



SAKARYA ÜNİVERSİTESİ
BİLGİSAYAR VE BİLİŞİM BİLİMLERİ FAKÜLTESİ
BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ

VERİTABANI YÖNETİM SİSTEMLERİ
Proje

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Uygulamanın tanıtımı

Bu Uygulama bir seyahat şirketine ait biletleri yolculara sunmaktadır. Yolcular kalkış ve varış şehirleri seçip kolaylıkla bilet alabilmelerini sağlamayan uygulama geliştirdim. Ayrıca şirketin otobüsleri, şoförleri, ve seferlerin yönetmeliği kapsamaktadır. Yani hem yolcu hem de yönetici için hizmet veren uygulamadır.

İş Kuralları

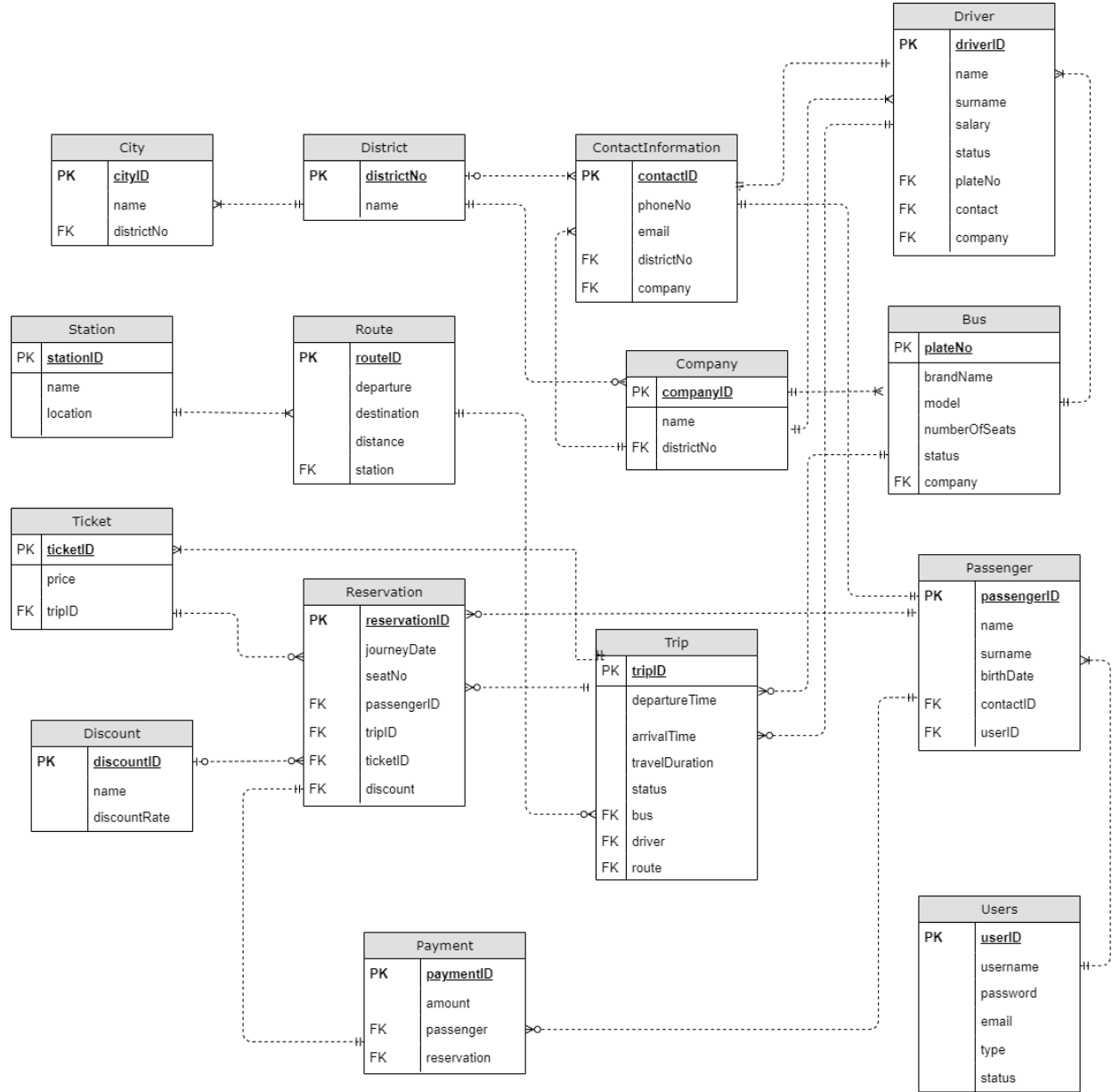
- Otobüs şirketinin adı, adresi ve iletişim bilgileri vardır.
- Otobüsün markası, modeli, koltuk sayısı ve durum bilgileri vardır.
- Bir otobüs yalnızca bir şirkete aittir. Otobüs şirketin çok sayıda otobüsleri vardır.
- Bir şoförün adı, soyadı, geliri ve durumu saklanır.
- Bir şoför bir şirkette çalışır. Otobüs şirketin çok sayıda şoförleri vardır.
- Bir şoför yalnızca bir otobüs sürerken bir otobüsün birden fazla şoförleri olabilir.
- Bir ilde çok sayıda ilçeler vardır.
- İletişim bilgileri içerisinde Telefon numarası, eposta ve adres bilgileri mevcuttur.
- Güzergah bilgileri içerisinde kalkış ve varış noktaları, uzaklık mevcuttur.
- Stasyon bilgileri içerisinde stasyonun adı ve konumu vardır.
- Bir güzergahın varış noktasında bir stasyonu varken bir stasyonun çok sayıda güzergahı olabilir.
- Seferler bilgileri içerisinde kalkış ve varış saati, yolculuğun süresi saklanmalı.
