**-- Compute the number of people born after 2000 and are currently enrolled in a role for each role**

CREATE FUNCTION Role\_Volume (@PK INT)

RETURNS INT

AS

BEGIN

DECLARE @RET INT = (SELECT COUNT(P.PersonID)

FROM tblROLE R

JOIN tblROSTER RT ON R.RoleID = RT.RoleID

JOIN tblPERSON\_ROSTER PR ON RT.RosterID = PR.RosterID

JOIN tblPERSON P ON P.PersonID = PR.PersonID

WHERE YEAR(P.PersonBirth) >= '2000'

AND PR.EndDate IS NULL

AND R.RoleID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblROLE

ADD Num\_People\_In\_Role AS (dbo.Role\_Volume(RoleID))

GO

**-- Compute the age of a player for the PLAYER table**

CREATE FUNCTION Tell\_Me\_Your\_Age (@PK INT)

RETURNS INT

AS

BEGIN

DECLARE @RET INT = (SELECT DATEDIFF(year, PersonBirth, GETDATE())

FROM tblPERSON

WHERE PersonID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblPERSON

ADD Age AS (dbo.Tell\_Me\_Your\_Age(PersonID))

GO

**-- Calculate the average value of each statistic type**

CREATE FUNCTION fn\_TotalStatTypes(@PK INT)

RETURNS INTEGER

AS

BEGIN

DECLARE @RET INTEGER = (SELECT AVG(S.StatValue)

FROM tblSTATISTIC\_TYPE ST

JOIN tblSTATISTIC S ON ST.StatTypeID = S.StatTypeID

WHERE ST.StatTypeID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblSTATISTIC\_TYPE

ADD Calc\_AvgStatVal AS (fn\_TotalStatTypes(StatTypeID))

GO

**-- Calculate the total players from each region**

CREATE FUNCTION fn\_TotalPlayersPerRegion(@PK INT)

RETURNS INTEGER

AS

BEGIN

DECLARE @RET INTEGER = (SELECT COUNT(\*)

FROM tblREGION R

JOIN tblCOUNTRY C ON C.RegionID = R.RegionID

JOIN tblPERSON P ON C.PersonID = P.PersonID

WHERE R.RegionID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblREGION

ADD Calc\_TotalPlayers AS (fn\_TotalPlayersPerRegion(RegionID))

GO

-- How many times a game has been played within the context of a tournament

CREATE FUNCTION Tournament\_Count(@PK INT)

RETURNS INT

AS

BEGIN

DECLARE @RET INT = (SELECT COUNT(\*)

FROM tblTOURNAMENT T

JOIN tblGAME\_PLATFORM GP ON T.GamePlatformID = GP.GamePlatformID

JOIN tblGAME G ON GP.GameID = G.GameID

WHERE G.GameID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblGAME

ADD NumTournaments AS (dbo.Tournament\_Count(tblGAME.GameID))

GO

-- How many times a team has made it to Finals

CREATE FUNCTION Grand\_Finals\_Count(@PK INT)

RETURNS INT

AS

BEGIN

DECLARE @RET INT = (SELECT COUNT(\*)

FROM tblTEAM T

JOIN tblROSTER R ON R.TeamID = T.TeamID

JOIN tblROSTER\_ROUND RR ON RR.RosterID = R.RosterID

JOIN tblROUND RND ON RR.RoundID = RND.RoundID

WHERE RND.RoundType = 'Finals'

AND T.TeamID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblTEAM

ADD NumGrandFinals AS (dbo.Grand\_Finals\_Count(tblTEAM.TeamID))

GO

*--Compute the total number of players in each team for the tblTEAM table*

CREATE FUNCTION fn\_TotalPlayersTeam(@PK INT)

RETURNS INTEGER

AS

BEGIN

DECLARE @RET INTEGER = (SELECT COUNT(\*)

FROM tblROSTER R

JOIN tblROLE RO ON R.RoleID = RO.RoleID

JOIN tblTEAM T ON R.TeamID = T.TeamID

JOIN tblPERSON\_ROSTER PR ON PR.RosterID = R.RosterID

JOIN tblPERSON P ON PR.PersonID = P.PersonID

WHERE R.RoleName = 'Player'

AND T.TeamID = @PK

GROUP BY P.PersonID)

RETURN @RET

END

GO

ALTER TABLE tblTEAM

ADD Calc\_TotalPlayers AS (dbo.fn\_TotalPlayersTeam(TeamID))

GO

*--Compute the total number of teams in each region for the REGION table*

CREATE FUNCTION fn\_TotalTeamsRegion(@PK INT)

RETURNS INTEGER

AS

BEGIN

DECLARE @RET INTEGER = (SELECT COUNT(\*)

FROM tblROSTER R

JOIN tblTEAM T ON R.TeamID = T.TeamID

JOIN tblPERSON\_ROSTER PR ON R.RosterID = PR.RosterID

JOIN tblPERSON P ON PR.PersonID = P.PersonID

JOIN tblCOUNTRY C ON P.CountryID = C.CountryID

JOIN tblREGION RE ON C.RegionID = RE.RegionID

WHERE RE.RegionID = @PK)

RETURN @RET

END

GO

ALTER TABLE tblREGION

ADD Calc\_TotalTeams AS (dbo.fn\_TotalTeamsRegion(RegionID))

GO