**1. Почему любое отношение в реляционной схеме имеет по крайней мере один ключ?**

Поскольку все кортежи в отношении по определению уникальны, каждое отношение должно содержать минимум один потенциальный ключ.

**2. Переведите все диаграммы ER из предыдущей домашней работы в реляционные схемы.**

1 схема

Book: {[ISBN: integer, Year: integer, Name: string, Author: string, Page Count: integer, Publisher Id: integer]}

Publisher: {[Id: integer, Name: string, Address: string]}

Copy: {[Copy number: integer, ISBN: integer, Shelf position: integer]}

Reader: {[Id: integer, Surname: string, Name: string, Address: string, Birthday: Datetime]}

Coupon: {[ Id: integer, Copy Id: integer, Reader Id: integer, Return date: Datetime]}

Category: {[Id: integer, Name: string, Parent Id: integer]}

Book – Category Link {[Id: integer, Book Id: integer, Category Id: integer,]}

2 схема

Apartment: {[House Number: integer, Apartment Number: integer]}

House: {[Street Name: string, House Number: integer]}

Street: {[City Name: string, Street Name: string]}

City: {[Country Name: string, City Name: string]}

Country: {[Country Name: string]}

3 схема

Player: {[Id: integer, Name: string, Surname: string, Role: string]}

Team: {[Name: string]}

Match {[Id: integer, Team A Name: string, Team B Name: string, Team A Score: integer, Team B Score: integer, Time: Datetime, Arbitrator Id: integer]}

Arbitrator: {[Id: integer, Name: string, Surname: string]}

4 схема

Man: {[Id: integer, Father: string, Mother: string, Name: string, Surname: string, Patronymic: string]}

Woman: {[Id: integer, Father: string, Mother: string, Name: string, Surname: string, Patronymic: string]}

Have Father: {[ Id: integer, Parent Id: integer, Children Id: integer]}

Have Mother: {[ Id: integer, Parent Id: integer, Children Id: integer]}

**3. Переведите приведенные диаграммы ER в реляционные схемы.**

**3.1**

Station: {[Name: string, #Tracks: integer]}

City: {[Region: string, Name: string]}

Train: {[TrainNr: integer, Length: integer]}

Lie in: {[ StationName: string, #Tracks: integer, Region: string, CityName: string]}

Connected: {[Name: string, TrainNr: integer, Departure: string, Arrival: string]}

Start: {[Name: string, TrainNr: integer]}

End: {[Name: string, TrainNr: integer]}

**3.2**

StationPersonell: {[PersNr: integer, #Name: string, StatNr: integer]}

Station: {[StatNr: integer, Name: string]}

Caregiver: {[PersNr: integer, #Name: string, Qualification: string]}

Doctor: {[PersNr: integer, #Name: string, Area: string, Rank: double]}

Room: {[StatNr: integer, RoomNr: integer, #Beds: integer]}

Patient: {[PatientNr: integer, Name: string, Disease: string, PersNr: integer]}

Admission: {[ StatNr: integer, RoomNr: integer, PatientNr: integer, from:string, to:string]}