PES

UNIVERSITY

PROJECT TITLE :

OLYMPIC

MANAGEMENT DATABASE

DBMS ASSIGNMENT - 2

From Team 10,

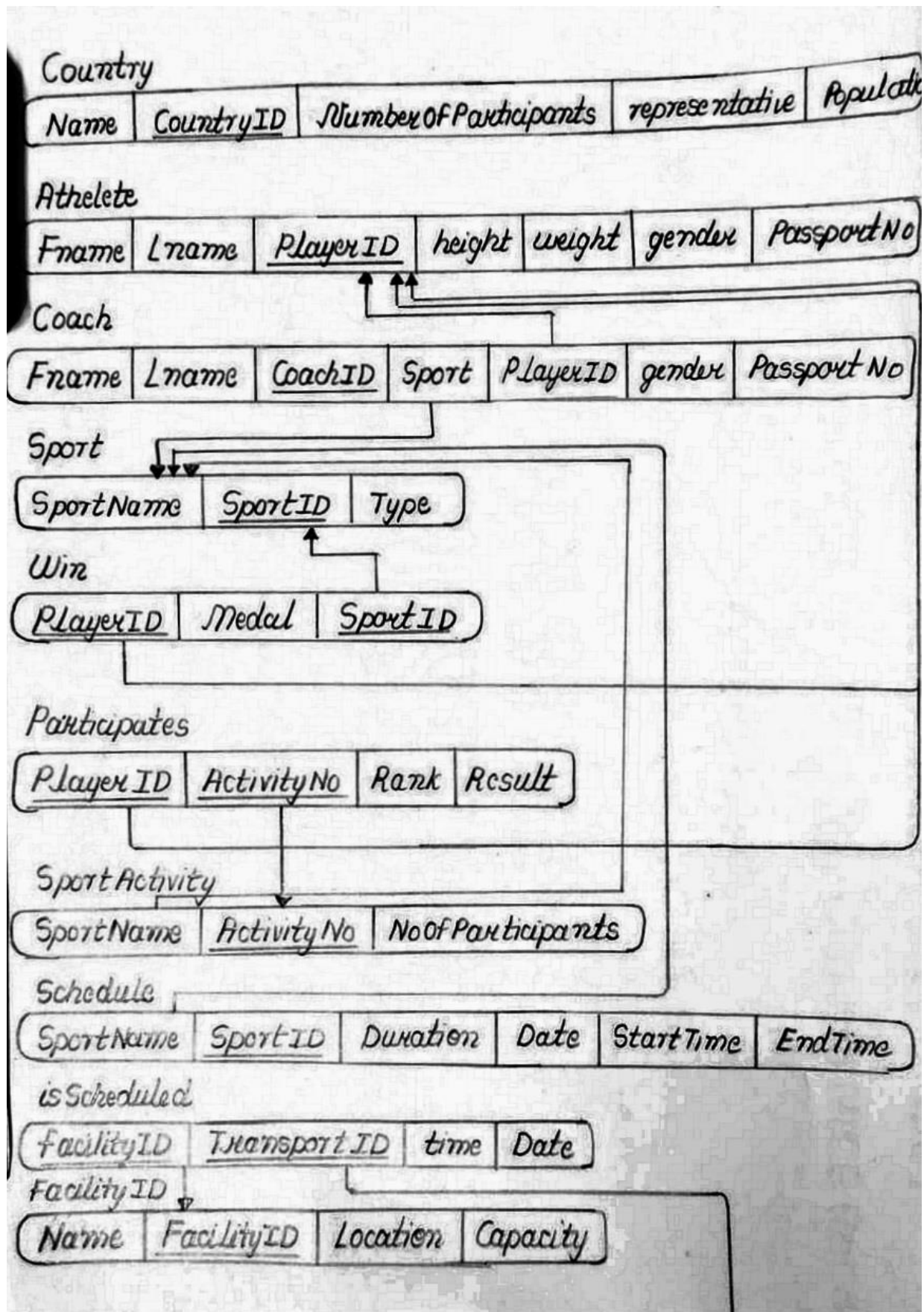| Sumukh Bharadwaj	PES1UG19CS518
Sujay Ambekar	PES1UG19CS516
Bilva Teja R	PES2UG19CS093

