NATIONAL INSTITUTE OF TECHNOLOGY, WARANGAL

Department of Mechanical Engineering

OLYMPIC GAMES DATABASE MANAGEMENT PROJECT

Done By:

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PROBLEM STATEMT:

In this project, we have designed a database management system to store information about Olympic Games. The database will contain important information about the event organisation and will be accessible to International Olympic Committee

This database will contain the details of the Athletes, participating countries, fixtures, event participation, information about the various games organised (group and individual), venues and services, results and leader board.

This database management system will help the International Olympic Committee to access various types of information and improve the quality of conduction of these games in the future. They can also keep track of the various services and equipment required during the games and assess how many more will be needed.

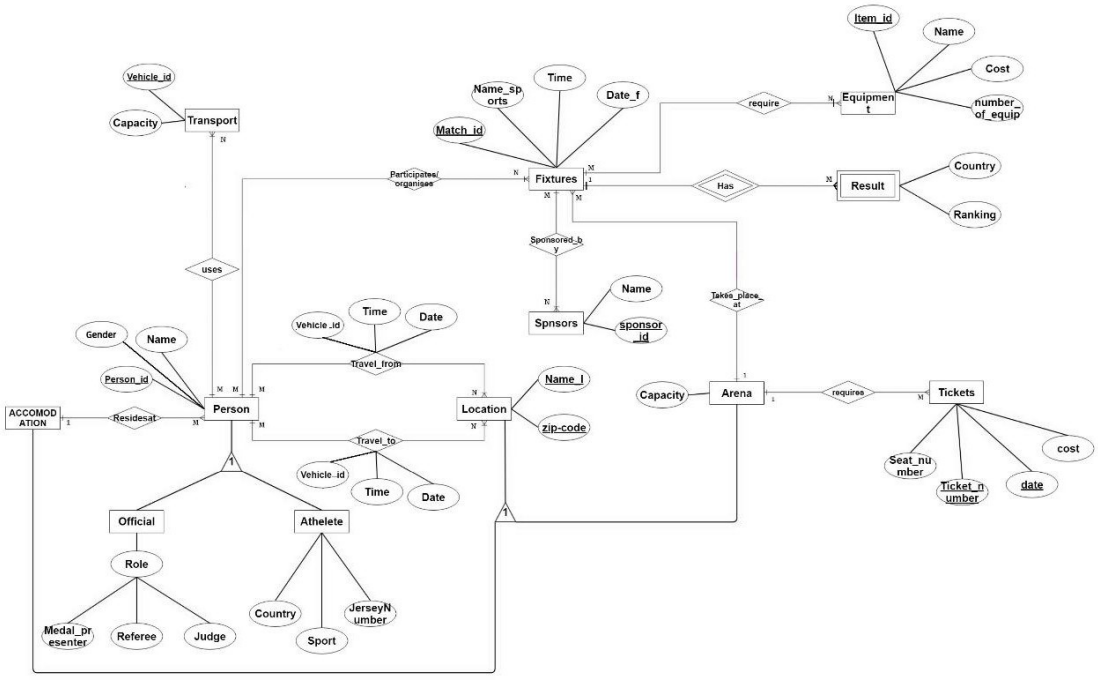
CONTENTS:

1) ER model assumptions
2) ER Diagram
3) Tables
4) Functional Dependencies & Primary key
5) Normalization
6) Relational Schema
7) SQL Code

I. ER MODEL ASSUMPTIONS:

1) All sports taken are solo events
2) An athlete participates in one sport only.

II. ER DIAGRAM:



III. TABLES:

1) EQUPIMENT

Attribute	Datatype	Constraints and Characteristics
Item_Id	INT	NOT NULL, PRIMARY KEY
Name_e	VARCHAR	NOT NULL
Cost	INT	NOT NULL
Number_of_equipment	INT	NOT NULL

2) SPONSORS

Attribute	Datatype	Constraints and Characteristics
Name_s	VARCHAR	NOT NULL
Sponsor_Id	INT	NOT NULL, PRIMARY KEY

3) TRANSPORT

Attribute	Datatype	Constraints and Characteristics
Vehicle_Id	VARCHAR	NOT NULL, PRIMARY KEY
Capacity	INT	NOT NULL

4) LOCATION

Attribute	Datatype	Constraints and Characteristics
Name_l	VARCHAR	NOT NULL, PRIMARY KEY
Zip-code	INT	NOT NULL, PRIMARY KEY

5) ARENA

Attribute	Datatype	Constraints and Characteristics
Capacity	INT	NOT NULL
Name_l	VARCHAR	NOT NULL, PRIMARY KEY,FOREIGN KEY
Zip-code	INT	NOT NULL, PRIMARY KEY, FOREIGN KEY

6) TICKETS

Attribute	Datatype	Constraints and Characteristics
Seat_Number	INT	NOT NULL
Ticket_Number	INT	NOT NULL, PRIMARY KEY
Date	DATE	NOT NULL
Cost	INT	NOT NULL
Name_l	VARCHAR	NOT NULL, FOREIGN KEY
Zip-code	INT	NOT NULL, FOREIGN KEY

