name, address, phone number, date of birth store in the system. The cricket club also has a unique id. Its name, location, phone number also stored. Chairman appointed a manager to maintain the club. Manager also have a unique id and his name, address, date of birth, phone number also stored in this system. The club has board members. They also have unique id, name, address (city, country), phone number, date of birth. Club also have many stuffs. They also have unique id, name, address (city, country), phone number, date of birth. Many players join in the club. They have unique id, name, address (city, country), phone number, date of birth. They also have type. Someone is bowler, someone is batsman and someone is wicket keeper. Manager appointed many coaches. They have unique id, name, address (city, country), phone number, date of birth. They have categories like batting coach, bowling coach, keeping coach.

Build

UNF:

ch-id, ch-name, date of birth, address, ch-phone number, club-id, club-name, location, club-phone number.

1NF:

ch-phone number, club-phone number is multivalued attributes.

ch-id, ch-name, date of birth, address, ch-phone number, club-id, club-name, location, club-phone number.

2NF:

1.ch-id, Ch-name, date of birth, address, ch-phone number.

2.club-id, club-name, location, club-phone number.

3NF:

1.ch-id, ch-name, date of birth, address, ch-phone number.

2.club-id, club-name, location, club-phone number.

Table Create:

1. <u>ch-id</u> , ch-name, date of birth, address, ch-phone number.
2. <u>club-id</u> , club-name, location, club-phone number, ch-id

Appointed:

UNF:

ch-id, ch-name, address, date of birth, ch-phone number, m-id, m-name, m-phone number, address, date of birth.

1NF:

Here ch-phone and m-phone number is multivalued attributes.

ch-id, ch-name, address, date of birth, ch-phone number, m-id, m-name, m-phone number, address, date of birth.

2NF:

1.ch-id, ch-name, address, date of birth, ch-phone number.

2.m-id, m-name, m-phone number, address, date of birth.

3NF:

1.ch-id, ch-name, address, date of birth, ch-phone number.

2.m-id, m-name, m-phone number, address, date of birth.

Table Create:

1. <u>ch-id</u> , ch-name, address, date of birth, ch-phone number.
2. <u>m-id</u> , m-name, m-phone number, address, date of birth, ch-id

Maintain

UNF:

m-id, m-name, m-phone number, date of birth, address, club-id, club-name, location, club-phone number.

1NF:

Here m-phone and club-phone number is multivalued attributes.

m-id, m-name, m-phone number, date of birth, address, club-id, club-name, location, club-phone number.

2NF:

1.m-id, m-name, m-phone number, date of birth, address.

2.club-id, club-name, location, club-phone number.

3NF:

1.m-id, m-name, m-phone number, date of birth, address.

2.club-id, club-name, location, club-phone number.

Table Create:

1. <u>m-id</u> , m-name, m-phone number, date of birth, address.
2. <u>club-id</u> , club-name, location, club-phone number, m-id

Appointed:

UNF:

m-id, m-name, m-phone number, address, date of birth, coach-id,
coach-name, coach-phone number, city, country, date of birth.

1NF:

Here m-phone and coach-phone number is multivalued attributes.

m-id, m-name, m-phone number, address, date of birth, coach-id,
coach-name, coach-phone number, city, country, date of birth.

2NF:

1.m-id, m-name, m-phone number, address, date of birth.

2.coach-id, coach-name, coach-phone number, city, country,
Date of birth.

3NF:

1.m-id, m-name, m-phone number, address, date of birth.

2.coach-id, coach-name, coach-phone number, date of birth.

3.city, country.

Table Create:

1. <u>m-id</u> , m-name, m-phone number, address, date of birth.
2. <u>aid</u> , city, country.
3. <u>coach-id</u> , coach-name, coach-phone number, date of birth, m-id , aid

Categories:

UNF:

Coach-id, coach-name, coach-phone number, date of birth, city, country, bating, bowling, keeping.

1NF:

Coach-phone number is multivalued attributes.

Coach-id, coach-name, coach-phone number, date of birth, city, country, bating, bowling, keeping.

2NF:

1.coach-id, coach-name, coach-phone number, date of birth, city, Country.

2.bating, bowling, keeping.

3NF:

1.coach-id, coach-name, coach-phone number, date of birth.

2.city, country.

3.bating, bowling, keeping.

Table Create:

1. <u>aid</u> , city, country.
2. <u>coach-id</u> , coach-name, coach-phone number, date of birth, aid .
3. bating, bowling, keeping, _coach-id .

Has

UNF:

b-id, b-name, b-phone, date of birth, city, country, club-id, club-name, location, club-phone number.

1NF:

Here club-phone number and b-phone number is multivalued attributes.

b-id, b-name, b-phone, date of birth, city, country, club-id, club-name, location, club-phone number.