1) <u>DBMS Chosen:</u> Relational DBMS

<u>List of reasons/constraints to justify the choice of DBMS</u>

- Relational DBMS maintains a neat and consistent structure for every aspect of the mini world it represents, which is beneficial to our database.
- SQL databases are table based while NOSQL databases are document, key-value, graph, wide – column stores.

We intend to use PostgreSQL for this purpose.

Mapping Conceptual Model to Relational Model

Country

Name	CountryID	Number Of Participants	representative	Populati...

Athelete

Fname	Lname	PlayerID	height	weight	gender	Passport No

Coach

Fname	Lname	CoachID	Sport	PlayerID	gender	Passport No

Sport

SportName	SportID	Type

Win

PlayerID	Medal	SportID

Participates

Player ID	ActivityNo	Rank	Result

Sport Activity

SportName	Activity No	No Of Participants

Schedule

SportName	SportID	Duration	Date	StartTime	EndTime

is Scheduled

FacilityID	Transport ID	time	Date

Facility ID

Name	FacilityID	Location	Capacity

Transportation

Capacity	TransportID	Type	FacilityID

Support Staff

Name	StaffID	gender	Role

Phone No

StaffID	Phone No

Olympic Event

Country Name	year	season	city	state

.sql file with create statements

```sql
drop database olympics;

create database olympics;


\c olympics


CREATE TABLE Country
(       Name VARCHAR(15) NOT NULL,
        CountryID CHAR(5) NOT NULL,
        NumberOfParticipants INT NOT NULL,
        Population VARCHAR(30),
        Representative VARCHAR(30) NOT NULL,
        PRIMARY KEY (CountryID)
);


CREATE TABLE Athlete
(       FirstName VARCHAR(15) NOT NULL,
        LastName VARCHAR(15) NOT NULL,
        PlayerID CHAR(6) NOT NULL,
        Gender CHAR(1) NOT NULL,
        Age INT NOT NULL,
        Height DECIMAL NOT NULL,
        Weight DECIMAL NOT NULL,
        PassportNo INT NOT NULL,
        PRIMARY KEY (PlayerID)
);


CREATE TABLE Sport
(       SportName VARCHAR(20) NOT NULL UNIQUE,
        SportID CHAR(5) NOT NULL,
        TypeOfSport VARCHAR(10),
        PRIMARY KEY (SportID)
);
```

```sql
CREATE TABLE SportActivity
(       SportName VARCHAR(20) NOT NULL,
        ActivityNo INT NOT NULL,
        NumberOfParticipants INT NOT NULL,
        PRIMARY KEY (ActivityNo),
        FOREIGN KEY (SportName) REFERENCES Sport(SportName)
);


CREATE TABLE Schedule
(       SportName VARCHAR(20) NOT NULL,
        SportID CHAR(5) NOT NULL,
        Duration DECIMAL NOT NULL,
        Date DATE NOT NULL,
        StartTime TIME NOT NULL,
        EndTime TIME NOT NULL,
        PRIMARY KEY (SportID),
        FOREIGN KEY (SportName) REFERENCES Sport(SportName)
);


CREATE TABLE Facility
(       Name VARCHAR(20) NOT NULL,
        FacilityID CHAR(5) NOT NULL,
        Location VARCHAR(20) NOT NULL,
        Capacity INT NOT NULL,
        PRIMARY KEY (FacilityID)
);


CREATE TABLE Transportation
(       Type VARCHAR(10) NOT NULL,
        FacilityID CHAR(5) NOT NULL,
        TransportID CHAR(5) NOT NULL,
        Capacity INT NOT NULL,
        PRIMARY KEY (TransportID),