7) ACCOMODATION

Attribute	Datatype	Constraints and Characteristics
Name_l	VARCHAR	NOT NULL, PRIMARY KEY, FOREIGN KEY
Zip-code	INT	NOT NULL, PRIMARY KEY, FOREIGN KEY

8) FIXTURES

Attribute	Datatype	Constraints and Characteristics
Match_Id	VARCHAR	NOT NULL, PRIMARY KEY
Name_Sports	VARCHAR	NOT NULL
Time	VARCHAR	NOT NULL
Date_f	DATE	NOT NULL
Name_l	VARCHAR	NOT NULL, FOREIGN KEY
Zip-code	INT	NOT NULL, FOREIGN KEY

9) RESULT

Attribute	Datatype	Constraints and Characteristics
Country	VARCHAR	NOT NULL, PRIMARY KEY
Ranking	INT	NOT NULL
Match_Id	VARCHAR	NOT NULL, PRIMARY KEY, FOREIGN KEY

10) SPONSORED_BY

Attribute	Datatype	Constraints and Characteristics
Sponsor_Id	INT	NOT NULL, FOREIGN KEY
Match_Id	VARCHAR	NOT NULL, FOREIGN KEY

11) REQUIRE

Attribute	Datatype	Constraints and Characteristics
Item_Id	INT	NOT NULL, FOREIGN KEY
Match_Id	VARCHAR	NOT NULL, FOREIGN KEY

12) PERSON

Attribute	Datatype	Constraints and Characteristics
Name	VARCHAR	NOT NULL
Person_Id	VARCHAR	NOT NULL, PRIMARY KEY
Gender	VARCHAR	NOT NULL
Name_l	VARCHAR	NOT NULL, FOREIGN KEY
Zip-code	INT	NOT NULL, FOREIGN KEY

13) PARTICIPATES_ORGANISES

Attribute	Datatype	Constraints and Characteristics
Match_Id	VARCHAR	NOT NULL, FOREIGN KEY
Person_Id	VARCHAR	NOT NULL, FOREIGN KEY

14) TRAVELS_FROM

Attribute	Datatype	Constraints and Characteristics
Time	VARCHAR	NOT NULL
Date	DATE	NOT NULL
Name_l	VARCHAR	NOT NULL, FOREIGN KEY
Zip-Code	INT	NOT NULL, FOREIGN KEY
Person_Id	VARCHAR	NOT NULL, FOREIGN KEY
Vehicle_Id	VARCHAR	NOT NULL, FOREIGN KEY

15) TRAVELS_TO

Attribute	Datatype	Constraints and Characteristics
Time	VARCHAR	NOT NULL
Date	DATE	NOT NULL
Name_l	VARCHAR	NOT NULL, FOREIGN KEY
Zip-Code	INT	NOT NULL, FOREIGN KEY
Person_Id	VARCHAR	NOT NULL, FOREIGN KEY
Vehicle_Id	VARCHAR	NOT NULL, FOREIGN KEY

16) OFFICIAL

Attribute	Datatype	Constraints and Characteristics
Person_Id	VARCHAR	NOT NULL, PRIMARY KEY, FOREIGN KEY
Medal_Presenter	CHAR (1)	NOT NULL
Referee	CHAR (1)	NOT NULL
Judge	CHAR (1)	NOT NULL

17) ATHELETE

Attribute	Datatype	Constraints and Characteristics
Person_Id	VARCHAR	NOT NULL, PRIMARY KEY, FOREIGN KEY
Sport	VARCHAR	NOT NULL
Country	VARCHAR	NOT NULL
Jersey_Number	INT	NOT NULL

18) USES

Attribute	Datatype	Constraints and Characteristics
Vehicle_Id	VARCHAR	NOT NULL, FOREIGN KEY
Person_Id	VARCHAR	NOT NULL, FOREIGN KEY

IV. FUNCTIONAL DEPENDENCIES & PRIMARY KEY:

1) EQUIPMENT:

Item_Id -> {Item_Id, Name_e, Cost, Number_Of_Equipment}

Since all the fields depend on Item_Id, (Item_Id) + -> R.

Hence, Item_Id is Primary Key.

2) SPONSORS:

Sponsor_Id -> {Sponsor_Id, Name_s}

Since all the fields depend on Sponsor_Id, (Sponsor_Id) + -> R.

Hence, Sponsor_Id is Primary Key.

3) TRANSPORT

Vehicle_Id -> {Vehicle_Id, Capacity}

Since all the fields depend on Vehicle_Id, (Vehicle_Id) + -> R.

Hence, Vehicle_Id is Primary Key.

4) LOCATION

{Name_l, Zip-code} -> {Name_l, Zip-code}

Since all the fields depend on {Name_l, Zip-code}, {Name_l, Zip-code} +-> R.

Hence, {Name_l, Zip-code} is Primary Key.

