

CREATION OF DATABASE & CREATION OF TABLES

1. Creation of database :

```
CREATE DATABASE PROJ_IMT543_GROUP01
```

2. Creation of tables :

Part A - Lookup tables

-- Table 01

```
CREATE TABLE tblEVENT_TYPE  
(Event_type_ID INT IDENTITY(61,1) primary key,  
Event_type_name varchar(30) NOT NULL,  
Event_type_descr varchar(500) NULL)  
GO
```

-- Table 02

```
CREATE TABLE tblCOUNTRY  
(Country_ID INT IDENTITY(201,1) primary key,  
Country_name varchar(30) NOT NULL)  
GO
```

-- Table 03

```
CREATE TABLE tblGENDER  
(Gender_ID INT IDENTITY(1,1) primary key,  
Gender varchar(10) NOT NULL,  
Gender_descr varchar(500) NULL)  
GO
```

-- Table 04

```
CREATE TABLE tblMEDAL  
(Medal_ID INT IDENTITY(1,1) primary key,  
MedalName varchar(10) NOT NULL,  
Medal_descr VARCHAR(100) NULL)  
GO
```

-- Table 05

```
CREATE TABLE tblSPONSORS  
(Sponsor_ID INT IDENTITY(9001,1) primary key,  
SponsorName varchar(20) NOT NULL,
```

```
SponsorDescr varchar(500) NULL)  
GO
```

-- Table 06

```
CREATE TABLE tblCITY  
(City_ID varchar(5) primary key,  
City_Name varchar(30) NOT NULL)  
GO
```

-- Table 07

```
create table tblTICKET_TYPE  
(Ticket_type_ID INT IDENTITY(1,1) primary key,  
Ticket_type_name varchar(20) NOT NULL,  
Ticket_type_descr varchar(500) NULL)  
GO
```

-- Table 08

```
CREATE TABLE tblVENDOR_TYPE  
(Vendor_type_ID INT IDENTITY(1,1) primary  
key,  
Vendor_type_name varchar(50) NOT NULL,  
Vendor_type_descr varchar(500) NULL)  
GO
```

-- Table 09

```
CREATE TABLE tblCUSTOMER  
(Customer_ID INT IDENTITY(50001,1) primary  
key,  
CustomerFname varchar(30) NOT NULL,  
CustomerLname varchar(30) NOT NULL)
```

Part B - Transactional tables

-- Table 10

```
CREATE TABLE tblFACILITY
(Facility_ID INT IDENTITY(7001,1) primary key,
City_ID varchar(5) FOREIGN KEY REFERENCES tblCITY(City_ID),
Facility_Name varchar(50) NOT NULL)
GO
```

-- Table 11

```
CREATE TABLE tblEVENT
(Event_ID INT IDENTITY(1,1) primary key,
Event_Name varchar(30) NOT NULL,
Event_type_ID INT FOREIGN KEY REFERENCES tblEVENT_TYPE(Event_type_ID) NOT NULL)
GO
```

-- Table 12

```
CREATE TABLE tblVENDOR
(Vendor_ID INT IDENTITY(40001,1) primary key,
Vendor_name varchar(50) NOT NULL,
Vendor_type_ID INT FOREIGN KEY REFERENCES tblVENDOR_TYPE(Vendor_type_id) NOT NULL)
GO
```

-- Table 13

```
CREATE TABLE tblOLYMPIAD
(Olympics_ID INT IDENTITY(3001,1) primary key,
Country_ID INT FOREIGN KEY REFERENCES tblCOUNTRY(Country_ID) NOT NULL,
[YEAR] INT NOT NULL,
Oly_Start_date Date NOT NULL,
Oly_endDate Date NOT NULL)
GO
```

-- Table 14

```
CREATE TABLE tblOLYMPIC_EVENT
(OE_ID INT IDENTITY(5001,1) primary key,
EVENT_ID INT FOREIGN KEY REFERENCES tblEVENT(Event_ID) NOT NULL,
Olympics_ID INT FOREIGN KEY REFERENCES tblOLYMPIAD(Olympics_ID) NOT NULL,
Facility_ID INT FOREIGN KEY REFERENCES tblFACILITY(Facility_ID) NOT NULL,
DateKey Date)
GO
```

-- Table 15

```
CREATE TABLE tblTICKET
(Ticket_ID INT IDENTITY(1,1) primary key,
OE_ID INT FOREIGN KEY REFERENCES tblOLYMPIC_EVENT(OE_ID) NOT NULL,
Vendor_ID INT FOREIGN KEY REFERENCES tblVENDOR(Vendor_ID) NOT NULL,
Customer_ID INT FOREIGN KEY REFERENCES tblCUSTOMER(Customer_ID) NOT NULL,
Ticket_type_ID INT FOREIGN KEY REFERENCES tblTICKET_TYPE(Ticket_type_ID) NOT NULL,
Purchase_count INT NOT NULL,
Purchase_date Date NOT NULL)
```

-- Table 16

```
CREATE TABLE tblATHLETE
(Athlete_ID INT IDENTITY(10001,1) primary key,
Country_ID INT FOREIGN KEY REFERENCES tblCOUNTRY(Country_ID) NOT NULL,
```

```
AthleteFname varchar(50) NOT NULL,  
AthleteLname varchar(50) NOT NULL,  
DateOfBirth Date NOT NULL,  
Gender_ID INT FOREIGN KEY REFERENCES tblGENDER(Gender_ID) NOT NULL)  
GO
```