```

```sql
        FOREIGN KEY (FacilityID) REFERENCES Facility(FacilityID)
);


CREATE TABLE SupportStaff
(       Name VARCHAR(20) NOT NULL,
        StaffID CHAR(5) NOT NULL,
        Gender CHAR(1) NOT NULL,
        Role VARCHAR(20) NOT NULL,
        PRIMARY KEY (StaffID)
);


CREATE TABLE Coach
(       FirstName VARCHAR(15) NOT NULL,
        LastName VARCHAR(15) NOT NULL,
        CoachID CHAR(5) NOT NULL,
        Gender CHAR(1) NOT NULL,
        PlayerID VARCHAR(6) NOT NULL,
        Sport VARCHAR(20) NOT NULL,
        PassportNo INT NOT NULL,
        PRIMARY KEY (CoachID),
        FOREIGN KEY (PlayerID) REFERENCES Athlete(PlayerID),
        FOREIGN KEY (Sport) REFERENCES Sport(SportName)
);


CREATE TABLE OlympicEvent
(       CountryName VARCHAR(15) NOT NULL,
        Year INT NOT NULL,
        Season VARCHAR(6) NOT NULL,
        City VARCHAR(10) NOT NULL,
        State VARCHAR(10) NOT NULL,
        PRIMARY KEY (CountryName)
);


CREATE TABLE Win
```

```sql
(       SportID CHAR(5) NOT NULL,

        PlayerID CHAR(6) NOT NULL,

        Medal VARCHAR(6) NOT NULL,

        PRIMARY KEY (SportID,PlayerID),

        FOREIGN KEY (PlayerID) REFERENCES Athlete(PlayerID),

        FOREIGN KEY (SportID) REFERENCES Sport(SportID)

);


CREATE TABLE Participates

(       ActivityNo INT NOT NULL,

        PlayerID CHAR(6) NOT NULL,

        Rank INT NOT NULL,

        Result VARCHAR(6),

        PRIMARY KEY (PlayerID,ActivityNo),

        FOREIGN KEY (PlayerID) REFERENCES Athlete(PlayerID),

        FOREIGN KEY (ActivityNo) REFERENCES SportActivity(ActivityNo)

);


CREATE TABLE is_Scheduled

(       Time TIME NOT NULL,

        Date DATE NOT NULL,

        FacilityID CHAR(5) NOT NULL,

        TransportID CHAR(5) NOT NULL,

        PRIMARY KEY (FacilityID,TransportID),

        FOREIGN KEY (TransportID) REFERENCES Transportation(TransportID)

);


CREATE TABLE PhoneNo

(       StaffID CHAR(5) NOT NULL,

        Phone BIGINT NOT NULL,

        PRIMARY KEY (StaffID,Phone),

        FOREIGN KEY (StaffID) REFERENCES SupportStaff(StaffID)

);
```

.sql file with insert statements

\c olympics

INSERT into Country values('India',100,156,'1350Million','Neeraj');

INSERT into Country values('USA',101,201,'1150Million','Michael');

INSERT into Country values('China',102,176,'1550Million','Xiao');

INSERT into Country values('Japan',103,196,'150Million','Minamoto');

INSERT into Country values('SriLanka',104,190,'850Million','Kushal');

INSERT into Country values('SouthKorea',105,287,'900Million','Kim');

INSERT into Country values('HongKong',106,67,'50Million','Jong');

INSERT into Country values('Taiwan',107,42,'350Million','Jinping');

INSERT into Country values('Australia',108,125,'750Million','Imran');

INSERT into Athlete values('PV','Sindhu','100','F',25,170.3,57.5,98765);

INSERT into Athlete values('Neeraj','Chopra','101','M',23,180.5,67.5,98764);

INSERT into Athlete values('Lovlina','Borgohain','102','F',26,171.3,55.5,98763);