5) ARENA

{Name_l, Zip-code} -> {Name_l, Zip-code, Capacity}

Since all the fields depend on {Name_l, Zip-code}, {Name_l, Zip-code} +-> R.

Hence, {Name_l, Zip-code} is Primary Key.

6) TICKETS

{Ticket_number, Date} {Ticket_number, Date, Seat_number, Cost, Name_l, Zip-code}

Since all the fields depend on {Ticket_number, Date}, {Ticket_number, Date} + -> R.

Hence, {Ticket_number, Date} is Primary Key.

7) ACCOMODATION

{Name_l, Zip-code} -> {Name_l, Zip-code}

Since all the fields depend on {Name_l, Zip-code}, {Name_l, Zip-code} +-> R.

Hence, {Name_l, Zip-code} is Primary Key.

8) FIXTURES

Match_Id -> {Match_Id, Name_Sports, Time, Date_f, Name_l, Zip-code }

Since all the fields depend on Match_Id, (Match_Id)+ -> R.

Hence, Match_Id is Primary Key.

9) RESULT

{Match_Id, Country} -> {Match_Id, Country, Ranking}

Since all the fields depend on {Match_Id, Country}, ({Match_Id, Country})+ -> R.

Hence, {Match_Id, Country} is Primary Key.

10) PERSON

Person_Id -> {Name, Person_Id, Gender, Name_I, Zip-code}

Since all the fields depend on Person_Id, (Person_Id) + -> R.

Hence, Person_Id is Primary Key.

11) OFFICIAL

Person_Id -> {Person_Id, Medal_Presenter, Referee, Judge}

Since all the fields depend on Person_Id, (Person_Id) + -> R.

Hence, Person_Id is Primary Key.

12) ATHELETE

Person_Id -> {Person_Id, Country, Sport, Jersey_Number}

Since all the fields depend on Person_Id, (Person_Id) + -> R.

Hence, Person_Id is Primary Key

V. NORMALISATION:

1) EQUIPMENT

Primary key: Item_Id

All attributes depend on the Item_Id, hence the table is 2NF.

All attributes depend directly on Item_Id, hence the table is in 3NF.

All determinants (Item_Id) are candidate keys, hence the table is in BCNF.

2) SPONSORS

Primary key: Sponsor_Id

All attributes depend on the Sponsor_Id, hence the table is 2NF.

All attributes depend directly on Sponsor_Id, hence the table is in 3NF.

All determinants (Sponsor_Id) are candidate keys, hence the table is in BCNF.

3) TRANSPORT

Primary key: Vehicle_Id

All attributes depend on the Vehicle_Id, hence the table is 2NF.

All attributes depend directly on Vehicle_Id, hence the table is in 3NF.

All determinants (Vehicle_Id) are candidate keys, hence the table is in BCNF.

4) LOCATION

Primary key: {Name_l, Zip-code}

All attributes depend on the {Name_l, Zip-code}, hence the table is 2NF.

All attributes depend directly on {Name_l, Zip-code}, hence the table is in 3NF.

All determinants {Name_l, Zip-code} are candidate keys, hence the table is in BCNF.

5) ARENA

Primary key: {Name_l, Zip-code}

All attributes depend on the {Name_l, Zip-code}, hence the table is 2NF.

All attributes depend directly on {Name_l, Zip-code}, hence the table is in 3NF.

All determinants {Name_l, Zip-code} are candidate keys, hence the table is in BCNF.

6) TICKETS

Primary key: {Ticket_number, Date}

All attributes depend on the {Ticket_number, Date}, hence the table is 2NF.

All attributes depend directly on {Ticket_number, Date}, hence the table is in 3NF.

All determinants {Ticket_number, Date} are candidate keys, hence the table is in BCNF.

7) ACCOMODATION

Primary key: {Name_l, Zip-code}

All attributes depend on the {Name_l, Zip-code}, hence the table is 2NF.

All attributes depend directly on {Name_l, Zip-code}, hence the table is in 3NF.

All determinants {Name_l, Zip-code} are candidate keys, hence the table is in BCNF.

8) FIXTURES

Primary key: Match_Id

All attributes depend on the Match_Id, hence the table is 2NF.

All attributes depend directly on Match_Id, hence the table is in 3NF.

All determinants (Match_Id) are candidate keys, hence the table is in BCNF.

9) RESULT

Primary key: {Match_Id, Country}

All attributes depend on the {Match_Id, Country}, hence the table is 2NF.

All attributes depend directly on {Match_Id, Country}, hence the table is in 3NF.

All determinants {Match_Id, Country} are candidate keys, hence the table is in BCNF.

10) PERSON

Primary key: Person_Id

All attributes depend on the Person_Id, hence the table is 2NF.

All attributes depend directly on Person_Id, hence the table is in 3NF.

All determinants (Person_Id) are candidate keys, hence the table is in BCNF.

11) OFFICIAL

Primary key: Person_Id

All attributes depend on the Person_Id, hence the table is 2NF.

All attributes depend directly on Person_Id, hence the table is in 3NF.

All determinants (Person_Id) are candidate keys, hence the table is in BCNF.