-- Table 17

```
CREATE TABLE tblPARTICIPANT  
(Participant_ID INT IDENTITY(200001,1) primary key,  
OE_ID INT FOREIGN KEY REFERENCES tblOLYMPIC_EVENT(OE_ID) NOT NULL,  
Athlete_ID INT FOREIGN KEY REFERENCES tblATHLETE(Athlete_ID) NOT NULL,  
Medal_ID INT FOREIGN KEY REFERENCES tblMEDAL(Medal_ID) NOT NULL)  
GO
```

-- Table 18

```
CREATE TABLE tblSPONSOR_OLY_EVENT  
(spsr_OE_ID INTEGER IDENTITY(1,1) PRIMARY KEY,  
Sponsor_ID INT FOREIGN KEY REFERENCES tblSPONSORS(Sponsor_ID) NOT NULL,  
OE_ID INT FOREIGN KEY REFERENCES tblOLYMPIC_EVENT(OE_ID) NOT NULL,  
Sponsor_amount_$ INT NOT NULL)
```

CREATING STORED PROCEDURES FOR EACH TABLE

Part A - Stored procedures for look-up tables

-- 1) For tblEVENT_TYPE

```
CREATE PROCEDURE add_sport_event_type
@Ev_typeName varchar(30),
@Ev_typeDescr varchar(500)
AS
INSERT INTO tblEVENT_TYPE
(Event_type_name, Event_type_descr)
VALUES(@Ev_typeName, @Ev_typeDescr)
GO
```

-- 2) For tblCOUNTRY

```
CREATE PROCEDURE country_names
@CntName varchar(30)
AS
INSERT INTO tblCOUNTRY (Country_Name)
VALUES(@CntName)
GO
```

-- 3) For tblGENDER

```
CREATE PROCEDURE add_gender_types
@Gname varchar(10),
@Gdescr varchar(500)
AS
INSERT INTO tblGENDER (Gender,
Gender_descr)
VALUES(@Gname, @Gdescr)
GO
```

-- 4) For tblMEDAL

```
CREATE PROCEDURE medal_types_four
@Mname varchar(10)
AS
INSERT INTO tblMEDAL (MedalName)
VALUES(@Mname)
GO
```

-- 5) For tblSPONSORS

```
CREATE PROCEDURE add_sponsor_name
@Sname varchar(20),
@SpDescr varchar(500)
AS
INSERT INTO tblSPONSORS (SponsorName,
SponsorDescr)
VALUES(@Sname, @SpDescr)
GO
```

-- 6) For tblCITY

```
CREATE PROCEDURE add_city_names
@C_ID varchar(5),
@Cname varchar(30)
AS
INSERT INTO tblCITY (City_ID, City_Name)
VALUES(@C_ID, @Cname)
GO
```

-- 7) For tblTICKET_TYPE

```
CREATE PROCEDURE ticket_type_add
@T_typeName varchar(20),
@T_typeDescr varchar(500)
AS
INSERT INTO TBLTICKET_TYPE
(Ticket_type_name, Ticket_type_descr)
VALUES(@T_typeName, @T_typeDescr)
GO
```

-- 8) For tblVENDOR_TYPE

```
CREATE PROCEDURE add_vendor_type
@V_typeName varchar(50),
@V_typeDescr varchar(500)
AS
INSERT INTO tblVENDOR_TYPE
(Vendor_type_name, Vendor_type_descr)
VALUES(@V_typeName, @V_typeDescr)
GO
```

For table 9 = tblCUSTOMER, we did not add entries using stored procedure. Rather we copied the bulk data from another available database.

The code for that operation is in Step III file.

Part B - Stored procedures for transactional tables - Referring to only one foreign key

-- 10) For tblFACILITY

```
CREATE PROCEDURE add_facility
@City_nm varchar(30),
@Facility_nm VARCHAR(50)
AS
DECLARE @City_ID VARCHAR(5)
SET @City_ID = (SELECT City_ID FROM tblCITY
WHERE City_Name = @City_nm)
INSERT INTO tblFACILITY (City_ID, Facility_Name)
VALUES (@City_ID, @Facility_nm)
```

-- 11) For tblEVENT

```
CREATE PROCEDURE add_event
@Event_type_nm varchar(30),
@Event_nm VARCHAR(30)
AS
DECLARE @Event_type_ID INT
SET @Event_type_ID = (SELECT Event_type_ID FROM tblEVENT_TYPE
WHERE Event_type_name = @Event_type_nm)
INSERT INTO tblEvent (Event_Name, Event_type_ID)
VALUES (@Event_nm, @Event_type_ID)
```

-- 12) For tblVENDOR

```
CREATE PROCEDURE add_vendor_name
@Vend_Name varchar(50),
@Vend_type_name varchar(50)
AS
DECLARE @Vend_type_ID INT
SET @Vend_type_ID = (SELECT Vendor_type_ID FROM tblVENDOR_TYPE
WHERE Vendor_type_name = @Vend_type_name)
INSERT INTO tblVENDOR (Vendor_name, Vendor_type_ID)
VALUES(@Vend_Name, @Vend_type_ID)
```

-- 13) For tblOLYMPIAD

```
CREATE PROCEDURE Add_Olympic_extravaganza
@Ctr_name varchar(30),
@Yr INT,
@Ol_start DATE,
@Ol_end DATE
AS
DECLARE @Ctr_ID INT
SET @Ctr_ID = (SELECT Country_ID FROM tblCOUNTRY
WHERE Country_name = @Ctr_name)
INSERT INTO tblOLYMPIAD (Country_ID, Year, Oly_Start_date, Oly_endDate)
VALUES (@Ctr_ID, @Yr, @Ol_start, @Ol_end)
GO
```

Part C - Stored procedures for transactional tables - Referring more than one foreign key