- Bir güzergahın çok sayıda seferleri vardır. Bir seferin sadece bir güzergahı vardır.
- Bir şoförün çok sayıda seferleri bulunabilir ama bir sefer sadece bir şoföre aittir.
- Bir otobüsün çok sayıda seferleri bulunabilir ama bir sefer sadece bir otobüse aittir.
- Rezervasyon bilgileri içerisinde yolculuğun tarihi ve saati, koltuk numarası bilgileri saklanır.
- Bilet bilgileri içerisinde baz fiyatı saklanır.
- Bir biletin bir seferi varken bir seferin fazla bileti bulunabilir.
- Bir biletin indirimi olabilir. Bir indirim tipi çok sayıda bilet için hesaplanabilir.
- Bir rezervasyon için yalnızca bir bilet hazırlanır ama bir bilet çok sayıda rezerve edilebilir.
- Bir sefer çok sayıda rezerve edilebilir ama bir rezervasyon sadece bir sefer için yapılabilir.
- Yolcu bilgileri içerisinde adı, soyadı, kimlik numarası, cinsiyeti, doğum tarihi, iletişim bilgileri ve kullanıcı bilgileri saklanır.
- Bir yolcu çok sayıda rezervasyon yapabilir ama bir rezervasyon sadece bir yolcu tarafından yapılır.

- Ödeme bilgileri içersinde toplam fiyatı saklanır.
- Bir yolcu çok sayıda ödemeler yapabilir ama bir ödeme sadece bir yolcu tarafından yapılır.
- Bir rezervasyon için ödeme yapılır.

İlişisel şeması

- Company (**companyID: Serial**, name: varchar, districtNo: int)
- Bus(**plateNo: int**, brandName: varchar, model: varchar, numberOfSeats: smallint, status: varchar, company: int)
- Driver(**driverID: serial**, name: varchar, surname: varchar, salary: int, status: varchar, plateNo: int, company: int, company: int)
- Passenger(**passengerID: serial**, name: varchar, surname: varchar, birthdate: date, contactID: int, userID: int)
- Users(**userID: serial**, username: varchar, password: varchar, email: varchar, type: char(1), status: varchar)
- ContactInformation(**contactID: serial**, phone: varchar, email: varchar, district: int, company: int)
- District(**districtNo: serial**, name: varchar)
- City(**cityID: serial**, name: varchar, districtNo: int)
- Route(**routeID: serial**, departure: varchar, destination: varchar, distance: int, station: int)
- Station(**stationID: serial**, name: varchar, location: varchar)
- Trip(**tripID: serial**, departureTime: time, arrivalTime: time, travelDuration: varchar, status: varchar, bus: int, driver: int, route: int)
- Reservation(**reservationID: serial**, journeyDate: date, seatNo: smallint, passengerID: int, tripID: int, ticketID: int, discount: int)
- Ticket(**ticketID: serial**, price: money, trip: int)
- Payment(**paymentID: serial**, amount: int, passenger: int, reservation: int)
- Discount(**discountID: serial**, name: varchar, discountRate: real)

VARLIK BAĞINTI DİAGRAMI



SQL kodu

```
--  
-- PostgreSQL database dump  
--  
  
-- Dumped from database version 13.4  
  
SET statement_timeout = 0;  
SET lock_timeout = 0;  
SET idle_in_transaction_session_timeout = 0;  
SET client_encoding = 'UTF8';  
SET standard_conforming_strings = on;  
SELECT pg_catalog.set_config('search_path', '', false);  
SET check_function_bodies = false;  
SET xmloption = content;  
SET client_min_messages = warning;  
SET row_security = off;  
  
--  
-- Name: OnlineBusReservation; Type: DATABASE; Schema:  
--; Owner: postgres  
--  
  
CREATE DATABASE "OnlineBusReservation" WITH TEMPLATE =  
template0 ENCODING = 'UTF8' LOCALE =  
'Turkish_Turkey.1254';  
  
ALTER DATABASE "OnlineBusReservation" OWNER TO  
postgres;  
  
\connect "OnlineBusReservation"
```

```
SET statement_timeout = 0;
SET lock_timeout = 0;
SET idle_in_transaction_session_timeout = 0;
SET client_encoding = 'UTF8';
SET standard_conforming_strings = on;
SELECT pg_catalog.set_config('search_path', '', false);
SET check_function_bodies = false;
SET xmloption = content;
SET client_min_messages = warning;
SET row_security = off;

--
-- Name: public; Type: SCHEMA; Schema: -; Owner:
postgres
--

CREATE SCHEMA public;

ALTER SCHEMA public OWNER TO postgres;

--
-- Name: SCHEMA public; Type: COMMENT; Schema: -;
Owner: postgres
--

COMMENT ON SCHEMA public IS 'standard public schema';

--
-- Name: addContactInformation(); Type: FUNCTION;
Schema: public; Owner: postgres
```

```
--  
  
CREATE FUNCTION public."addContactInformation"()  
RETURNS trigger  
    LANGUAGE plpgsql  
    AS $$  
BEGIN  
    IF NEW."email" NOT LIKE '%@%' THEN  
        NEW."email"  
            := CONCAT(NEW.email,  
                '@epixtravels.com');  
    END IF;  
    RETURN NEW;  
END;  
$;
```

```
ALTER FUNCTION public."addContactInformation"() OWNER  
TO postgres;
```

```
--  
-- Name: addDriverTR1(); Type: FUNCTION; Schema:  
public; Owner: postgres  
--
```

```
CREATE FUNCTION public."addDriverTR1"() RETURNS trigger  
    LANGUAGE plpgsql  