2NF:

1.b-id, b-name, b-phone number, date of birth, city, country.

2.club-id, club-name, location, club-phone number.

3NF:

1.b-id, b-name, b-phone number, date of birth.

2.city, country.

3.club-id, club-name, location, club-phone number.

Table creation:

1. <u>b-id</u> , b-name, b-phone number, date of birth, aid , club-id .
2. <u>aid</u> , city, country.
3. <u>club-id</u> , club-name, location, club-phone number.

Has:

UNF:

s-id, s-name, s-phone number, date of birth, city, country, club-id, club-name, location, club-phone.

1NF:

Here s-phone number and club-phone number is multivalued attributes.

s-id, s-name, s-phone number, date of birth, city, country, club-id, club-name, location, club-phone.

2NF:

1.club-id, club-name, location, club-phone.

2.s-id, s-name, s-phone number, date of birth, city, country.

3NF:

1.club-id, club-name, location, club-phone.

2.s-id, s-name, s-phone number, date of birth.

3.city, country.

Table Create:

1. <u>club-id</u> , club-name, location, club-phone.
2. <u>s-id</u> , s-name, s-phone number, date of birth, _aid , club-id .
3. <u>aid</u> , city, country.

Join:

UNF:

club-id, club-name, club-phone number, location, p-id, p-name, p-phone number, date of birth, city, country.

1NF:

Club-phone number and p-phone number are multivalued attributes.

club-id, club-name, club-phone number, location, p-id, p-name, p-phone number, date of birth, city, country.

2NF:

1. club-id, club-name, club-phone number, location.
2. p-id, p-name, p-phone number, date of birth, city, country.

3NF:

1. club-id, club-name, club-phone number, location.
2. p-id, p-name, p-phone number, date of birth.
3. city, country.

Table Create:

1. <u>club-id</u> , club-name, club-phone number, location.
2. <u>p-id</u> , p-name, p-phone number, date of birth, aid , club-id .
3. <u>aid</u> , city, country.

Categories:

UNF:

p-id, p-name, p-phone number, date of birth, city, country,
batsman, bowler, wicket keeper.

1NF:

p-phone number is multivalued attributes

p-id, p-name, p-phone number, date of birth, city, country,
batsman, bowler, wicket keeper.

2NF:

- 1.p-id, p-name, p-phone number, date of birth, city, country.
- 2.batsman, bowler, wicket keeper.

3NF:

1. p-id, p-name, p-phone number, date of birth.
- 2.city, country.
3. batsman, bowler, wicket keeper.

Table Create:

1. <u>p-id</u> , p-name, p-phone number, date of birth, aid .
2. <u>aid</u> , city, country.
3. batsman, bowler, wicket keeper, p-id .

Table:

- 1.ch-id, ch-name, ch-phone number, date of birth, address.
- 2.club-id, club-name, location, club-phone number, **ch-id**, **m-id**
- 3.m-id, m-name, m-phone number, date of birth, address, **ch-id**
- 4.p-id, p-name, p-phone number, date of birth, **aid**, **club-id**.
5. aid, city, country.
- 6.batsman, bowler, wicket keeper, **_p-id**.
- 7.s-id, s-name, s-phone number, date of birth, **aid**, **club-id**.
- 8.b-id, b-name, b-phone number, date of birth, **_aid**, **club-id**.
- 9.coach-id, coach-name, coach-phone number, date of birth, **aid**, **club-id**.
- 10.bowling, bating, wicket keeper, **coach-id**.

Table Chairman:

```
create table CHAIRMAN(ch_id number(10) primary  
key,ch_name varchar2(20) not null,date_of_birth  
varchar2(20),ch_phone number(20),address varchar2(50) not  
null);
```

Results Explain Describe Saved SQL History

Object Type TABLE Object CHAIRMAN

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CHAIRMAN	CH_ID	Number	-	10	0	1	-	-	-
	CH_NAME	Varchar2	20	-	-	-	-	-	-
	DATE_OF_BIRTH	Varchar2	20	-	-	-	✓	-	-
	CH_PHONE	Number	-	20	0	-	✓	-	-
	ADDRESS	Varchar2	50	-	-	-	-	-	-

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Table CRICKET CLUB:

```
create table CRICKET CLUB(club_id number(10) primary  
key,club_name varchar2(20) not null,location varchar2(20) not  
null,club_phone number(20),ch_id number(10),mid  
number(10));
```

Results	Explain	Describe	Saved SQL	History
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Object Type	TABLE	Object	CRICKET_CLUB
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Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CRICKET_CLUB</u>	<u>CLUB_ID</u>	Number	-	10	0	1	-	-	-
	<u>CLUB_NAME</u>	Varchar2	20	-	-	-	-	-	-
	<u>LOCATION</u>	Varchar2	20	-	-	-	-	-	-
	<u>CLUB_PHONE</u>	Number	-	20	0	-	✓	-	-
	<u>CH_ID</u>	Number	-	10	0	-	✓	-	-
	<u>MID</u>	Number	-	10	0	-	✓	-	-