-- 14) For tblOLYMPIC_EVENT

```
CREATE PROCEDURE Add_olympic_event
@Event_nm VARCHAR(30),
@Facil_nm varchar(50),
@Ctr_nm VARCHAR(30),
@Dt DATE
AS

DECLARE @Event_ID INT ,@Olymp_ID INT, @Facil_ID INT
SET @Event_ID = (SELECT Event_ID FROM tblEVENT
WHERE Event_Name = @Event_nm)
SET @Facil_ID = (SELECT Facility_ID FROM tblFACILITY
WHERE Facility_Name = @Facil_nm)
SET @Olymp_ID = (SELECT Olympics_ID FROM tblOLYMPIAD
JOIN tblCOUNTRY on tblOLYMPIAD.Country_ID = tblCOUNTRY.Country_ID
WHERE Country_name =@Ctr_nm)

INSERT INTO tblOLYMPIC_EVENT (EVENT_ID, Olympics_ID, Facility_ID, DateKey)
VALUES (@Event_ID,@Olymp_ID, @Facil_ID, @Dt)
```

-- 15) For tblTICKET

```
CREATE PROCEDURE ticket_add
@vedr_nm VARCHAR(30),
@Cust_Fname varchar(30),
@Cust_Lname varchar(30),
@Ticket_type_nm varchar(30),
@yr INT,
@event_nm varchar(30),
@Purch_amt INTEGER,
@purch_dt DATE
AS

DECLARE @Cust_ID INT, @Vendr_ID INT, @Tick_type_ID INT, @OE_ID INT
SET @Cust_ID = (SELECT TOP 1 Customer_ID FROM tblCUSTOMER
WHERE CustomerFname = @Cust_Fname
AND CustomerLname = @Cust_Lname)
SET @Vendr_ID = (SELeCT Vendor_ID FROM tblVENDOR
WHERE Vendor_name = @vedr_nm)
SET @Tick_type_ID = (SELECT Ticket_type_ID FROM tblTICKET_TYPE
WHERE Ticket_type_name = @Ticket_type_nm)
SET @OE_ID = (SELECT TOP 1 OE.OE_ID FROM tblOLYMPIC_EVENT AS OE
JOIN tblOLYMPIAD AS OLD ON OE.Olympics_ID = OLD.Olympics_ID
JOIN tblEVENT ON tblEVENT.Event_ID = OE.EVENT_ID
WHERE OLD.[YEAR] = @yr
AND Event_Name = @event_nm)

INSERT INTO tblTICKET (Ticket_type_ID, OE_ID, Vendor_ID, Customer_ID, Purchase_count,
Purchase_date)
VALUES (@Tick_type_ID, @OE_ID, @Vendr_ID, @Cust_ID, @Purch_amt, @purch_dt)
```

Part E - Stored procedures for transactional tables - Using nested stored procedures

1) Nested procedures to use in the outer stored procedures

-- a) For retrieving countryID

```
CREATE PROCEDURE get_countryID
@CName varchar(100),
@CountryID INT OUTPUT
AS
SET @CountryID = (SELECT C.Country_ID FROM tblCOUNTRY C WHERE Country_name = @CName)
GO
```

-- b) For retrieving genderID

```
CREATE PROCEDURE get_genderID
@GName varchar (100),
@GenderID INT OUTPUT
AS
SET @GenderID = (SELECT G.Gender_ID FROM tblGENDER G WHERE G.Gender = @GName)
GO
```

-- c) For retrieving medalID

```
CREATE PROCEDURE get_medal_ID
@MedalColour varchar(10),
@MID INT OUTPUT
AS
SET @MID = (SELECT Medal_ID FROM tblMEDAL WHERE MedalName = @MedalColour)
GO
```

-- d) For retrieving sponsorID

```
CREATE PROCEDURE get_sponsor_ID
@SPName varchar(500),
@SP_ID INT OUTPUT
AS
SET @SP_ID = ( SELECT Sponsor_ID FROM tblSPONSORS WHERE SponsorName = @SPName)
GO
```

-- e) For retrieving athleteID

```
CREATE PROCEDURE get_athleteID
@AFName varchar(500),
@ALName varchar(500),
@AID INT OUTPUT
AS
SET @AID = (SELECT Athlete_ID from tblATHLETE WHERE AthleteFname = @AFName AND
AthleteLname = @ALName)
GO
```

-- f) For retrieving oly_eventID

```
CREATE PROCEDURE get_OE_ID
@EventName varchar(500),
@CountryName varchar(500),
@FacilityName varchar(500),
@OE_ID INT OUTPUT
AS
SET @OE_ID = (SELECT OE_ID FROM tblOLYMPIC_EVENT AS OE
JOIN tblOLYMPIAD AS OLYD ON OLYD.Olympics_ID = OE.Olympics_ID
JOIN tblFACILITY AS FC ON FC.Facility_ID = OE.Facility_ID
JOIN tblEVENT ON tblEVENT.Event_ID = OE.EVENT_ID
JOIN tblCOUNTRY ON tblCOUNTRY.Country_ID = OLYD.Country_ID
WHERE tblEVENT.Event_Name = @EventName
AND tblCOUNTRY.Country_name = @CountryName
AND FC.Facility_Name = @FacilityName)
GO
```

2) Nested procedures to use in the outer stored procedures Actual outer stored procedures that use get_ID nested procedures created above

-- 16) For tblATHLETE

```
CREATE PROCEDURE add_athlete
@Country varchar(100),
@AFName varchar(100),
@ALName varchar(100),
@DOB Date,
@Gender varchar(100)
AS
```

```
DECLARE @GID INT, @CID INT
EXECUTE get_countryID
@CName = @Country,
@CountryID = @CID OUTPUT
EXECUTE get_genderID
@GName = @Gender,
@GenderID = @GID OUTPUT
```

```
INSERT INTO tblATHLETE (Country_ID, AthleteFname, AthleteLname, DateOfBirth, Gender_ID)
VALUES (@CID, @AFName, @ALName, @DOB, @GID)
GO
```