    AS $$  
BEGIN  
    NEW."name" = LTRIM(NEW."name");  
    NEW."surname" = LTRIM(NEW."surname");  
    NEW."surname" = UPPER(NEW."surname");  
    IF NEW."salary" < 2800 THEN
```

```
        RAISE EXCEPTION 'Salary should be greater
than Minimum wage - 2800€';
```

```
    END IF;
```

```
    RETURN NEW;
```

```
END;
```

```
$$;
```

```
ALTER FUNCTION public."addDriverTR1"() OWNER TO
postgres;
```

```
--
```

```
-- Name: bringavailablebuses(); Type: FUNCTION; Schema:
public; Owner: postgres
```

```
--
```

```
CREATE FUNCTION public.bringavailablebuses() RETURNS
text
```

```
    LANGUAGE plpgsql
```

```
    AS $$
```

```
DECLARE
```

```
    buses "Bus"%ROWTYPE;
```

```
    busPlateNo Text;
```

```
BEGIN
```

```
    busPlateNo := '';
```

```
    FOR buses IN SELECT * FROM "Bus"
```

```
    LEFT JOIN "Driver" ON "Bus"."plateNo" =
```

```
"Driver"."plateNo"
```

```
    WHERE "driverID" IS NULL LOOP
```

```
        busPlateNo := busPlateNo || buses."plateNo" ||
```

```
E'\r\n';
```

```
    END LOOP;
```

```
    RETURN busPlateNo;
```



```
END;
$$;

ALTER FUNCTION public.bringavailablebuses() OWNER TO
postgres;

--
-- Name: calculateprice(integer, date); Type: FUNCTION;
Schema: public; Owner: postgres
--

CREATE FUNCTION public.calculateprice(baseprice
integer, birthdate date) RETURNS integer
    LANGUAGE plpgsql
    AS $$
DECLARE
    age INT;
    finalPrice INT;
BEGIN
    age := EXTRACT(year FROM
age(current_date, birthdate));
    finalPrice := baseprice;

    IF getDiscountID(birthdate) = 1 THEN
        finalPrice := baseprice * 0.7;
    END IF;
    IF getDiscountID(birthdate) = 2 THEN
        finalPrice := basePrice * 0.8;
    END IF;
    RETURN finalPrice;
END;
$$;
```

```
ALTER FUNCTION public.calculateprice(baseprice integer,  
birthdate date) OWNER TO postgres;
```

```
--  
-- Name: controlStatus(); Type: FUNCTION; Schema:  
public; Owner: postgres  
--
```

```
CREATE FUNCTION public."controlStatus"() RETURNS  
trigger  
    LANGUAGE plpgsql  
    AS $$  
BEGIN  
    IF OLD."status" != 'Unbooked' THEN  
        RAISE EXCEPTION 'Trip can not be deleted  
since it is already booked';  
    ELSE  
        UPDATE "Driver"  
        SET "status" = 'Available'  
        WHERE "Driver"."driverID" = OLD."driver";  
  
        UPDATE "Bus"  
        SET "status" = 'Available'  
        WHERE "Bus"."plateNo" = OLD."bus";  
    END IF;  
    RETURN OLD;  
END;  
$;
```

```
ALTER FUNCTION public."controlStatus"() OWNER TO
postgres;

--
-- Name: getdiscountid(date); Type: FUNCTION; Schema:
public; Owner: postgres
--

CREATE FUNCTION public.getdiscountid(birthdate date)
RETURNS integer
    LANGUAGE plpgsql
    AS $$
DECLARE
    discountID INT;
    age INT;
BEGIN
    age := EXTRACT(year FROM
age(current_date, birthdate));
    discountID := 5;

    IF age < 24 THEN
        discountID := 1;
    END IF;
    IF age > 60 THEN
        discountID := 2;
    END IF;
    RETURN discountID;
END;
$$;

ALTER FUNCTION public.getdiscountid(birthdate date)
OWNER TO postgres;
```

```
--  
-- Name: salaryChangesTR(); Type: FUNCTION; Schema:  
public; Owner: postgres  
--
```

```
CREATE FUNCTION public."salaryChangesTR"() RETURNS  
trigger
```

```
    LANGUAGE plpgsql
```

```
    AS $$
```

```
BEGIN
```

```
    IF NEW."salary" <> OLD."salary" THEN
```

```
        INSERT INTO "SalaryChanges"("driverID",  
"oldSalary", "newSalary", "updatedOn")
```

```
            VALUES(OLD."driverID", OLD."salary",  
NEW."salary", CURRENT_TIMESTAMP::TIMESTAMP);
```

```
    END IF;
```

```
    RETURN NEW;
```

```
END;
```

```
$$;
```

```
ALTER FUNCTION public."salaryChangesTR"() OWNER TO  
postgres;
```

```
--  
-- Name: searchdistricts(integer); Type: FUNCTION;  
Schema: public; Owner: postgres  
--
```

```
CREATE FUNCTION public.searchdistricts(district
integer) RETURNS TABLE("districtID" integer, "Name"
character varying)
    LANGUAGE plpgsql
    AS $$
BEGIN
    RETURN QUERY SELECT "districtNo", "name" FROM
"District"
                WHERE "districtNo" = district;
END;
$;
```

```
ALTER FUNCTION public.searchdistricts(district integer)
OWNER TO postgres;
```

```
--
-- Name: setStatus(); Type: FUNCTION; Schema: public;
Owner: postgres
--
```

```
CREATE FUNCTION public."setStatus"() RETURNS trigger
    LANGUAGE plpgsql
    AS $$
BEGIN
    UPDATE "Driver"
    SET "status" = 'Busy'
    WHERE "Driver"."driverID" = NEW."driver";

    UPDATE "Bus"
    SET "status" = 'Busy'
    WHERE "Bus"."plateNo" = NEW."bus";
```

```
        RETURN NEW;
END;
$$;

ALTER FUNCTION public."setStatus"() OWNER TO postgres;

--
-- Name: updateTrip(); Type: FUNCTION; Schema: public;
Owner: postgres
--