12) ATHELETE

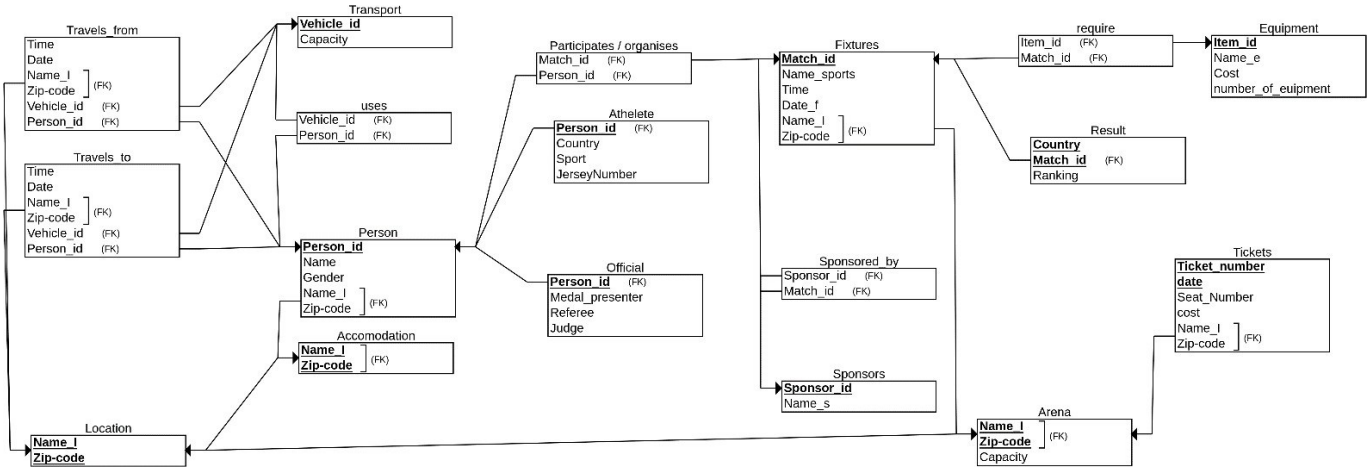
Primary key: Person_Id

All attributes depend on the Person_Id, hence the table is 2NF.

All attributes depend directly on Person_Id, hence the table is in 3NF.

All determinants (Person_Id) are candidate keys, hence the table is in BCNF.