-- 17) For tblPARTICIPANT


```

CREATE PROCEDURE add_participant
@AthleteFName varchar(500),
@AthleteLName varchar(500),
@Event_Name varchar(500),
@Country_Name varchar(50),
@Facility_Name varchar(100),
@MedalWon varchar(15)
AS
DECLARE @A_ID INT, @M_ID INT, @OEID INT, @E_ID INT
EXECUTE get_OE_ID
@EventName = @Event_Name,
@CountryName = @Country_Name,
@FacilityName = @Facility_Name,
@OE_ID = @OEID OUTPUT
EXECUTE get_athleteID
@AFName = @AthleteFName,
@ALName = @AthleteLName,
@AID = @A_ID OUTPUT
EXECUTE get_medal_ID
@MedalColour = @MedalWon,
@MID = @M_ID OUTPUT

INSERT INTO tblPARTICIPANT (OE_ID, Athlete_ID, Medal_ID)
VALUES (@OEID, @A_ID, @M_ID)
Go

```

-- 18) For tblSPONSOR_OLY_EVENT

```

CREATE PROCEDURE add_sponsor_oly_event
@Event_name varchar(500),
@CName varchar(500),
@Facility_Name varchar(500),
@sponsor_name varchar(500),
@SPAmount$ INT
AS

DECLARE @SPID INT, @OEID INT
EXECUTE get_OE_ID
@EventName = @Event_name,
@CountryName = @CName,
@FacilityName = @Facility_Name,
@OE_ID = @OEID OUTPUT
EXECUTE get_sponsor_ID
@SPName = @sponsor_name,
@SP_ID = @SPID OUTPUT

INSERT INTO tblSPONSOR_OLY_EVENT (Sponsor_ID, OE_ID, Sponsor_amount_$)
VALUES (@SPID, @OEID, @SPAmount$)
GO

```

ESTABLISHING THE BUSINESS RULES FOR ENSURING THE VALID ENTRIES

1) Each customer can purchase maximum of 10 tickets per purchase instance

```
CREATE FUNCTION TicketCountLimit()
RETURNS INTEGER
AS
BEGIN
    DECLARE @RET INTEGER = 0
    IF EXISTS (SELECT T.Purchase_count, C.Customer_ID
    FROM tblTICKET T
    JOIN tblCUSTOMER C ON T.Customer_ID = C.Customer_ID
    WHERE T.Purchase_count > 10)
    BEGIN
        SET @RET = 1
    END
    RETURN @RET
END
GO
```

```
ALTER TABLE tblTICKET
ADD CONSTRAINT LessThan10PerCustomer
CHECK (dbo.TicketCountLimit()=0)
GO
```

2) All male athletes must be at least 21 years old

```
CREATE FUNCTION AthleteAgeLimit()
RETURNS INTEGER
AS
BEGIN
    DECLARE @RET INTEGER = 0
    IF EXISTS (SELECT *
    FROM tblATHLETE AS A
    JOIN tblGENDER G ON A.Gender_ID = G.Gender_ID
    WHERE A.Gender_ID = '1'

    AND DATEDIFF(YEAR, A.DateOfBirth, GETDATE()) < 21)
    BEGIN
        SET @RET = 1
    END
    RETURN @RET
END
GO
```

```
ALTER TABLE tblATHLETE
IMT543 GROUP1 ADD CONSTRAINT MaleAthleteAgeLimit
CHECK (dbo.AthleteAgeLimit()=0)
GO
```

EXECUTING THE STORED PROCEDURES TO ADD ENTRIES INTO THE TABLES

Part A - Adding entries into Lookup tables

-- 1) For tblEVENT_TYPE

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Swimming',
@Ev_typeDescr = 'Swimming is an individual or
team racing sport that requires the use of one's
entire body to move through water.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Archery',
@Ev_typeDescr = 'Members shoot at stationary
circular targets at varying distances.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Track and Field',
@Ev_typeDescr = 'Includes athletic contests
established on the skills of running, jumping, and
throwing. It takes place on a running track and a
grass field for the throwing and the jumping
events.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Rowing',
@Ev_typeDescr = 'It involves propelling a boat
(racing shell) on water using oars. Two forms:
sweep-oar rowing and sculling.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Football',
@Ev_typeDescr = 'Played on a rectangular field
with a goal at each end. The object of the game
is to outscore the opposition by moving the ball
beyond the goal line into the opposing goal.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Tennis',
@Ev_typeDescr = 'Each player uses a tennis
racket that is strung with cord to strike a rubber
ball. The player who is unable to return the ball
will not gain a point, while the opposite player
will.'
```

```
EXECUTE add_sport_event_type
@Ev_typeName = 'Boxing',
@Ev_typeDescr = 'A combat sport in which two
people, wearing protective gloves and other
protective equipment, throw punches at each
other in a boxing ring.'
```

-- 2) For tblCOUNTRY

```
EXEC country_names
@CntName = 'Afghanistan'
EXEC country_names
@CntName = 'Albania'
EXEC country_names
@CntName = 'Algeria'
```

--For best athletes in 2016

```
EXEC country_names
@CntName = 'Jamaica'
EXEC country_names
@CntName = 'United States of America'
EXEC country_names
@CntName = 'Great Britain'
```

```
EXEC country_names
@CntName = 'Hungary'
EXEC country_names
@CntName = 'India'
```

-- For olympic host countries

```
EXEC country_names
@CntName = 'Japan'
EXEC country_names
@CntName = 'Brazil'
EXEC country_names
@CntName = 'China'
EXEC country_names
@CntName = 'Greece'
EXEC country_names
@CntName = 'Australia'
```

-- 3) For tblGENDER