CREATE FUNCTION public."updateTrip"() RETURNS trigger
    LANGUAGE plpgsql
    AS $$
BEGIN
    UPDATE "Trip"
    SET "status" = 'Booked'
    WHERE "Trip"."tripID" = NEW."tripID";
    RETURN NEW;

END;
$$;

ALTER FUNCTION public."updateTrip"() OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
```

```
-- Name: Bus; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public."Bus" (  
    "plateNo" integer NOT NULL,  
    "brandName" character varying(40) NOT NULL,  
    model character varying(40) NOT NULL,  
    "numberOfSeats" smallint DEFAULT 20,  
    status character varying(10) DEFAULT  
'Available'::character varying,  
    company integer DEFAULT 1  
);
```

```
ALTER TABLE public."Bus" OWNER TO postgres;
```

```
--
```

```
-- Name: Bus_plateNo_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Bus_plateNo_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Bus_plateNo_seq" OWNER TO postgres;
```

```
--  
-- Name: Bus_plateNo_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres  
--
```

```
ALTER SEQUENCE public."Bus_plateNo_seq" OWNED BY  
public."Bus"."plateNo";
```

```
--  
-- Name: City; Type: TABLE; Schema: public; Owner:  
postgres  
--
```

```
CREATE TABLE public."City" (  
    "cityID" integer NOT NULL,  
    name character varying(20) NOT NULL,  
    "districtNo" integer NOT NULL  
);
```

```
ALTER TABLE public."City" OWNER TO postgres;
```

```
--  
-- Name: City_cityID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."City_cityID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE
```



```
NO MAXVALUE  
CACHE 1;
```

```
ALTER TABLE public."City_cityID_seq" OWNER TO postgres;
```

```
--  
-- Name: City_cityID_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres  
--
```

```
ALTER SEQUENCE public."City_cityID_seq" OWNED BY  
public."City"."cityID";
```

```
--  
-- Name: Company; Type: TABLE; Schema: public; Owner:  
postgres  
--
```

```
CREATE TABLE public."Company" (  
    "companyID" integer NOT NULL,  
    name character varying(40) NOT NULL,  
    "districtNo" integer NOT NULL  
);
```

```
ALTER TABLE public."Company" OWNER TO postgres;
```

```
--  
-- Name: Company_companyID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."Company_companyID_seq"  
  AS integer  
  START WITH 1  
  INCREMENT BY 1  
  NO MINVALUE  
  NO MAXVALUE  
  CACHE 1;
```

```
ALTER TABLE public."Company_companyID_seq" OWNER TO  
postgres;
```

```
--  
-- Name: Company_companyID_seq; Type: SEQUENCE OWNED  
BY; Schema: public; Owner: postgres  
--
```

```
ALTER SEQUENCE public."Company_companyID_seq" OWNED BY  
public."Company"."companyID";
```

```
--  
-- Name: ContactInformation; Type: TABLE; Schema:  
public; Owner: postgres  
--
```

```
CREATE TABLE public."ContactInformation" (  
  "contactID" integer NOT NULL,  
  "phoneNo" character varying(20) NOT NULL,  
  email character varying(30),  
  "districtNo" integer,  
  company integer  
);
```

```
ALTER TABLE public."ContactInformation" OWNER TO
postgres;
```

```
--
-- Name: ContactInformation_contactID_seq; Type:
SEQUENCE; Schema: public; Owner: postgres
--
```

```
CREATE SEQUENCE
public."ContactInformation_contactID_seq"
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;
```

```
ALTER TABLE public."ContactInformation_contactID_seq"
OWNER TO postgres;
```

```
--
-- Name: ContactInformation_contactID_seq; Type:
SEQUENCE OWNED BY; Schema: public; Owner: postgres
--
```

```
ALTER SEQUENCE
public."ContactInformation_contactID_seq" OWNED BY
public."ContactInformation"."contactID";
```

```
--
```

```
-- Name: Discount; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public."Discount" (  
    "discountID" integer NOT NULL,  
    name character varying(30) NOT NULL,  
    "discountRate" real NOT NULL  
);
```

```
ALTER TABLE public."Discount" OWNER TO postgres;
```

```
--
```

```
-- Name: Discount_discountID_seq; Type: SEQUENCE;  
Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Discount_discountID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Discount_discountID_seq" OWNER TO  
postgres;
```

```
--
```

```
-- Name: Discount_discountID_seq; Type: SEQUENCE OWNED  
BY; Schema: public; Owner: postgres
```

```
--  
  
ALTER SEQUENCE public."Discount_discountID_seq" OWNED  
BY public."Discount"."discountID";
```

```
--  
-- Name: District; Type: TABLE; Schema: public; Owner:  
postgres
```

```
--  
  
CREATE TABLE public."District" (  
    "districtNo" integer NOT NULL,  
    name character varying(20) NOT NULL  
);
```

```
ALTER TABLE public."District" OWNER TO postgres;
```

```
--  
-- Name: District_districtNo_seq; Type: SEQUENCE;  