INSERT into Athlete values('Milka','Singh','103','M',45,180.3,67.5,98762);

INSERT into Athlete values('PT','Usha','104','F',28,176.3,53.5,98761);

INSERT into Athlete values('Ravi','Dahiya','105','M',32,167.3,71.5,98760);

INSERT into Athlete values('Sushil','Kumar','106','M',45,187.3,77.3,98759);

INSERT into Athlete values('Suchith','Shankar','107','M',31,177.9,59.8,98758);

INSERT into Athlete values('Aarav','Bindra','108','M',30,167.9,59.8,98757);

INSERT into Athlete values('Virat','Singh','109','M',39,178.9,59.8,98756);

INSERT into Athlete values('Neerav','Paswan','110','M',29,179.9,59.8,98755);

INSERT into Sport values('Badminton','10','Individual');

INSERT into Sport values('Cricket','11','Team');

INSERT into Sport values('Javelin','12','Individual');

INSERT into Sport values('Hockey','13','Team');

INSERT into Sport values('BasketBall','14','Team');

```sql
INSERT into Sport values('BaseBall','15','Team');
INSERT into Sport values('FootBall','16','Team');
INSERT into Sport values('Boxing','17','Individual');
INSERT into Sport values('Wrestling','18','Individual');
INSERT into Sport values('Golf','19','Individual');


INSERT into SportActivity values('Badminton',1,4);
INSERT into SportActivity values('Badminton',2,6);
INSERT into SportActivity values('Cricket',3,2);
INSERT into SportActivity values('Cricket',4,2);
INSERT into SportActivity values('Cricket',5,2);
INSERT into SportActivity values('Javelin',6,15);
INSERT into SportActivity values('Javelin',7,14);
INSERT into SportActivity values('Hockey',8,4);
INSERT into SportActivity values('BasketBall',9,5);
INSERT into SportActivity values('Wrestling',10,16);
INSERT into SportActivity values('Golf',11,20);


INSERT into Schedule values('Badminton',10,38.3,'2021-07-15','13:00:00','14:00:00');
INSERT into Schedule values('Javelin',12,30,'2021-07-14','12:00:00','13:00:00');
INSERT into Schedule values('Cricket',11,42,'2021-07-13','14:00:00','15:00:00');
INSERT into Schedule values('BasketBall',14,50,'2021-07-12','15:00:00','16:00:00');
INSERT into Schedule values('BaseBall',15,32,'2021-07-11','10:00:00','11:00:00');
INSERT into Schedule values('Hockey',13,100,'2021-07-10','13:00:00','14:00:00');
INSERT into Schedule values('Wrestling',18,38.3,'2021-07-09','10:00:00','11:00:00');
INSERT into Schedule values('Golf',19,45,'2021-07-08','09:00:00','10:00:00');
INSERT into Schedule values('FootBall',16,38,'2021-07-07','11:00:00','12:00:00');
INSERT into Schedule values('Boxing',17,15,'2021-07-06','13:00:00','14:00:00');


INSERT into Facility values('RedPlanet',200,'Tokyo',25);
INSERT into Facility values('Aman',201,'Hokaido',32);
```

```sql
INSERT into Facility values('HostelEast21',202,'Tokyo',56);
INSERT into Facility values('TokyoPrince',203,'Hokaido',16);
INSERT into Facility values('RoyalParkHotel',204,'Tokyo',87);
INSERT into Facility values('TokyoBay',205,'Tokyo',22);
INSERT into Facility values('SarkuraCross',206,'Hokaido',29);
INSERT into Facility values('TheGateHotel',207,'Tokyo',75);


INSERT into Transportation values('Bus',200,500,25);
INSERT into Transportation values('Car',201,501,32);
INSERT into Transportation values('Car',202,502,56);
INSERT into Transportation values('Bus',203,503,16);
INSERT into Transportation values('Taxi',204,504,87);
INSERT into Transportation values('Car',205,505,22);