```
EXEC add_gender_types
@Gname = 'Female',
@Gdescr = 'The second largest section. Generally physically weaker than the males.'
```

```
EXEC add_gender_types
@Gname = 'Male',
@Gdescr = 'The largest section in the society. Generally stronger than the females.'
```

-- 4) For tblMEDAL

```
EXEC medal_types_four
@Mname = 'Gold'
EXEC medal_types_four
@Mname = 'Silver'
```

```
EXEC medal_types_four
@Mname = 'Bronze'
EXEC medal_types_four
@Mname = 'None'
```

-- 5) For tblSPONSOR

```
EXEC add_sponsor_name
@Sname = 'Coca Cola Company',
@SpDescr = 'American multinational beverage corporation. Headquartered in Atlanta, Georgia.
The Coca-Cola Company has interests in the manufacturing, retailing, and marketing of nonalcoholic
beverage concentrates and syrups.'
```

```
EXEC add_sponsor_name
@Sname = 'Airbnb',
@SpDescr = 'American vacation rental online marketplace company based in San Francisco, California.
Airbnb maintains and hosts a marketplace, accessible to consumers on its website or via an app.'
```

```
EXEC add_sponsor_name
@Sname = 'Samsung',
@SpDescr = 'South Korean multinational conglomerate headquartered in Samsung Town, Seoul.'
```

-- 6) For tblCITY

```
EXEC add_city_names
@C_ID = 'Syd',
@Cname = 'Sydney'
EXEC add_city_names
@C_ID = 'Ath',
@Cname = 'Athens'
```

```
EXEC add_city_names
@C_ID = 'Bei',
@Cname = 'Beijing'
```

```
EXEC add_city_names
@C_ID = 'Lon',
@Cname = 'London'
```

```
EXEC add_city_names
@C_ID = 'Rio',
@Cname = 'Rio de Janeiro'
EXEC add_city_names
@C_ID = 'Tok',
@Cname = 'Tokyo'
```

-- 7) For tblTICKET_TYPE

```
EXEC ticket_type_add
@T_typeName = 'Online ticket',
@T_typeDescr = 'The customer will be able to
watch the sports events online. The access will
be restricted for the specific event.'
```

```
EXEC ticket_type_add
@T_typeName = 'Physical ticket',
@T_typeDescr = 'The customer can visit the
Olympic games facilities physically to watch the
specific events.'
```

-- 8) For tblVENDOR_TYPE

```
EXECUTE add_vendor_type
@V_typeName = 'Digital service provider',
@V_typeDescr = 'The customer will be able to
get the digital access to view the Olympic
sports events for a limited time.'
```

```
EXECUTE add_vendor_type
@V_typeName = 'Physical ticket service
provider',
@V_typeDescr = 'The customer will be able to
visit the venue holding the games, and view the
specific sports event in person.'
```

Part B - Exception : Adding entries into Lookup tables without using stored procedures

-- 9) For tblCUSTOMER - We populated this table using different method, by copying from the existing database. Not using the stored procedures. It adds 500,000 customer entries.

```
INSERT INTO tblCUSTOMER (CustomerFname, CustomerLname)
SELECT TOP 500000 CustomerFname, CustomerLname
FROM peeps.dbo.tblCUSTOMER
```

Part C - Adding entries into transaction tables

-- 10) For tblFACILITY

```

EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Japan National Stadium' -- For
track and field
EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Ariake Coliseum' -- For tennis

EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Sea Forest Waterway' -- For
rowing
EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'International Stadium
Yokohama' -- For football

EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Ryogoku' -- For boxing
EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Tokyo Aquatic Centre' -- For
swimming

EXECUTE add_facility
@City_nm = 'Tokyo',
@Facility_nm = 'Yumeno Park' -- For archery
EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Olympic Aquatics Stadium' --
For Swimming

```

```

EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Olympic Tennis Centre' -- For
tennis
EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Maracana Stadium' -- For
Football

```

```

EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Brazil Olympic Stadium' -- For
track and field
EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Sambo' -- For Archery

```

```

EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Rodrigo Lagoon' -- For Rowing
EXECUTE add_facility
@City_nm = 'Rio de Janeiro',
@Facility_nm = 'Riocentro' -- For Boxing

```

```

EXECUTE add_facility
@City_nm = 'London',
@Facility_nm = 'Olympic Stadium'

```

-- 11) For tblEVENT

```

EXEC add_event
@Event_type_nm = 'Football',
@Event_nm = "Football - Men"
EXEC add_event
@Event_type_nm = 'Football',

```

```

@Event_nm = "Football - Women"

```

```

EXEC add_event
@Event_type_nm = 'Rowing',
@Event_nm = "Men Single Scull"

```

```

EXEC add_event
@Event_type_nm ='Rowing',
@Event_nm = "Women Single Scull"

EXEC add_event
@Event_type_nm ='Track and Field',
@Event_nm = "100 mtr Sprint- Men"
EXEC add_event
@Event_type_nm ='Track and Field',
@Event_nm = "100 mtr Sprint- Women"

EXEC add_event
@Event_type_nm ='Track and Field',
@Event_nm = "Javelin throw- Men"
EXEC add_event
@Event_type_nm ='Track and Field',
@Event_nm = "High jump- Women"

EXEC add_event
@Event_type_nm ='Swimming',
@Event_nm = "100 mtrs Freestyle- Men"

EXEC add_event
@Event_type_nm ='Swimming',
@Event_nm = "100 mtrs Butterfly- Women"