Schema: public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."District_districtNo_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."District_districtNo_seq" OWNER TO
postgres;

--
-- Name: District_districtNo_seq; Type: SEQUENCE OWNED
BY; Schema: public; Owner: postgres
--

ALTER SEQUENCE public."District_districtNo_seq" OWNED
BY public."District"."districtNo";

--
-- Name: Driver; Type: TABLE; Schema: public; Owner:
postgres
--

CREATE TABLE public."Driver" (
    "driverID" integer NOT NULL,
    name character varying(30) NOT NULL,
    surname character varying(30) NOT NULL,
    salary integer NOT NULL,
    status character varying(10) DEFAULT
'Available'::character varying,
    "plateNo" integer NOT NULL,
    contact integer,
    company integer NOT NULL
);

ALTER TABLE public."Driver" OWNER TO postgres;

--
```

```
-- Name: Driver_driverID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Driver_driverID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Driver_driverID_seq" OWNER TO  
postgres;
```

```
--
```

```
-- Name: Driver_driverID_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public."Driver_driverID_seq" OWNED BY  
public."Driver"."driverID";
```

```
--
```

```
-- Name: Passenger; Type: TABLE; Schema: public; Owner:  
postgres
```

```
--
```

```
CREATE TABLE public."Passenger" (  
    "passengerID" integer NOT NULL,  
    name character varying(30) NOT NULL,
```

```
    surname character varying(30) NOT NULL,
    "birthDate" date NOT NULL,
    contact integer NOT NULL,
    "userID" integer
);

ALTER TABLE public."Passenger" OWNER TO postgres;

--
-- Name: Passenger_passengerID_seq; Type: SEQUENCE;
-- Schema: public; Owner: postgres
--

CREATE SEQUENCE public."Passenger_passengerID_seq"
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER TABLE public."Passenger_passengerID_seq" OWNER TO
postgres;

--
-- Name: Passenger_passengerID_seq; Type: SEQUENCE
-- OWNED BY; Schema: public; Owner: postgres
--

ALTER SEQUENCE public."Passenger_passengerID_seq" OWNED
BY public."Passenger"."passengerID";
```



```
--  
-- Name: Payment; Type: TABLE; Schema: public; Owner:  
postgres  
--
```

```
CREATE TABLE public."Payment" (  
    "paymentID" integer NOT NULL,  
    amount character varying(30) NOT NULL,  
    passenger integer NOT NULL,  
    reservation integer NOT NULL  
);
```

```
ALTER TABLE public."Payment" OWNER TO postgres;
```

```
--  
-- Name: Payment_paymentID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."Payment_paymentID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Payment_paymentID_seq" OWNER TO  
postgres;
```

```
--
-- Name: Payment_paymentID_seq; Type: SEQUENCE OWNED
BY; Schema: public; Owner: postgres
--

ALTER SEQUENCE public."Payment_paymentID_seq" OWNED BY
public."Payment"."paymentID";

--
-- Name: Reservation; Type: TABLE; Schema: public;
Owner: postgres
--

CREATE TABLE public."Reservation" (
    "reservationID" integer NOT NULL,
    "journeyDate" date NOT NULL,
    "seatNo" smallint NOT NULL,
    "passengerID" integer NOT NULL,
    "tripID" integer NOT NULL,
    "ticketID" integer NOT NULL,
    discount integer
);

ALTER TABLE public."Reservation" OWNER TO postgres;

--
-- Name: Reservation_reservationID_seq; Type: SEQUENCE;
Schema: public; Owner: postgres
--

CREATE SEQUENCE public."Reservation_reservationID_seq"
```

```
AS integer
START WITH 1
INCREMENT BY 1
NO MINVALUE
NO MAXVALUE
CACHE 1;
```

```
ALTER TABLE public."Reservation_reservationID_seq"
OWNER TO postgres;
```

```
--
-- Name: Reservation_reservationID_seq; Type: SEQUENCE
OWNED BY; Schema: public; Owner: postgres
--
```

```
ALTER SEQUENCE public."Reservation_reservationID_seq"
OWNED BY public."Reservation"."reservationID";
```

```
--
-- Name: Route; Type: TABLE; Schema: public; Owner:
postgres
--
```

```
CREATE TABLE public."Route" (
    "routeID" integer NOT NULL,
    departure character varying(30) NOT NULL,
    destination character varying(30) NOT NULL,
    distance character varying(20),
    station integer
);
```

```
ALTER TABLE public."Route" OWNER TO postgres;
```

```
--
```

```
-- Name: Route_routeID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Route_routeID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Route_routeID_seq" OWNER TO  
postgres;
```

```
--
```

```
-- Name: Route_routeID_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public."Route_routeID_seq" OWNED BY  
public."Route"."routeID";
```

```
--
```

```
-- Name: SalaryChanges; Type: TABLE; Schema: public;  
Owner: postgres
```

```
--
```

```
CREATE TABLE public."SalaryChanges" (  
    "recordNo" integer NOT NULL,  
    "driverID" smallint NOT NULL,  
    "oldSalary" real NOT NULL,  