1 - 6

```
create table MANAGER(mid number(10) primary key,m_name
varchar2(20) not null,m_phone number(20),date_of_birth
varchar2(20),address varchar2(50) not null,ch_id number(10));
```

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>MANAGER</u>	<u>MID</u>	Number	-	10	0	1	-	-	-
	<u>M_NAME</u>	Varchar2	20	-	-	-	-	-	-
	<u>M_PHONE</u>	Number	-	20	0	-	✓	-	-
	<u>DATE_OF_BIRTH</u>	Varchar2	20	-	-	-	✓	-	-
	<u>ADDRESS</u>	Varchar2	50	-	-	-	-	-	-
	<u>CH_ID</u>	Number	-	10	0	-	✓	-	-

1 - 6

```
create table ADDRESS(aid number(10) primary key,city  
varchar2(20),country varchar2(20));
```

[illegible]

```
create table PLAYER(pid number(10) primary key, p_name  
varchar2(20) not null,p_phone number(20),date_of_birth  
varchar2(20),aid number(10),club_id number(10));
```

Table TYPE:

```
create table TYPE(batsman varchar2(3),bowler
varchar2(3),wicket_keeper varchar2(3),pid number(10));
```

Results	Explain	Describe	Saved SQL	History
---------	---------	----------	-----------	---------

Object Type

TABLE Object

TYPE

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TYPE	BATSMAN	Varchar2	3	-	-	-	✓	-	-
	BOWLER	Varchar2	3	-	-	-	✓	-	-
	WICKET KEEPER	Varchar2	3	-	-	-	✓	-	-
	PID	Number	-	10	0	-	✓	-	-

1 - 4

Table STUFF:

```
create table STAFF(sid number(10) primary key,sname  
varchar2(20) not null,sphone number(20),date_of_birth  
varchar2(20),aid number(10),club_id number(10));
```

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STAFF	<u>SID</u>	Number	-	10	0	1	-	-	-
	<u>SNAME</u>	Varchar2	20	-	-	-	-	-	-
	<u>SPHONE</u>	Number	-	20	0	-	✓	-	-
	<u>DATE_OF_BIRTH</u>	Varchar2	20	-	-	-	✓	-	-
	<u>AID</u>	Number	-	10	0	-	✓	-	-
	<u>CLUB_ID</u>	Number	-	10	0	-	✓	-	-

1 - 6

Table BOARD MEMBERS:

```
create table BOARD_MEMBER(bid number(10) primary  
key,bname varchar2(20) not null,bphone  
varchar2(20),date_of_birth varchar2(20),aid  
number(10),club_id number(10));
```

Results Explain Describe Saved SQL History

Object Type TABLE Object BOARD_MEMBER

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOARD_MEMBER	BID	Number	-	10	0	1	-	-	-
	BNAME	Varchar2	20	-	-	-	-	-	-
	BPHONE	Varchar2	20	-	-	-	✓	-	-
	DATE_OF_BIRTH	Varchar2	20	-	-	-	✓	-	-
	AID	Number	-	10	0	-	✓	-	-
	CLUB_ID	Number	-	10	0	-	✓	-	-

1 - 6


```
create table COACH(cid number(10) primary key,cname  
varchar2(20) not null,cphone number(20),date_of_birth  
varchar2(20),aid number(10),mid number(10));
```

Table CATEGORIES:

```
create table CATAGORIES(bating varchar2(3),bowling
varchar2(3),wicket_keeping varchar2(3),cid number(10));
```

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>CATEGORIES</u>	<u>BATING</u>	Varchar2	3	-	-	-	✓	-	-
	<u>BOWLING</u>	Varchar2	3	-	-	-	✓	-	-
	<u>WICKET KEEPING</u>	Varchar2	3	-	-	-	✓	-	-
	<u>CID</u>	Number	-	10	0	-	✓	-	-

1 - 4

CONSTRAINTS:

1.alter table MANAGER add constraint fk foreign key(ch_id) references CHAIRMAN(ch_id);

2.alter table CRICKET_CLUB add constraint fkk foreign key(ch_id) references CHAIRMAN(ch_id);

3.alter table CRICKET_CLUB add constraint fkpppp foreign key(mid) references MANAGER(mid);

4.alter table PLAYER add constraint f foreign key(aid) references ADDRESS(aid);

5.alter table PLAYER add constraint fp foreign key(club_id) references CRICKET_CLUB(club_id);