EXEC add_event

```

-- 12) For tblVENDOR

```

EXEC add_vendor_name
@Vend_name ='ESPN',
@Vend_type_name = 'Digital service provider'
EXEC add_vendor_name
@Vend_name ='NHL Network',
@Vend_type_name = 'Digital service provider'

EXEC add_vendor_name
@Vend_name ='Fox Sports',
@Vend_type_name = 'Digital service provider'
EXEC add_vendor_name
@Vend_name ='Fubo TV',
@Vend_type_name = 'Digital service provider'

```

-- 13) For tblOLYMPIAD

```

EXECUTE Add_Olympic_extravaganza
@Ctr_name ='Australia',
@Yr =2000,
@OI_start = '15 September, 2000',

```

```

@Event_type_nm ='Archery',
@Event_nm = "Archery Men- Individual"
EXEC add_event
@Event_type_nm ='Archery',
@Event_nm = "Archery Women- Individual"

EXEC add_event
@Event_type_nm ='Boxing',
@Event_nm = "Boxing Men Heavyweight"
EXEC add_event
@Event_type_nm ='Boxing',
@Event_nm = "Boxing Men Lightweight"

EXEC add_event
@Event_type_nm ='Boxing',
@Event_nm = "Boxing Women Heavyweight"
EXEC add_event
@Event_type_nm ='Boxing',
@Event_nm = "Boxing Women Lightweight"

EXEC add_event
@Event_type_nm ='Tennis',
@Event_nm = "Tennis Men Singles"
EXEC add_event
@Event_type_nm ='Tennis',
@Event_nm = "Tennis Women Singles"

```

```

EXEC add_vendor_name
@Vend_name ='Hulu',
@Vend_type_name = 'Digital service provider'
EXEC add_vendor_name
@Vend_name ='AT&T',
@Vend_type_name = 'Digital service provider'

EXEC add_vendor_name
@Vend_name ='International Olympic
Committee',
@Vend_type_name = 'Physical ticket service
provider' -- two spaces before 'provider'
EXEC add_vendor_name
@Vend_name ='Infosys',
@Vend_type_name = 'Physical ticket service
provider' -- two spaces before 'provider'

```

```

@OI_end = '01 October, 2000'

```

```

EXECUTE Add_Olympic_extravaganza
@Ctr_name ='Greece',

```

```
@Yr =2004,  
@Ol_start = '13 August, 2004',  
@Ol_end = '29 August, 2004'
```

```
EXECUTE Add_Olympic_extravaganza  
@Ctr_name = 'China',  
@Yr =2008,  
@Ol_start = '08 August, 2008',  
@Ol_end = '24 August, 2008'
```

```
EXECUTE Add_Olympic_extravaganza  
@Ctr_name = 'Great Britain',  
@Yr =2012,  
@Ol_start = '27 July, 2012',
```

```
@Ol_end = '12 August, 2012'
```

```
EXECUTE Add_Olympic_extravaganza  
@Ctr_name = 'Brazil',  
@Yr =2016,  
@Ol_start = '05 August, 2016',  
@Ol_end = '21 August, 2016'
```

```
EXECUTE Add_Olympic_extravaganza  
@Ctr_name = 'Japan',  
@Yr =2020,  
@Ol_start = '23 July, 2021',  
@Ol_end = '08 August, 2021'
```

-- 14) For tblOLYMPIC_EVENT

a) Entries for Brazil Olympics - Rio

```
EXECUTE Add_olympic_event  
@Event_nm = "Tennis Men Singles",  
@Facil_nm = 'Olympic Tennis Centre',  
@Ctr_nm = 'Brazil',  
@Dt = '10 August, 2016'  
EXECUTE Add_olympic_event  
@Event_nm = "Tennis Women Singles",  
@Facil_nm = 'Olympic Tennis Centre',  
@Ctr_nm = 'Brazil',  
@Dt = '10 August, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "100 mtr Sprint- Women",  
@Facil_nm = 'Brazil Olympic Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '27 July, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "100 mtr Sprint- Men",  
@Facil_nm = 'Brazil Olympic Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '27 July, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "High jump- Women",  
@Facil_nm = 'Brazil Olympic Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '31 July, 2016'
```

```
EXECUTE Add_olympic_event  
EXECUTE Add_olympic_event  
@Event_nm = "Men Single Scull",  
@Facil_nm = 'Rodrigo Lagoon',  
@Ctr_nm = 'Brazil',  
@Dt = '15 July, 2016'
```

```
@Event_nm = "Football - Women",  
@Facil_nm = 'Maracana Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '16 August, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "Football - Men",  
@Facil_nm = 'Maracana Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '18 August, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "100 mtrs Butterfly- Women",  
@Facil_nm = 'Olympic Aquatics Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '12 August, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "100 mtrs Freestyle- Men",  
@Facil_nm = 'Olympic Aquatics Stadium',  
@Ctr_nm = 'Brazil',  
@Dt = '12 August, 2016'
```

```
EXECUTE Add_olympic_event  
@Event_nm = "Women Single Scull",  
@Facil_nm = 'Rodrigo Lagoon',  
@Ctr_nm = 'Brazil',  
@Dt = '19 July, 2016'
```

b) Entries for Japan Olympics - Tokyo


```
EXECUTE Add_olympic_event
@Event_nm ="Tennis Women Singles",
@Facil_nm ='Ariake Coliseum',
@Ctr_nm ='Japan',
@Dt = '29 July, 2020'
```

```
EXECUTE Add_olympic_event
@Event_nm ="Tennis Men Singles",
@Facil_nm ='Ariake Coliseum',
@Ctr_nm ='Japan',
@Dt = '29 July, 2020'
```