INSERT into Transportation values('Taxi',206,506,29);
INSERT into Transportation values('Bus',207,507,75);


INSERT into SupportStaff values('Alex',600,'M','Physio');
INSERT into SupportStaff values('Theodore',601,'F','Host');
INSERT into SupportStaff values('Yamato',602,'M','Organiser');
INSERT into SupportStaff values('Joy',603,'M','Physio');
INSERT into SupportStaff values('Tabata',604,'M','Host');
INSERT into SupportStaff values('Inata',605,'F','Cameraman');
INSERT into SupportStaff values('Michael',606,'M','Commentator');
INSERT into SupportStaff values('Elizabeth',607,'F','Maintainence');


INSERT into Coach values('Chaitanya','Sharma',700,'M',100,'Badminton',12340);
INSERT into Coach values('Tarpan','Roy',701,'M',101,'Javelin',12341);
INSERT into Coach values('Hemanth','Hegde',702,'M',102,'Boxing',12342);
INSERT into Coach values('Lohith','Kumar',703,'M',103,'Hockey',12343);
INSERT into Coach values('Nihal','Jadhav',704,'M',104,'BaseBall',12344);
INSERT into Coach values('Pranjal','Kumar',705,'M',105,'Wrestling',12345);
```

```sql
INSERT into Coach values('Deepti','Yadav',706,'F',106,'Golf',12346);

INSERT into Coach values('Divya','Sharma',707,'F',107,'FootBall',12347);

INSERT into Coach values('Anjali','Kumar',708,'F',108,'BasketBall',12348);


INSERT into OlympicEvent values('Japan',2021,'Summer','Tokyo','Kanto');


INSERT into Win values(10,100,'Silver');

INSERT into Win values(11,101,'Gold');

INSERT into Win values(12,102,'Bronze');

INSERT into Win values(13,103,'Silver');

INSERT into Win values(14,104,'Bronze');

INSERT into Win values(15,105,'Bronze');

INSERT into Win values(16,106,'Gold');



INSERT into Participates values(1,100,2,'Won');

INSERT into Participates values(2,101,1,'Won');

INSERT into Participates values(3,102,3,'Won');

INSERT into Participates values(4,103,2,'Won');

INSERT into Participates values(5,104,3,'Won');

INSERT into Participates values(6,105,3,'Won');

INSERT into Participates values(7,106,1,'Won');

INSERT into Participates values(8,107,0,'Lost');

INSERT into Participates values(9,108,0,'Lost');

INSERT into Participates values(10,109,0,'Lost');


INSERT into is_Scheduled values('13:00:00','2021-07-12',200,500);

INSERT into is_Scheduled values('12:00:00','2021-07-11',201,501);

INSERT into is_Scheduled values('11:00:00','2021-07-12',202,502);

INSERT into is_Scheduled values('10:00:00','2021-07-11',203,503);

INSERT into is_Scheduled values('09:00:00','2021-07-10',204,504);

INSERT into is_Scheduled values('11:00:00','2021-07-13',205,505);

INSERT into is_Scheduled values('12:00:00','2021-07-14',206,506);

INSERT into is_Scheduled values('13:00:00','2021-07-11',207,507);
```

```
INSERT into PhoneNo values(600,987654321);

INSERT into PhoneNo values(601,987654320);

INSERT into PhoneNo values(602,987654322);

INSERT into PhoneNo values(603,987654323);

INSERT into PhoneNo values(604,987654324);

INSERT into PhoneNo values(605,987654325);

INSERT into PhoneNo values(606,987654326);

INSERT into PhoneNo values(607,987654327);
```

Contributions:

Sumukh Bharadwaj	Relational Schema diagram and Create statements
Sujay Ambekar	Create and insert statements
Bilva Teja R	Insert statements and report making

Activity	Time Spent
1	30 minutes
2	5 Hrs

Thank You for your Patience,

Regards,

Team H10