6.alter table TYPE add constraint fpp foreign key(pid) references PLAYER(pid);

7.alter table STAFF add constraint fkkl foreign key(aid) references ADDRESS(aid);

8.alter table STAFF add constraint fkkl foreign key(club_id) references CRICKET_CLUB(club_id);

9.alter table BOARD_MEMBER add constraint fkpk foreign key(aid) references ADDRESS(aid);

10.alter table BOARD_MEMBER add constraint fpl foreign key(club_id) references CRICKET_CLUB(club_id);

11.alter table COACH add constraint fpl foreign key(mid) references MANAGER(mid);

CONTINUE CONSTRAINTS>>>>>

**12.alter table COACH add constraint fppp foreign key(aid)
references ADDRESS(aid);**

**13.alter table CATAGORIES add constraint fppk foreign
key(cid) references COACH(cid);**

QUERY WRITING:

1.DISPLAY ALL DATA OF BOARD MEMBER ovy

Ans: select * from BOARD_MEMBER where lower(bname)='ovy';

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the query: `select *from BOARD_MEMBER where lower(bname)='ovy';`. The Results window displays a single row of data for the board member 'OVY'.

BID	BNAME	BPHONE	DATE_OF_BIRTH	AID	CLUB_ID
1011	OVY	383828	23-11-1994	1	10102

1 rows returned in 0.00 seconds [CSV Export](#)

Would you like to save your password for 127.0.0.1? [More info](#) Yes Never

Application Express 2.1.0.00.39
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2. DISPLAY player name and length of player name ,name starts with Z

ANS: select p_name,length(p_name) from PLAYER where p_name like'Z%';

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following query:

```
select p_name,length(p_name) from PLAYER where p_name like'Z%';
```

The query has been executed, and the results are displayed in a table with two columns: P_NAME and LENGTH(P_NAME). The results are as follows:

P_NAME	LENGTH(P_NAME)
ZANIBUL	7
ZONSON	6

2 rows returned in 0.00 seconds

The interface also shows the Oracle Database Express Edition logo, the user name CLUB, and the application version 2.1.0.00.30. The Windows taskbar is visible at the bottom of the screen.

3.DISPLAY COACH NAME,THE FIRST POSITION OF ALPHABET H IN COACH NAME OF 1 ID HOLDER

Ans:

select cname , instr(cname,'H') from COACH where cid=1;

The screenshot shows the Oracle Database Express Edition interface. The browser address bar displays the URL: 127.0.0.1:8080/apex/f?p=4500:1003:612289560562455::NO:1003:: The page title is "ORACLE Database Express Edition". The user is logged in as "User: CLUB". The breadcrumb navigation shows "Home > SQL > SQL Commands". The "Autocommit" checkbox is checked, and the "Display" dropdown is set to "10". The SQL command entered in the text area is: `select cname , instr(cname,'H') from COACH where cid=1;` The "Save" and "Run" buttons are visible. Below the command area, the "Results" tab is selected, showing a table with two columns: "CNAME" and "INSTR(CNAME,'H')". The table contains one row with the values "HABIBULLA" and "1". Below the table, it says "1 rows returned in 0.02 seconds" and there is a "CSV Export" link. The footer of the application shows "Language: en-us" and "Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved." The Windows taskbar at the bottom shows the search bar and various application icons.

CNAME	INSTR(CNAME,'H')
HABIBULLA	1

GROUP FUNCTION:

1.DISPLAY THE NUMBER OF BOARD MEMBER

Ans: select count(bid) from BOARD_MEMBER;

The screenshot displays the Oracle Database Express Edition web interface. The browser address bar shows the URL `127.0.0.1:8080/apex/f?p=4500:1003:612289560562455::NO:1003::`. The page title is "ORACLE Database Express Edition". The user is logged in as "User: CLUB". The main content area shows the "SQL Commands" tab with the query `select count(bid) from BOARD_MEMBER;` entered. The "Autocommit" checkbox is checked, and the "Display" dropdown is set to "10". The "Run" button has been clicked. Below the query editor, the "Results" tab is active, showing a single row with the column `COUNT(BID)` and the value `5`. The status bar indicates "1 rows returned in 0.00 seconds" and provides a "CSV Export" link. The footer shows the application version "Application Express 2.1.0.00.39" and the copyright "Copyright © 1999, 2008, Oracle. All rights reserved." The Windows taskbar at the bottom shows the time as 5:28 PM on 12/3/2018.

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:612289560562455::NO:1003::

ORACLE Database Express Edition

User: CLUB

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
select count(bid) from BOARD_MEMBER;
```

Results Explain Describe Saved SQL History

COUNT(BID)
5

1 rows returned in 0.00 seconds CSV Export

Application Express 2.1.0.00.39
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Type here to search

5:28 PM
12/3/2018