```
EXECUTE Add_olympic_event
@Event_nm ="100 mtr Sprint- Women",
@Facil_nm ='Japan National Stadium',
@Ctr_nm ='Japan',
@Dt = '27 July, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="100 mtr Sprint- Men",
@Facil_nm ='Japan National Stadium',
@Ctr_nm ='Japan',
@Dt = '27 July, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="High jump- Women",
@Facil_nm ='Japan National Stadium',
@Ctr_nm ='Japan',
@Dt = '28 July, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="Football - Women",
@Facil_nm ='International Stadium Yokohama',
@Ctr_nm ='Japan',
@Dt = '16 August, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="Football - Men",
@Facil_nm ='International Stadium Yokohama',
@Ctr_nm ='Japan',
@Dt = '16 August, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="100 mtrs Butterfly- Women",
@Facil_nm ='Tokyo Acquatic Centre',
@Ctr_nm ='Japan',
@Dt = '03 August, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="100 mtrs Freestyle- Men",
@Facil_nm ='Tokyo Acquatic Centre',
@Ctr_nm ='Japan',
@Dt = '2 August, 2021'
```

```
EXECUTE Add_olympic_event
@Event_nm ="Women Single Scull",
@Facil_nm ='Sea Forest Waterway',
@Ctr_nm ='Japan',
@Dt = '28 July, 2021'
```

c) Entries for UK Olympics - London

```
EXECUTE Add_olympic_event
@Event_nm ="100 mtr Sprint- Men",
@Facil_nm ='Olympic Stadium',
@Ctr_nm ='Great Britain',
@Dt = '31 July, 2012'
```

-- 15) For tblTICKET

```
EXECUTE ticket_add
@vedr_nm = 'FUBO TV',
@Cust_Fname ='Lloyd',
@Cust_Lname ='Thierman',
@Ticket_type_nm ='Online ticket',
@yr =2016,
@event_nm ="Tennis Men Singles",
@Purch_amt =3,
@purch_dt = '18 August, 2016'
```

-- 16) For tblATHLETE

Execute add_athlete

@Country = 'United States of America',
@AFName = 'Michael',
@ALName = 'Phelps',
@DOB = '30 June, 1985',
@Gender = 'Male'

Execute add_athlete

@Country = 'Jamaica',
@AFName = 'Usain',
@ALName = 'Bolt',
@DOB = '21 August, 1986',
@Gender = 'Male'

Execute add_athlete

@Country = 'United States of America',
@AFName = 'Kathleen',
@ALName = 'Ledecky',
@DOB = '17 March, 1997',
@Gender = 'Female'

Execute add_athlete

@Country = 'United States of America',
@AFName = 'Simone',
@ALName = 'Biles',
@DOB = '14 March, 1997',
@Gender = 'Female'

Execute add_athlete

@Country = 'Great Britain',
@AFName = 'Jason',
@ALName = 'Kenny',
@DOB = '23 March, 1988',
@Gender = 'Male'

Execute add_athlete

@Country = 'Hungary',
@AFName = 'Katinka',
@ALName = 'Hosszu',
@DOB = '3 May, 1989',
@Gender = 'Female'

Execute add_athlete

@Country = 'United States of America',
@AFName = 'Ryan',
@ALName = 'Murphy',
@DOB = '02 July, 1995',
@Gender = 'Male'

Execute add_athlete

@Country = 'India',
@AFName = 'Uttam',
@ALName = 'H',
@DOB = '12 June, 1993',
@Gender = 'Male'

Execute add_athlete

@Country = 'Hungary',
@AFName = 'Danuta',
@ALName = 'Kozak',
@DOB = '11 January, 1987',
@Gender = 'Female'

-- 17) For tblPARTICIPANT

i) Usain Bolt

EXECUTE add_participant

@AthleteFName = 'Usain',
@AthleteLName = 'Bolt',
@Event_Name = '100 mtr Sprint- Men',
@Country_Name = 'Brazil',
@Facility_Name = 'Brazil Olympic Stadium',
@MedalWon = 'Gold'

EXECUTE add_participant

@AthleteFName = 'Usain',
@AthleteLName = 'Bolt',
@Event_Name = '100 mtr Sprint- Men',
@Country_Name = 'Great Britain',
@Facility_Name = 'Olympic Stadium',
@MedalWon = 'Gold'

EXECUTE add_participant

@AthleteFName = 'Usain',
@AthleteLName = 'Bolt',
@Event_Name = '100 mtr Sprint- Men',

```
@Country_Name ='Japan',
@Facility_Name ='Japan National Stadium' ,
@MedalWon = 'Gold'
```

ii) Michael Phelps

```
EXECUTE add_participant
@AthleteFName = 'Michael',
@AthleteLName = 'Phelps',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Brazil',
@Facility_Name ='Olympic Aquatics Stadium' ,
@MedalWon = 'Gold'
```

```
EXECUTE add_participant
@AthleteFName = 'Michael',
@AthleteLName = 'Phelps',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Japan',
@Facility_Name ='Tokyo Aquatic Centre' ,
@MedalWon = 'Bronze'
```

iii) Kathleen Ledecky

```
EXECUTE add_participant
@AthleteFName = 'Kathleen',
@AthleteLName = 'Ledecky',
@Event_Name = "100 mtrs Butterfly- Women",
@Country_Name ='Brazil',
@Facility_Name ='Olympic Aquatics Stadium' ,
@MedalWon = 'Gold'
```

```
EXECUTE add_participant
@AthleteFName = 'Kathleen',
@AthleteLName = 'Ledecky',
@Event_Name = "100 mtrs Butterfly- Women",
@Country_Name ='Japan',
@Facility_Name ='Tokyo Aquatic Centre' ,
@MedalWon = 'Gold'
```

iv) Katinka Hosszu

