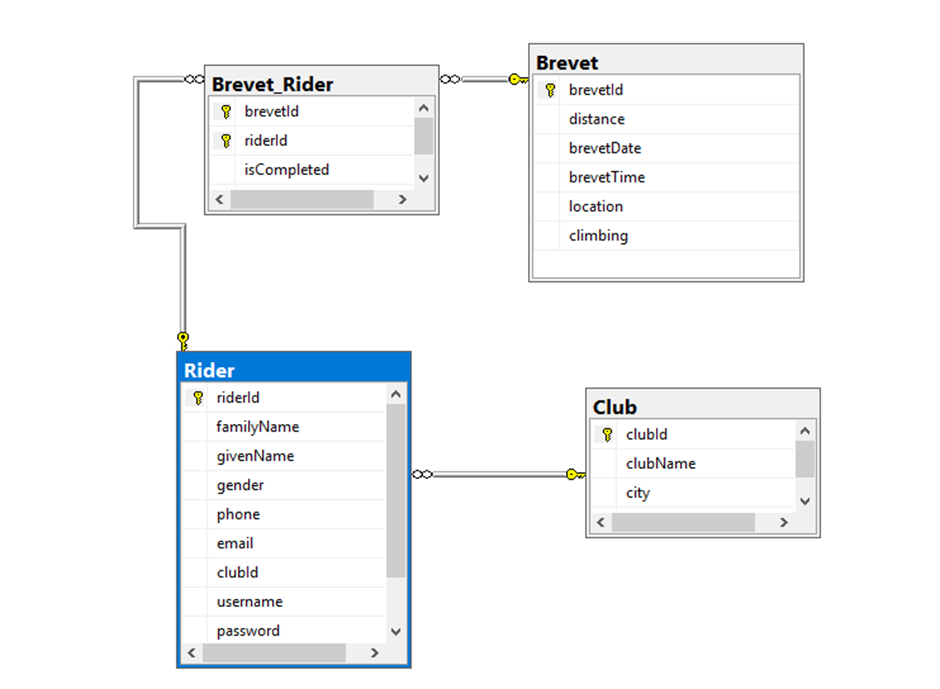
**RDB\_Diagram**



1. **Creating tables**

CREATE TABLE Brevet (

brevetId INTEGER NOT NULL IDENTITY,

distance INTEGER NOT NULL,

brevetDate DATE NOT NULL,

brevetTime TIME NOT NULL,

location VARCHAR(50) NOT NULL,

climbing INTEGER NOT NULL,

CONSTRAINT pk\_Brevet PRIMARY KEY(brevetId),

CONSTRAINT ck\_Brevet\_distance CHECK(distance IN (200, 300, 400, 600, 1000, 1200)),

CONSTRAINT ck\_Brevet\_climbing CHECK(climbing BETWEEN 0 AND 99999)

);

CREATE TABLE Club (

clubId INTEGER NOT NULL IDENTITY,

clubName VARCHAR(50) NOT NULL,

city VARCHAR(50) NOT NULL,

email VARCHAR(50) NOT NULL,

CONSTRAINT pk\_Club PRIMARY KEY(clubId),

CONSTRAINT u\_Club UNIQUE(clubName)

) ;

CREATE TABLE Rider (

riderId INTEGER NOT NULL IDENTITY,

familyName VARCHAR(50) NOT NULL,

givenName VARCHAR(50) NOT NULL,

gender CHAR(1) NOT NULL,

phone VARCHAR(20),

email VARCHAR(50),

clubId INTEGER NOT NULL,

username VARCHAR(50) NOT NULL,

password VARCHAR(50) NOT NULL,

role VARCHAR(5) NOT NULL,

CONSTRAINT pk\_Rider PRIMARY KEY(riderId),

CONSTRAINT fk\_Rider\_Club FOREIGN KEY(clubId) REFERENCES Club(clubId),

CONSTRAINT u\_Rider UNIQUE(username),

CONSTRAINT ck\_Rider\_gender CHECK(gender IN ('F', 'M')),

CONSTRAINT ck\_Rider\_role CHECK(role IN ('user', 'admin'))

) ;

CREATE TABLE Brevet\_Rider (

brevetId INTEGER NOT NULL,

riderId INTEGER NOT NULL,

isCompleted CHAR(1) NOT NULL,

finishingTime TIME NOT NULL,

CONSTRAINT PK\_Brevet\_Rider PRIMARY KEY(brevetId, riderId),

CONSTRAINT fk\_Brevet\_Rider\_Brevet FOREIGN KEY(brevetId) REFERENCES Brevet(brevetId),

CONSTRAINT fk\_Brevet\_Rider\_Rider FOREIGN KEY(riderId) REFERENCES Rider(riderId),

CONSTRAINT ck\_Brevet\_Rider CHECK(isCompleted IN ('N', 'Y'))

);

1. **Inserting Data**

insert into Brevet (distance, brevetDate, brevetTime, location, climbing)

values ('200', '2018-12-12', '14:00', 'Helsinki', '1200');

insert into Brevet (distance, brevetDate, brevetTime, location, climbing)

values ('300', '2018-10-02', '09:00', 'Porvoo', '12800');

insert into Brevet (distance, brevetDate, brevetTime, location, climbing)

values ('400', '2018-02-16', '17:00', 'Espoo', '4200');

insert into Club (clubName, city, email)

values ('ABClub', 'Helsinki', 'abclub@hotmail.com');

insert into Club (clubName, city, email)

values ('CrazyMonkey', 'Moscow', 'crazymonkey@hotmail.ru');

insert into Club (clubName, city, email)

values ('SuomiSport', 'Turku', 'suomisport@hotmail.fi');

insert into Rider (familyName, givenName, gender, phone, email, clubId, username, password, role)

values ('Johnson', 'John', 'M', '+12345678', 'johnjohnson@hotmail.com', '1', 'JohnJohson', '1q2w3e4r', 'user');

insert into Rider (familyName, givenName, gender, phone, email, clubId, username, password, role)

values ('Poppins', 'Mary', 'F', '+87654433', 'marypoppins@hotmail.uk', '3', 'Sweetheart', 'milkyway2018', 'admin');

insert into Brevet\_Rider (brevetId, riderId, isCompleted, finishingTime)

values ('1', '2', 'Y', '19:45');

insert into Brevet\_Rider (brevetId, riderId, isCompleted, finishingTime)

values ('2', '2', 'N', '17:55');

insert into Brevet\_Rider (brevetId, riderId, isCompleted, finishingTime)

values ('1', '1', 'Y', '13:45');

1. **Checking constraints out**

--invalid data--

insert into Brevet (distance, brevetDate, brevetTime, location, climbing)

values ('700', '2018-12-12', '14:00', 'Helsinki', '1200');

insert into Rider (familyName, givenName, gender, phone, email, clubId, username, password, role)

values ('Johnson', 'John', 'W', '+12345678', 'johnjohnson@hotmail.com', '1', 'MaryJohson', '1q2w3e4r', 'user');

insert into Brevet (distance, brevetDate, brevetTime, location, climbing)

values ('700', '2018-12-12', '14:00', 'Helsinki', '1000000');

insert into Rider (familyName, givenName, gender, phone, email, clubId, username, password, role)

values ('Johnson', 'John', 'M', '+12345678', 'johnjohnson@hotmail.com', '1', 'LeenaJohson', '1q2w3e4r', 'guest');

insert into Brevet\_Rider (brevetId, riderId, isCompleted, finishingTime)

values ('3', '4', 'W', '19:45');