VI. RELATIONAL SCHEMA:



VII. SQL CODE:

```
CREATE TABLE Equipment
(
  Item_id INT NOT NULL,
  Name_e VARCHAR2(30) NOT NULL,
  Cost INT NOT NULL,
  number_of_equipment INT NOT NULL,
  PRIMARY KEY (Item_id)
);
```

```
Table EQUIPMENT created.
```

```
CREATE TABLE Sponsors
(
  Name_s VARCHAR2(30) NOT NULL,
  Sponsor_id INT NOT NULL,
  PRIMARY KEY (Sponsor_id)
);
```

```
Table SPONSORS created.
```

```
CREATE TABLE Transport
(
  Vehicle_id VARCHAR2(10) NOT NULL,
  Capacity INT NOT NULL,
  PRIMARY KEY (Vehicle_id)
);
```

```
Table TRANSPORT created.
```

```
CREATE TABLE Location
(
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  PRIMARY KEY (Name_L, Zip_code)
);
```

```
Table LOCATION created.
```

```
CREATE TABLE Arena
(
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  Capacity INT NOT NULL,
  PRIMARY KEY (Name_L, Zip_code),
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Location(Name_L, Zip_code)
);
```

```
Table ARENA created.
```

```
CREATE TABLE Accomodation
(
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  PRIMARY KEY (Name_L, Zip_code),
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Location(Name_L, Zip_code)
);
```

```
Table ACCOMODATION created.
```

```
CREATE TABLE Tickets
(
  Seat_Number INT NOT NULL,
  Ticket_number INT NOT NULL,
  date_t DATE NOT NULL,
  cost INT NOT NULL,
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  PRIMARY KEY (Ticket_number, date_t),
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Arena(Name_L, Zip_code)
);
```

```
Table TICKETS created.
```

```
CREATE TABLE Fixtures
(
  Match_id VARCHAR2(10) NOT NULL,
  Name_sports VARCHAR2(30) NOT NULL,
  Time_f VARCHAR2(30) NOT NULL,
  Date_f DATE NOT NULL,
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  PRIMARY KEY (Match_id),
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Arena(Name_L, Zip_code)
);
```

```
Table FIXTURES created.
```

```
CREATE TABLE Result
(
  Country VARCHAR2(30) NOT NULL,
  Ranking INT NOT NULL,
  Match_id VARCHAR2(10) NOT NULL,
  PRIMARY KEY (Country, Match_id),
  FOREIGN KEY (Match_id) REFERENCES Fixtures(Match_id)
);
```

```
Table RESULT created.
```

```
CREATE TABLE Sponsored_by
(
  Sponsor_id INT NOT NULL,
  Match_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Sponsor_id) REFERENCES Sponsors(Sponsor_id),
  FOREIGN KEY (Match_id) REFERENCES Fixtures(Match_id)
);
```

```
Table SPONSORED_BY created.
```

```
CREATE TABLE require
(
  Item_id INT NOT NULL,
  Match_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Item_id) REFERENCES Equipment(Item_id),
  FOREIGN KEY (Match_id) REFERENCES Fixtures(Match_id)
);
```

```
Table REQUIRE created.
```

```
CREATE TABLE Person
(
  Name VARCHAR2(30) NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  Gender VARCHAR2(10),
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  PRIMARY KEY (Person_id),
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Accomodation(Name_L, Zip_code)
);
```

```
Table PERSON created.
```

```
CREATE TABLE Official
(
  Medal_presenter CHAR(1) NOT NULL,
  Referee CHAR(1) NOT NULL,
  Judge CHAR(1) NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  PRIMARY KEY (Person_id),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id)
);
```

```
Table OFFICIAL created.
```

```
CREATE TABLE Athelete
(
  Country VARCHAR2(30) NOT NULL,
  Sport VARCHAR2(30) NOT NULL,
  JerseyNumber INT NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  PRIMARY KEY (Person_id),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id)
);
```

```
Table ATHELETE created.
```

```
CREATE TABLE Participates_organises
(
  Match_id VARCHAR2(10) NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Match_id) REFERENCES Fixtures(Match_id),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id)
);
```

```
Table PARTICIPATES_ORGANISES created.
```

```
CREATE TABLE Travels_from
(
  Time_D VARCHAR2(10) NOT NULL,
  Date_D DATE NOT NULL,
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  Vehicle_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Location(Name_L, Zip_code),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id),
  FOREIGN KEY (Vehicle_id) REFERENCES Transport(Vehicle_id)
);
```

```
Table TRAVELS_FROM created.
```

```
CREATE TABLE Travels_to
(
  Time_A VARCHAR2(10) NOT NULL,
  Date_A DATE NOT NULL,
  Name_L VARCHAR2(30) NOT NULL,
  Zip_code INT NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  Vehicle_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Name_L, Zip_code) REFERENCES Location(Name_L, Zip_code),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id),
  FOREIGN KEY (Vehicle_id) REFERENCES Transport(Vehicle_id)
);
```

```
Table TRAVELS_TO created.
```

```
CREATE TABLE uses
(
  Vehicle_id VARCHAR2(10) NOT NULL,
  Person_id VARCHAR2(10) NOT NULL,
  FOREIGN KEY (Vehicle_id) REFERENCES Transport(Vehicle_id),
  FOREIGN KEY (Person_id) REFERENCES Person(Person_id)
);
```

```
Table USES created.
```

LOCATION

```
insert into location values ('Olympics Aquatic Stadium', 2501);
insert into location values ('Engenehao Stadium', 2503);
insert into location values ('Olympics Shooting Centre', 2504);
insert into location values ('Sambrodomo', 2504);
insert into location values ('Riocentro', 2505);
insert into location values ('Miramar Hotel', 2505);
insert into location values ('Fasano Hotel', 2506);
insert into location values ('Venit Mio Hotel', 2502);
insert into location values ('Grand Residency', 2502);
insert into location values ('Grand Residency', 2508);
select * from location;
```

	NAME_L	ZIP_CODE
1	Engenehao Stadium	2503
2	Fasano Hotel	2506
3	Grand Residency	2502
4	Grand Residency	2508
5	Miramar Hotel	2505
6	Olympics Aquatic Stadium	2501
7	Olympics Shooting Centre	2504
8	Riocentro	2505
9	Sambrodomo	2504
10	Venit Mio Hotel	2502

ARENA

insert into arena values ('Olympics Aquatic Stadium', 2501,15000);

insert into arena values ('Engenehao Stadium', 2503,60000);

insert into arena values ('Olympics Shooting Centre', 2504,10000);

insert into arena values ('Sambrodomo', 2504,9000);

insert into arena values ('Riocentro', 2505,36000);

select * from arena;

	NAME_L	ZIP_CODE	CAPACITY
1	Olympics Aquatic Stadium	2501	15000
2	Engenehao Stadium	2503	60000
3	Olympics Shooting Centre	2504	10000
4	Sambrodomo	2504	9000
5	Riocentro	2505	36000

ACCOMODATION

insert into accomodation values ('Miramar Hotel', 2505);

insert into accomodation values ('Fasano Hotel', 2506);

insert into accomodation values ('Venit Mio Hotel', 2502);

insert into accomodation values ('Grand Residency', 2502);

insert into accomodation values ('Grand Residency', 2508);

select * from accomodation;

	NAME_L	ZIP_CODE
1	Fasano Hotel	2506
2	Grand Residency	2502
3	Grand Residency	2508
4	Miramar Hotel	2505
5	Venit Mio Hotel	2502