    "newSalary" real NOT NULL,  
    "updatedOn" timestamp without time zone NOT NULL  
);
```

```
ALTER TABLE public."SalaryChanges" OWNER TO postgres;
```

```
--
```

```
-- Name: SalaryChanges_recordNo_seq; Type: SEQUENCE;  
Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."SalaryChanges_recordNo_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."SalaryChanges_recordNo_seq" OWNER  
TO postgres;
```

```
--
```

```
-- Name: SalaryChanges_recordNo_seq; Type: SEQUENCE  
OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public."SalaryChanges_recordNo_seq"  
OWNED BY public."SalaryChanges"."recordNo";
```

```
--
```

```
-- Name: Station; Type: TABLE; Schema: public; Owner:  
postgres
```

```
--
```

```
CREATE TABLE public."Station" (  
    "stationID" integer NOT NULL,  
    name character varying(30) NOT NULL,  
    location character varying(30) NOT NULL  
);
```

```
ALTER TABLE public."Station" OWNER TO postgres;
```

```
--
```

```
-- Name: Station_stationID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Station_stationID_seq"  
AS integer  
START WITH 1  
INCREMENT BY 1  
NO MINVALUE  
NO MAXVALUE  
CACHE 1;
```

```
ALTER TABLE public."Station_stationID_seq" OWNER TO  
postgres;
```

```
--  
-- Name: Station_stationID_seq; Type: SEQUENCE OWNED  
BY; Schema: public; Owner: postgres  
--
```

```
ALTER SEQUENCE public."Station_stationID_seq" OWNED BY  
public."Station"."stationID";
```

```
--  
-- Name: Ticket; Type: TABLE; Schema: public; Owner:  
postgres  
--
```

```
CREATE TABLE public."Ticket" (  
    "ticketID" integer NOT NULL,  
    price money NOT NULL,  
    trip integer  
);
```

```
ALTER TABLE public."Ticket" OWNER TO postgres;
```

```
--  
-- Name: Ticket_ticketID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."Ticket_ticketID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1
```

```
NO MINVALUE
NO MAXVALUE
CACHE 1;
```

```
ALTER TABLE public."Ticket_ticketID_seq" OWNER TO
postgres;
```

```
--
-- Name: Ticket_ticketID_seq; Type: SEQUENCE OWNED BY;
Schema: public; Owner: postgres
--
```

```
ALTER SEQUENCE public."Ticket_ticketID_seq" OWNED BY
public."Ticket"."ticketID";
```

```
--
-- Name: Trip; Type: TABLE; Schema: public; Owner:
postgres
--
```

```
CREATE TABLE public."Trip" (
    "tripID" integer NOT NULL,
    "departureTime" time without time zone NOT NULL,
    "arrivalTime" time without time zone NOT NULL,
    "travelDuration" character varying(30),
    status character varying(10) DEFAULT
'Unbooked'::character varying,
    bus integer NOT NULL,
    driver integer NOT NULL,
    route integer NOT NULL
);
```



```
ALTER TABLE public."Trip" OWNER TO postgres;
```

```
--
```

```
-- Name: Trip_tripID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public."Trip_tripID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Trip_tripID_seq" OWNER TO postgres;
```

```
--
```

```
-- Name: Trip_tripID_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public."Trip_tripID_seq" OWNED BY  
public."Trip"."tripID";
```

```
--
```

```
-- Name: Users; Type: TABLE; Schema: public; Owner:  
postgres
```

```
--
```

```
CREATE TABLE public."Users" (  
    "userID" integer NOT NULL,  
    username character varying(20) NOT NULL,  
    password character varying(10) NOT NULL,  
    email character varying(30) NOT NULL,  
    type character(1) DEFAULT 'P'::bpchar,  
    status character varying(10) DEFAULT  
'Passive'::character varying  
);
```

```
ALTER TABLE public."Users" OWNER TO postgres;
```

```
--  
-- Name: Users_userID_seq; Type: SEQUENCE; Schema:  
public; Owner: postgres  
--
```

```
CREATE SEQUENCE public."Users_userID_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER TABLE public."Users_userID_seq" OWNER TO  
postgres;
```

```
--  
-- Name: Users_userID_seq; Type: SEQUENCE OWNED BY;  
Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public."Users_userID_seq" OWNED BY  
public."Users"."userID";
```

```
--
```

```
-- Name: Bus plateNo; Type: DEFAULT; Schema: public;  
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Bus" ALTER COLUMN "plateNo"  
SET DEFAULT  
nextval('public."Bus_plateNo_seq"'::regclass);
```

```
--
```

```
-- Name: City cityID; Type: DEFAULT; Schema: public;  
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."City" ALTER COLUMN "cityID"  
SET DEFAULT  
nextval('public."City_cityID_seq"'::regclass);
```

```
--
```

```
-- Name: Company companyID; Type: DEFAULT; Schema:  
public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Company" ALTER COLUMN  
"companyID" SET DEFAULT  
nextval('public."Company_companyID_seq"'::regclass);
```

```
--  
-- Name: ContactInformation contactID; Type: DEFAULT;  