```
EXECUTE add_participant
@AthleteFName = 'Katinka',
@AthleteLName = 'Hosszu',
@Event_Name = "Tennis Women Singles",
@Country_Name ='Brazil',
@Facility_Name ='Olympic Tennis Centre' ,
@MedalWon = 'Bronze'
```

-- 18) For tblSPONSOR_OLY_EVENT

```
EXECUTE add_sponsor_oly_event
@Event_name = "100 mtr Sprint- Men",
@CName = 'Brazil',
@Facility_Name = 'Brazil Olympic Stadium',
@sponsor_name = 'Coca Cola Company',
@SPAmount$ = 134990
```

```
EXECUTE add_sponsor_oly_event
```

v) Danuta Kozak

```
EXECUTE add_participant
@AthleteFName = 'Danuta',
@AthleteLName = 'Kozak',
@Event_Name = "Tennis Women Singles",
@Country_Name ='Japan',
@Facility_Name ='Ariake Coliseum' ,
@MedalWon = 'None'
```

vi) Jason Kenny

```
EXECUTE add_participant
@AthleteFName = 'Jason',
@AthleteLName = 'Kenny',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Japan',
@Facility_Name ='Tokyo Aquatic Centre' ,
@MedalWon = 'Gold'
```

vii) Ryan Murphy

```
EXECUTE add_participant
@AthleteFName = 'Ryan',
@AthleteLName = 'Murphy',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Brazil',
@Facility_Name ='Olympic Aquatics Stadium' ,
@MedalWon = 'Bronze'
```

```
EXECUTE add_participant
@AthleteFName = 'Jason',
@AthleteLName = 'Kenny',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Brazil',
@Facility_Name ='Olympic Aquatics Stadium' ,
@MedalWon = 'Silver'
```

```
EXECUTE add_participant
@AthleteFName = 'Ryan',
@AthleteLName = 'Murphy',
@Event_Name = "100 mtrs Freestyle- Men",
@Country_Name ='Japan',
@Facility_Name ='Tokyo Aquatic Centre' ,
@MedalWon = 'None'
```

```
@Event_name = "100 mtr Sprint- Women",
@CName = 'Brazil',
@Facility_Name = 'Brazil Olympic Stadium',
@sponsor_name = 'Coca Cola Company',
@SPAmount$ = 80000
```

```
EXECUTE add_sponsor_oly_event
@Event_name = "100 mtrs Freestyle- Men",
```

```
@CName = 'Brazil',  
@Facility_Name = 'Olympic Aquatics Stadium',  
@sponsor_name = 'Samsung',  
@SPAmount$ = 65000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtrs Butterfly- Women",  
@CName = 'Brazil',  
@Facility_Name = 'Olympic Aquatics Stadium',  
@sponsor_name = 'Samsung',  
@SPAmount$ = 65000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "Tennis Women Singles",  
@CName = 'Brazil',  
@Facility_Name = 'Olympic Tennis Centre',  
@sponsor_name = 'Coca Cola Company',  
@SPAmount$ = 135000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtr Sprint- Men",  
@CName = 'Japan',  
@Facility_Name = 'Japan National Stadium',  
@sponsor_name = 'Airbnb',  
@SPAmount$ = 115000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtr Sprint- Men",  
@CName = 'Japan',  
@Facility_Name = 'Japan National Stadium',
```

```
@sponsor_name = 'Airbnb',  
@SPAmount$ = 115000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtrs Freestyle- Men",  
@CName = 'Japan',  
@Facility_Name = 'Tokyo Acquatic Centre',  
@sponsor_name = 'Airbnb',  
@SPAmount$ = 75000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtrs Butterfly- Women",  
@CName = 'Japan',  
@Facility_Name = 'Tokyo Acquatic Centre',  
@sponsor_name = 'Airbnb',  
@SPAmount$ = 70000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "Tennis Women Singles",  
@CName = 'Japan',  
@Facility_Name = 'Ariake Coliseum' ,  
@sponsor_name = 'Coca Cola Company',  
@SPAmount$ = 150000
```

```
EXECUTE add_sponsor_oly_event  
@Event_name = "100 mtr Sprint- Women",  
@CName = 'Japan',  
@Facility_Name = 'Japan National Stadium',  
@sponsor_name = 'Samsung',  
@SPAmount$ = 80000
```

CREATING COMPUTED COLUMNS

1) Count of number of ticket sales for each type of ticket - digital and physical tickets

```
CREATE FUNCTION TicketTypeSale(@PK INT)
RETURNS NUMERIC(20,0)
AS

BEGIN
    DECLARE @RET NUMERIC(14, 2) = (SELECT SUM(Purchase_count)
    FROM tblTICKET T
    JOIN TBLTICKET_TYPE TT ON T.Ticket_type_ID = TT.Ticket_type_ID
    WHERE TT.Ticket_type_ID = @PK
    GROUP BY TT.Ticket_type_ID)
    RETURN @RET
END
GO

ALTER TABLE TBLTICKET_TYPE
ADD TotalSale AS (dbo.TicketTypeSale(Ticket_type_ID))
GO
```

2) Number of times the customer has completed the transactions (not just number of tickets)

```
CREATE FUNCTION TotalTicketPurchaseInstance(@PK INT)
RETURNS NUMERIC(14, 2)
AS

BEGIN
    DECLARE @RET NUMERIC(14, 2) = (SELECT COUNT(TICKET_ID)
    FROM tblTICKET T
    JOIN tblCUSTOMER C ON T.Customer_ID = C.Customer_ID
    WHERE C.Customer_ID = @PK
    GROUP BY C.Customer_ID)
    RETURN @RET
END
GO

ALTER TABLE tblCUSTOMER
ADD CountofPurchaseInstance AS (dbo.TotalTicketPurchaseInstance(Customer_ID))
GO
```