TICKETS

insert into tickets values ('A1',102,'01-05-2016',550,'Engenehao Stadium', 2503);

insert into tickets values ('A1',103,'01-05-2016',1000,'Engenehao Stadium', 2503);

insert into tickets values ('A1',102,'03-05-2016',2000,'Sambrodomo', 2504);

insert into tickets values ('B1',103,'03-05-2016',2000,'Sambrodomo', 2504);

insert into tickets values ('A1',105,'10-05-2016',1500,'Riocentro', 2505);

select * from tickets;

	SEAT_NUMBER	TICKET_NUMBER	DATE_T	COST	NAME_L	ZIP_CODE
1	A1	102	01-05-16	550	Engenehao Stadium	2503
2	A1	103	01-05-16	1000	Engenehao Stadium	2503
3	A1	102	03-05-16	2000	Sambrodomo	2504
4	B1	103	03-05-16	2000	Sambrodomo	2504
5	A1	105	10-05-16	1500	Riocentro	2505

PERSON

insert into person values ('Usain Bolt','A1','Venit Mio Hotel', 2502,'M');

insert into person values ('Justin Gatlin','A2','Venit Mio Hotel', 2502,'M');

insert into person values ('Andre De Grasse','A3','Grand Residency', 2508,'M');

insert into person values ('Yohan Blake','A4','Grand Residency', 2508,'M');

insert into person values ('P. V. Sindhu','A5','Fasano Hotel', 2506,'F');

insert into person values ('Nozomi Okuhara','A6','Fasano Hotel', 2506,'F');

insert into person values ('Carolina Marin','A7','Fasano Hotel', 2506,'F');

insert into person values ('Anna Kortozaki','O1','Grand Residency', 2502,'M');

insert into person values ('Monika Karsch','O2','Miramar Hotel', 2505,'F');

insert into person values ('Heidi Diethelm Gerber','O3','Venit Mio Hotel', 2502,'M');

select * from person;

	NAME	PERSON_ID	NAME_L	ZIP_CODE	GENDER
1	Usain Bolt	A1	Venit Mio Hotel	2502	M
2	Justin Gatlin	A2	Venit Mio Hotel	2502	M
3	Andre De Grasse	A3	Grand Residency	2508	M
4	Yohan Blake	A4	Grand Residency	2508	M
5	P. V. Sindhu	A5	Fasano Hotel	2506	F
6	Nozomi Okuhara	A6	Fasano Hotel	2506	F
7	Carolina Marin	A7	Fasano Hotel	2506	F
8	Anna Kortozaki	O1	Grand Residency	2502	M
9	Monika Karsch	O2	Miramar Hotel	2505	F
10	Heidi Diethelm Gerber	O3	Venit Mio Hotel	2502	M

ATHELETE

insert into athelete values ('Jamaica','Men''s 100M',12,'A1');

insert into athelete values ('USA','Men''s 100M',34,'A2');

insert into athelete values ('Canada','Men''s 100M',20,'A3');

insert into athelete values ('South Africa','Men''s 100M',15,'A4');

insert into athelete values ('India','Badminton Women''s Single',9,'A5');

insert into athelete values ('Japan','Badminton Women''s Single',56,'A6');

insert into athelete values ('Spain','Badminton Women''s Single',2,'A7');

select * from athelete;

	COUNTRY	SPORT	JERSEYNUMBER	PERSON_ID
1	Jamaica	Men's 100M	12	A1
2	USA	Men's 100M	34	A2
3	Canada	Men's 100M	20	A3
4	South Africa	Men's 100M	15	A4
5	India	Badminton Women's Single	9	A5
6	Japan	Badminton Women's Single	56	A6
7	Spain	Badminton Women's Single	2	A7

OFFICIAL

insert into official values ('Y','Y','N','O1');

insert into official values ('N','Y','Y','O2');

insert into official values ('Y','Y','Y','O3');

select * from official;

	MEDAL_PRESENTER	REFEREE	JUDGE	PERSON_ID
1	Y	Y	N	O1
2	N	Y	Y	O2
3	Y	Y	Y	O3

TRANSPORT

insert into Transport values ('B01',100);

insert into Transport values ('B02',120);

insert into Transport values ('B03',50);

insert into Transport values ('B04',75);

insert into Transport values ('B05',60);

select * from Transport;

	VEHICLE_ID	CAPACITY
1	B01	100
2	B02	120
3	B03	50
4	B04	75
5	B05	60

FIXTURES

insert into fixtures values ('M1','Badminton Women''s Final','09:00 AM','01-05-2016','Engenehao Stadium', 2503);

insert into fixtures values ('M2','Men''s 100M','05:00 PM','03-05-2016','Sambrodomo', 2504);

insert into fixtures values ('M3','Men''s 100M Final','11:00 AM','10-05-2016','Riocentro', 2505);

select * from fixtures;

	MATCH_ID	NAME_SPORTS	TIME_F	DATE_F	NAME_L	ZIP_CODE
1	M1	Badminton Women's Final	09:00 AM	01-05-16	Engenehao Stadium	2503
2	M2	Men's 100M	05:00 PM	03-05-16	Sambrodomo	2504
3	M3	Men's 100M Final	11:00 AM	10-05-16	Riocentro	2505