Schema: public; Owner: postgres  
--  
  
ALTER TABLE ONLY public."ContactInformation" ALTER  
COLUMN "contactID" SET DEFAULT  
nextval('public."ContactInformation_contactID_seq" '::re  
gclass);  
  
--  
-- Name: Discount discountID; Type: DEFAULT; Schema:  
public; Owner: postgres  
--  
  
ALTER TABLE ONLY public."Discount" ALTER COLUMN  
"discountID" SET DEFAULT  
nextval('public."Discount_discountID_seq" '::regclass);  
  
--  
-- Name: District districtNo; Type: DEFAULT; Schema:  
public; Owner: postgres  
--  
  
ALTER TABLE ONLY public."District" ALTER COLUMN  
"districtNo" SET DEFAULT  
nextval('public."District_districtNo_seq" '::regclass);  
--
```

```
-- Name: Driver driverID; Type: DEFAULT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Driver" ALTER COLUMN
"driverID" SET DEFAULT
nextval('public."Driver_driverID_seq"'::regclass);

--

-- Name: Passenger passengerID; Type: DEFAULT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Passenger" ALTER COLUMN
"passengerID" SET DEFAULT
nextval('public."Passenger_passengerID_seq"'::regclass)
;

--

-- Name: Payment paymentID; Type: DEFAULT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Payment" ALTER COLUMN
"paymentID" SET DEFAULT
nextval('public."Payment_paymentID_seq"'::regclass);

--

-- Name: Reservation reservationID; Type: DEFAULT;
Schema: public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Reservation" ALTER COLUMN
"reservationID" SET DEFAULT
nextval('public."Reservation_reservationID_seq" '::regcl
ass);
```

```
--
-- Name: Route routeID; Type: DEFAULT; Schema: public;
Owner: postgres
--
```

```
ALTER TABLE ONLY public."Route" ALTER COLUMN "routeID"
SET DEFAULT
nextval('public."Route_routeID_seq" '::regclass);
```

```
--
-- Name: SalaryChanges recordNo; Type: DEFAULT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."SalaryChanges" ALTER COLUMN
"recordNo" SET DEFAULT
nextval('public."SalaryChanges_recordNo_seq" '::regclass
);
```

```
--
-- Name: Station stationID; Type: DEFAULT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Station" ALTER COLUMN
"stationID" SET DEFAULT
nextval('public."Station_stationID_seq" '::regclass);
```

```
--
-- Name: Ticket ticketID; Type: DEFAULT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Ticket" ALTER COLUMN
"ticketID" SET DEFAULT
nextval('public."Ticket_ticketID_seq" '::regclass);
```

```
--
-- Name: Trip tripID; Type: DEFAULT; Schema: public;
Owner: postgres
--
```

```
ALTER TABLE ONLY public."Trip" ALTER COLUMN "tripID"
SET DEFAULT
nextval('public."Trip_tripID_seq" '::regclass);
```

```
--
-- Name: Users userID; Type: DEFAULT; Schema: public;
Owner: postgres
--
```

```
ALTER TABLE ONLY public."Users" ALTER COLUMN "userID"
SET DEFAULT
nextval('public."Users_userID_seq" '::regclass);
```

```
--  
-- Data for Name: Bus; Type: TABLE DATA; Schema:  
public; Owner: postgres  
--  
  
INSERT INTO public."Bus" VALUES  
    (789456, 'Volks Wagen', 'VW34', 16, 'Available',  
1),  
    (1111, '2134', '4124', 20, 'Busy', 1),  
    (12, '134', '124', 20, 'Busy', 1),  
    (124241124, '12', '12', 20, 'Busy', 1),  
    (333333, 'Eurotracker', 'ER345', 14, 'Busy', 1),  
    (895623, 'Isuzu', 'IS3234', 20, 'Busy', 1),  
    (21, '214', 'rrr241', 20, 'Busy', 1),  
    (123456, 'Volvo', 'V3ER', 20, 'Available', 1),  
    (789789, 'test', 'ER32', 10, 'Available', 1),  
    (456789, 'Mercedes', 'MW49', 18, 'Available', 1),  
    (784512, 'Toyota', 'TER234', 20, 'Available', 1),  
    (12444, '124', '123412', 20, 'Available', 1),  
    (444, '234', '2352', 20, 'Available', 1),  
    (2312111, 'eewew', 'qqq', 20, 'Available', 1),  
    (24, 'dddd', '123', 20, 'Available', 1);
```

```
--  
-- Data for Name: City; Type: TABLE DATA; Schema:  
public; Owner: postgres  
--
```

```
INSERT INTO public."City" VALUES  
    (1, 'Sakarya', 1),  
    (2, 'Sakarya', 7),  
    (3, 'Sakarya', 8),
```



```
(4, 'Sakarya', 9),  
(5, 'Istanbul', 2),  
(6, 'Istanbul', 3),  
(7, 'Bursa', 10),  
(8, 'Bursa', 11),  
(9, 'Istanbul', 4),  
(10, 'Bursa', 12),  
(11, 'Istanbul', 5),  
(12, 'Bursa', 13),  
(13, 'Istanbul', 6),  
(14, 'Izmir', 17),  
(15, 'Izmir', 16),  
(16, 'Ankara', 20),  
(17, 'Ankara', 19),  
(18, 'Izmir', 14),  
(19, 'Ankara', 18),  
(21, 'Izmir', 15),  
(22, 'Ankara', 21);
```

```
--  
-- Data for Name: Company; Type: TABLE DATA; Schema:  
public; Owner: postgres  
--
```

```
INSERT INTO public."Company" VALUES  
    (1, 'Epix Travel Ltd', 1);
```

```
--  
-- Data for Name: ContactInformation; Type: TABLE DATA;  
Schema: public; Owner: postgres  
--
```

```

INSERT INTO public."ContactInformation" VALUES
  (1, '5539501268', 'testting@epix.com', 1, 1),
