**TABLES:**

In this scope, name of the fields, definiton of the tables, data types of the fields and information about some requirements are explained.

**1-Person Table:** It represents the people.

Ssn BIGINT PRIMARY KEY, --------- Represents the Unique ID, It is primary key.

FirstName NVARCHAR(50),

LastName NVARCHAR(50),

Gender NVARCHAR(6), CHECK (Gender IN ('Male', 'Female')),

Age AS DATEDIFF(YEAR, Birthdate, GETDATE()),

BirthDate DATE,

City NVARCHAR(50),

District NVARCHAR(50), --------- Represents the region

PhoneNumber NVARCHAR(13) NOT NULL

**2-MemberShip Plan Table:** It represents the type of the membership plans.

PlanID INT IDENTITY(1,1) PRIMARY KEY, ---------- Each plan type has own unique ID.

PlanName NVARCHAR(50),

Description NVARCHAR(255),

PlanFee DECIMAL(10, 2), ------------ Price of the plan type.

PlanDuration INT ----------- 3 Month, 6 Month 12 Month etc.

UNIQUE(PlanName, PlanDuration)

**3-Workout Table:** Represents the workouts.

WorkoutID INT IDENTITY(1,1) PRIMARY KEY, -------- Each workout has own unique ID.

WorkoutName NVARCHAR(50),

Description NVARCHAR(150), ---------Represents the description of that workout.

Duration INT

**4-Equipment Table:** Holds the records of the all equipments.

EquipmentID INT IDENTITY(1,1) PRIMARY KEY, ----------Each equipment has own unique ID.

EquipmentName NVARCHAR(50),

Condition NVARCHAR(50) DEFAULT 'Excellent' --------- represents the situation of the equipments.

**5-Financial Transaction Table:** Holds the records of the financial treatments.

TransactionID INT IDENTITY(1,1) PRIMARY KEY, --------Each transaction has own unique ID

TransactionType TINYINT,

TransactionDate DATE,

Amount DECIMAL(10, 2),

Description NVARCHAR(155)

**6-Maintenance Table:** It is about care, repair.

MaintenanceID INT IDENTITY(1,1) PRIMARY KEY, -------Each maintenance has own unique ID.

EquipmentID INT REFERENCES Equipment(EquipmentID), ----It means maintenance should be for equipments.

TransactionID INT REFERENCES FinancialTransaction(TransactionID), ----- In the same way, Every maintenance has something to do with financial affairs.

MaintenanceDate DATE,

Description NVARCHAR(50),

Cost DECIMAL(10, 2)

**7-Sale Table:** Holds the records of sales.

SaleID INT IDENTITY(1,1) PRIMARY KEY, ------Each sale has own unique ID.

Ssn BIGINT REFERENCES Person(Ssn), -------- It matches with ssn of the person. In this way, we understand which sale is which person.

TransactionID INT REFERENCES FinancialTransaction(TransactionID), ------It matches with transactionID of the Financial Transaction table.

SaleDate DATE,

TotalAmount DECIMAL(10, 2)

**8-Staff Table:** It holds the record of all of the employees in this gym.

StaffID INT IDENTITY(1,1) PRIMARY KEY, ------ Each Staff has own unique ID

Ssn BIGINT REFERENCES Person(Ssn), ---- Each staff is a person.

SalaryAmount DECIMAL(10, 2), ----Salary of the each staff.

StartDate DATE DEFAULT GETDATE()

**9-Salary Payment Table:** It is about the payments of salaries.

PaymentID INT IDENTITY(1,1) PRIMARY KEY, ------- Each payment has own unique ID.

StaffID INT REFERENCES Staff(StaffID), --------about the staff

TransactionID INT REFERENCES FinancialTransaction(TransactionID), ------ both the sinancial transaction

PaymentAmount DECIMAL(10, 2),

PaymentType NVARCHAR(50),

PaymentDate DATE

**10-Personal Trainer Table:** Holds the records of the personal trainer.

PTID INT IDENTITY(1,1) PRIMARY KEY, ------Each personal trainer has own unşque ID.

StaffID INT REFERENCES Staff(StaffID), -------Each personal trainer is a staff.

Specialization NVARCHAR(50)--------- represents the profession.