USES

insert into uses values ('B05','A1');

insert into uses values ('B05','A2');

insert into uses values ('B01','A2');

insert into uses values ('B03','A3');

insert into uses values ('B03','A4');

insert into uses values ('B01','A5');

insert into uses values ('B01','A6');

insert into uses values ('B01','A7');

insert into uses values ('B01','O1');

insert into uses values ('B04','O1');

insert into uses values ('B05','O2');

insert into uses values ('B02','O3');

insert into uses values ('B05','O3');

select * from uses;

	VEHICLE_ID	PERSON_ID
1	B05	A1
2	B05	A2
3	B01	A2
4	B03	A3
5	B03	A4
6	B01	A5
7	B01	A6
8	B01	A7
9	B01	O1
10	B04	O1
11	B05	O2
12	B02	O3
13	B05	O3

PARTICIPATES_ORGANISES

```
insert into Participates_Organises values ('M1','A5');
insert into Participates_Organises values ('M1','A6');
insert into Participates_Organises values ('M1','A7');
insert into Participates_Organises values ('M1','O3');
insert into Participates_Organises values ('M2','A2');
insert into Participates_Organises values ('M2','A3');
insert into Participates_Organises values ('M2','A4');
insert into Participates_Organises values ('M2','O1');
insert into Participates_Organises values ('M2','O2');
insert into Participates_Organises values ('M3','A1');
insert into Participates_Organises values ('M3','A2');
insert into Participates_Organises values ('M3','A3');
insert into Participates_Organises values ('M3','O1');
insert into Participates_Organises values ('M3','O3');
select * from Participates_Organises;
```

	MATCH_ID	PERSON_ID
1	M1	A5
2	M1	A6
3	M1	A7
4	M1	O3
5	M2	A2
6	M2	A3
7	M2	A4
8	M2	O1
9	M2	O2
10	M3	A1
11	M3	A2
12	M3	A3
13	M3	O1
14	M3	O3

RESULT

```
insert into result values ('Spain',1,'M1');
insert into result values ('India',2,'M1');
insert into result values ('Japan',3,'M1');
insert into result values ('Canada',1,'M2');
insert into result values ('USA',2,'M2');
insert into result values ('South Africa',3,'M2');
```

insert into result values ('Jamaica',1,'M3');

insert into result values ('USA',2,'M3');

insert into result values ('Canada',3,'M3');

select * from result;

	COUNTRY	RANKING	MATCH_ID
1	Spain	1	M1
2	India	2	M1
3	Japan	3	M1
4	Canada	1	M2
5	USA	2	M2
6	South Africa	3	M2
7	Jamaica	1	M3
8	USA	2	M3
9	Canada	3	M3

SPONSORS

insert into sponsors values ('Coca Cola',501);

insert into sponsors values ('Lenovo',502);

insert into sponsors values ('Ferrari Ltd.',503);

insert into sponsors values ('Subway',504);

select * from sponsors;

	NAME_S	SPONSOR_ID
1	Coca Cola	501
2	Lenovo	502
3	Ferrari Ltd.	503
4	Subway	504

SPONSORED_BY

insert into sponsored_by values (501,'M1');

insert into sponsored_by values (502,'M1');

insert into sponsored_by values (501,'M2');

insert into sponsored_by values (501,'M3');

insert into sponsored_by values (503,'M3');

insert into sponsored_by values (504,'M3');

select * from sponsored_by;

	SPONSOR_ID	MATCH_ID
1	501	M1
2	502	M1
3	501	M2
4	501	M3
5	503	M3
6	504	M3

EQUIPMENT

insert into equipment values (901,'Badminton Racket',2100,40);

insert into equipment values (902,'Badminton Shuttle',100,20);

insert into equipment values (903,'Drones',3000,10);

select * from equipment;

	ITEM_ID	NAME_E	COST	NUMBER_OF_EQUIPMENT
1	901	Badminton Racket	2100	40
2	902	Badminton Shuttle	100	20
3	903	Drones	3000	10

REQUIRE

insert into require values (901,'M1');

insert into require values (902,'M1');

insert into require values (903,'M1');

insert into require values (903,'M2');

insert into require values (903,'M3');

select * from require;