**11-Instructor Table:** Holds the records of the instructors.

InsID INT IDENTITY(1,1) PRIMARY KEY, ------ Each Instructor has own unique ID

StaffID INT REFERENCES Staff(StaffID),------ Each instructor is a staff.

**12-Member Table:** Holds the records of the members of Atmaca GYM.

MemberID INT IDENTITY(1,1) PRIMARY KEY, -------Each member has own unique ID.

Ssn BIGINT REFERENCES Person(Ssn), --------- Each Member is a person.

PlanID INT REFERENCES MembershipPlan(PlanID), ------Each member should have plan.

PTID INT REFERENCES PersonalTrainer(PTID), -------Members can have Personal Trainer.

MembershipStartDate DATE,

MembershipEndDate DATE,

RemainingTime AS CASE WHEN DATEDIFF(DAY, GETDATE(), MembershipEndDate) < 0 THEN 0 ELSE DATEDIFF(DAY, GETDATE(), MembershipEndDate) END -----There is a control that is necessary to avoid going negative

**13-MemberShip Payment:** Holds the records of membership payments.

PaymentID INT IDENTITY(1,1) PRIMARY KEY, ---------Each payment has own unique ID.

MemberID INT REFERENCES Member(MemberID), ------ about payments of the member for membership

TransactionID INT REFERENCES FinancialTransaction(TransactionID),

Amount DECIMAL(10, 2),

PaymentType NVARCHAR(50),

PaymentDate DATE

**14-Body Measurement Table:** Holds the records of the body measurement of members.

MeasurementID INT IDENTITY(1,1) PRIMARY KEY,

MemberID INT REFERENCES Member(MemberID),

MeasurementDate DATE, ------Holds the records of date of measurement. Because each person can have more than one record.

Height TINYINT CHECK (Height BETWEEN 100 AND 250),

Weight DECIMAL(6, 2),

BMI as (Weight / (Height \* Height) \* 10000),

**15-Product Table:** Holds the records of the product in this GYM.

ProductType NVARCHAR(50),

Brand NVARCHAR(50),

Price DECIMAL(10, 2),

QuantityInStock INT,

PRIMARY KEY(ProductType,Brand) -----Both of them are Primary keys.

**16-Product Sale Table :** About the sale of the products.

ProductType NVARCHAR(50),

Brand NVARCHAR(50),

SaleID INT REFERENCES Sale(SaleID),

Quantity INT,

FOREIGN KEY(ProductType,Brand) REFERENCES Product(ProductType,Brand),

PRIMARY KEY(ProductType,Brand,SaleID),

**17-Member Workout Table:** Holds the records of the workouts of members.

MemberID INT REFERENCES Member(MemberID),---- matches the memberID of Member Table

WorkoutID INT REFERENCES Workout(WorkoutID),---- matches the workoutId of Workout Table.

PRIMARY KEY(MemberID,WorkoutID) ----Both of them are primary key.

**18-Workout Equipment Table:** Holds the records of relationship of workout and equipment.

EquipmentID INT REFERENCES Equipment(EquipmentID),

WorkoutID INT REFERENCES Workout(WorkoutID)

PRIMARY KEY(EquipmentID,WorkoutID)

**19-Class Table:** Holds the records of the classes in this gym.

ClassID INT IDENTITY(1,1) PRIMARY KEY, ----Each class has own unique Class Id

InsID INT REFERENCES Instructor(InsID), ---Each class should have an instructor so references the InsID.

ClassName NVARCHAR(50),

MaxParticipants INT,

ClassStart DATETIME

ClassEnd DATETIME ---------holds the records of the dates.

**20-Attendance Table :**  Holds the records of the attendance of class for each member.

AttendanceID INT IDENTITY(1,1) PRIMARY KEY, ----Each attendance has own unique ID.

MemberID INT REFERENCES Member(MemberID), ----Each attendance should have a member.

ClassID INT REFERENCES Class(ClassID), -----Should have a class.

AttendanceDate DATE ------Date of the attendance.

**INDEXES:**

CREATE NONCLUSTERED INDEX IX\_Sale\_TransactionID

ON Sale (TransactionID);

CREATE NONCLUSTERED INDEX IX\_Maintenance\_TransactionID

ON Maintenance (TransactionID);