	ITEM_ID	MATCH_ID
1	901	M1
2	902	M1
3	903	M1
4	903	M2
5	903	M3

TRAVELS_TO

insert into travels_to values ('08:30 AM','01-05-2016','Engenehao Stadium',2503,'A5','B01');

insert into travels_to values ('08:30 AM','01-05-2016','Engenehao Stadium',2503,'A6','B01');

insert into travels_to values ('08:30 AM','01-05-2016','Engenehao Stadium',2503,'A7','B01');

insert into travels_to values ('08:00 AM','01-05-2016','Engenehao Stadium',2503,'O3','B02');

insert into travels_to values ('04:30 PM','03-05-2016','Sambrodomo', 2504,'A2','B01');

insert into travels_to values ('04:30 PM','03-05-2016','Sambrodomo', 2504,'A3','B03');

insert into travels_to values ('04:30 PM','03-05-2016','Sambrodomo', 2504,'A4','B03');

insert into travels_to values ('04:00 PM','03-05-2016','Sambrodomo', 2504,'O1','B04');

insert into travels_to values ('04:00 PM','03-05-2016','Sambrodomo', 2504,'O2','B05');

insert into travels_to values ('10:30 AM','10-05-2016','Riocentro', 2505,'A1','B05');

insert into travels_to values ('10:30 AM','10-05-2016','Riocentro', 2505,'A2','B05');

insert into travels_to values ('10:00 AM','10-05-2016','Riocentro', 2505,'A3','B03');

insert into travels_to values ('10:00 AM','10-05-2016','Riocentro', 2505,'O1','B01');

insert into travels_to values ('10:00 AM','10-05-2016','Riocentro', 2505,'O3','B05');

select * from travels_to;

	TIME_A	DATE_A	NAME_L	ZIP_CODE	PERSON_ID	VEHICLE_ID
1	08:30 AM	01-05-16	Engenehao Stadium	2503	A5	B01
2	08:30 AM	01-05-16	Engenehao Stadium	2503	A6	B01
3	08:30 AM	01-05-16	Engenehao Stadium	2503	A7	B01
4	08:00 AM	01-05-16	Engenehao Stadium	2503	O3	B02
5	04:30 PM	03-05-16	Sambrodomo	2504	A2	B01
6	04:30 PM	03-05-16	Sambrodomo	2504	A3	B03
7	04:30 PM	03-05-16	Sambrodomo	2504	A4	B03
8	04:00 PM	03-05-16	Sambrodomo	2504	O1	B04
9	04:00 PM	03-05-16	Sambrodomo	2504	O2	B05
10	10:30 AM	10-05-16	Riocentro	2505	A1	B05
11	10:30 AM	10-05-16	Riocentro	2505	A2	B05
12	10:00 AM	10-05-16	Riocentro	2505	A3	B03
13	10:00 AM	10-05-16	Riocentro	2505	O1	B01
14	10:00 AM	10-05-16	Riocentro	2505	O3	B05

TRAVELS_FROM

insert into travels_from values ('03:30 PM','01-05-2016','Engenehao Stadium',2503,'A5','B01');

insert into travels_from values ('03:30 PM','01-05-2016','Engenehao Stadium',2503,'A6','B01');

insert into travels_from values ('03:30 PM','01-05-2016','Engenehao Stadium',2503,'A7','B01');

insert into travels_from values ('05:00 PM','01-05-2016','Engenehao Stadium',2503,'O3','B02');

insert into travels_from values ('10:30 PM','03-05-2016','Sambrodomo', 2504,'A2','B01');

insert into travels_from values ('11:30 PM','03-05-2016','Sambrodomo', 2504,'A3','B03');

insert into travels_from values ('11:30 PM','03-05-2016','Sambrodomo', 2504,'A4','B03');

insert into travels_from values ('10:30 PM','03-05-2016','Sambrodomo', 2504,'O1','B04');

insert into travels_from values ('10:30 PM','03-05-2016','Sambrodomo', 2504,'O2','B05');

insert into travels_from values ('05:30 PM','10-05-2016','Riocentro', 2505,'A1','B05');

insert into travels_from values ('05:30 PM','10-05-2016','Riocentro', 2505,'A2','B05');

insert into travels_from values ('06:00 PM','10-05-2016','Riocentro', 2505,'A3','B03');

insert into travels_from values ('07:00 PM','10-05-2016','Riocentro', 2505,'O1','B01');

insert into travels_from values ('05:30 PM','10-05-2016','Riocentro', 2505,'O3','B05');

select * from travels_from;

	TIME_D	DATE_D	NAME_L	ZIP_CODE	PERSON_ID	VEHICLE_ID
1	03:30 PM	01-05-16	Engenehao Stadium	2503	A5	B01
2	03:30 PM	01-05-16	Engenehao Stadium	2503	A6	B01
3	03:30 PM	01-05-16	Engenehao Stadium	2503	A7	B01
4	05:00 PM	01-05-16	Engenehao Stadium	2503	O3	B02
5	10:30 PM	03-05-16	Sambrodomo	2504	A2	B01
6	11:30 PM	03-05-16	Sambrodomo	2504	A3	B03
7	11:30 PM	03-05-16	Sambrodomo	2504	A4	B03
8	10:30 PM	03-05-16	Sambrodomo	2504	O1	B04
9	10:30 PM	03-05-16	Sambrodomo	2504	O2	B05
10	05:30 PM	10-05-16	Riocentro	2505	A1	B05
11	05:30 PM	10-05-16	Riocentro	2505	A2	B05
12	06:00 PM	10-05-16	Riocentro	2505	A3	B03
13	07:00 PM	10-05-16	Riocentro	2505	O1	B01
14	05:30 PM	10-05-16	Riocentro	2505	O3	B05