  (9, '8494916986', 'driver@epixtravels.com', 1, 1),
  (10, '475788878', NULL, 1, 1),
  (11, '1241312413', 'wow@epixtravels.com', 1, 1),
  (12, '05547894512', 'New@epixtravels.com', 2, 1),
  (13, '055784512', 'Testing@epixtravels.com', 4, 1),
  (16, '05578451212', 'Testinga@epixtravels.com', 4,
1),
  (17, '4556422246', 'sofor@epixtravels.com', 20, 1),
  (18, '111111111', 'Check@epixtravels.com', 11, 1),
  (19, '222222222222222', 'Checking@epixtravels.com',
17, 1),
  (29, '054687121584', 'NewPassenger@gmail.com@ ',
NULL, NULL),
  (30, '05784512281', 'Izmir@gmail.com@ ', NULL,
NULL),
  (31, '78577852778', 'dw@hotmail.com@ ', NULL,
NULL),
  (32, '78513848', 'cool@yahoo.com@ ', NULL, NULL),
  (33, '12412', 're@gmail.com@ ', NULL, NULL),
  (34, '984518', 'fe@gmail.com@ ', NULL, NULL),
  (35, '1241241', 'check@hotmailci.com@ ', NULL,
NULL),
  (36, '12413412', 'jamy@gmail.com@ ', NULL, NULL),
  (37, '214241341', 'ozil@gmail.com@ ', NULL, NULL),
  (38, '1241242', 'resul@gmaul.com@ ', NULL, NULL),
  (39, '21412', 'deejoong@gamil.com@ ', NULL, NULL),
  (41, '214141231423', 'Jota@gmail.com@ ', NULL,
NULL),
  (42, '12421412412', 'alonso@gamilk..com@ ', NULL,
NULL),

```

```
(43, '054813198435', 'Elon@genius.com@ ', NULL,
NULL),
(44, '0654238329', 'burak@gmail.com@ ', NULL,
NULL),
(45, '0548213218', 'Umer@epixtravels.com', 17, 1),
(46, '06518158165', 'Mohammed@epixtravels.com', 19,
1);
```

```
--
-- Data for Name: Discount; Type: TABLE DATA; Schema:
public; Owner: postgres
--
```

```
INSERT INTO public."Discount" VALUES
(2, 'Above 60', 0.2),
(1, 'Student Under 24', 0.3),
(5, 'Normal', 0);
```

```
--
-- Data for Name: District; Type: TABLE DATA; Schema:
public; Owner: postgres
--
```

```
INSERT INTO public."District" VALUES
(1, 'Serdivan'),
(2, 'Üsküdar'),
(3, 'Kadıköy'),
(4, 'Fatih'),
(5, 'Beşiktaş'),
(6, 'Pendik'),
(7, 'Arifiye'),
```

```
(8, 'Adapazarı'),
(9, 'Erenler'),
(10, 'Osmangazi'),
(11, 'Gürsu'),
(12, 'Orhaneli '),
(13, 'Karacabey'),
(14, 'Bayraklı'),
(15, 'Güzelbahçe'),
(16, 'Bornova '),
(17, 'Gaziemir'),
(18, 'Çankaya'),
(19, 'Beypazarı'),
(20, 'Kahramankazan '),
(21, 'Kalecik'),
(22, 'Kadiköy'),
(23, 'Kadiköy'),
(24, 'Kadiköy'),
(25, 'Kadiköy'),
(26, 'Kadiköy'),
(27, 'Kadiköy'),
(28, 'Kadiköy'),
(29, 'Kadiköy'),
(30, 'Kadiköy'),
(31, 'Üsküdar'),
(32, 'Fatih'),
(33, 'Fatih'),
(34, 'Fatih'),
(35, 'Fatih'),
(36, 'Kahramankazan '),
(37, 'Gürsu'),
(38, 'Gürsu'),
(39, 'Gaziemir'),
(40, 'Gaziemir'),
```

```
(41, 'Gaziemir'),
(42, 'Gaziemir'),
(43, 'Gaziemir'),
(44, 'Beypazarı');

--
-- Data for Name: Driver; Type: TABLE DATA; Schema:
public; Owner: postgres
--

INSERT INTO public."Driver" VALUES
    (5, 'triggertest', 'SMALLLETTERS', 5000, 'Busy',
123456, 1, 1),
    (10, 'Check', 'AGAIN', 6000, 'Busy', 1111, NULL,
1),
    (12, 'Checking', 'AGAAAIN', 4500, 'Busy', 12, 19,
1),
    (3, 'SMALLLETTERS', 'SMALLLETTERS', 2500, 'Busy',
123456, 1, 1),
    (13, 'Checking', 'AGAAAIN', 4500, 'Busy', 12, NULL,
1),
    (8, 'sofor', 'YENI', 5000, 'Busy', 124241124, 17,
1),
    (7, 'Testinga', 'NEW', 5222, 'Busy', 333333, 16,
1),
    (15, 'Umer', 'FATIH', 3200, 'Busy', 895623, 45, 1),
    (16, 'Mohammed', 'BEYLUL', 5000, 'Busy', 21, 46,
1),
    (4, 'SMALLLETTERS', 'SMALLLETTERS', 4000,
'Available', 123456, 1, 1);
```

```
--  
-- Data for Name: Passenger; Type: TABLE DATA; Schema:  
public; Owner: postgres  
--
```

```
INSERT INTO public."Passenger" VALUES  
  (5, 'New', 'Passenger', '2000-03-16', 29, 1),  
  (6, 'Izmire', 'Gidiyorum', '1960-12-31', 30, 1),  
  (7, 'hi', 'hi', '2000-07-04', 31, 1),  
  (8, 'young', 'Boy', '2000-07-12', 32, 1),  
  (9, 'hi', 'juyf', '1990-12-31', 33, 1),  
  (10, 'Henry', 'Theo', '1960-12-31', 34, 1),  
  (11, 'theo', 'walcott', '2001-06-01', 35, 1),  
  (12, 'jamy', 'vardy', '1960-12-31', 36, 1),  
  (13, 'mesut', 'ozil', '1940-12-31', 37, 1),  
  (14, 'resul', 'daspinar', '2000-07-04', 38, 1),  
  (15, 'Frank', 'de Jong', '1990-01-31', 39, 1),  
  (17, 'Joa', 'Jota', '1991-12-31', 41, 1),  
  (18, 'alonso', 'dee', '2000-12-31', 42, 1),  
  (19, 'Elon', 'Musk', '1975-03-12', 43, 1),  
  (20, 'Burak', 'Koca', '2000-07-12', 44, 1);
```

```
--  
-- Data for Name: Payment; Type: TABLE DATA; Schema:  
public; Owner: postgres  
--
```

```
INSERT INTO public."Payment" VALUES  
  (5, '210', 5, 5),  
  (6, '175', 6, 6),  
  (7, '175', 7, 7),  
  (8, '175', 8, 8),
```

```
(9, '210', 9, 9),  
(11, '280', 11, 11),  
(13, '240', 13, 13),  
(14, '210', 14, 14),  
(15, '300', 15, 15),  
(17, '250', 17, 17),  
(18, '175', 18, 18),  
(19, '90', 19, 19),  
(20, '175', 20, 20);
```

```
--  
-- Data for Name: Reservation; Type: TABLE DATA;  
Schema: public; Owner: postgres  
--
```

```
INSERT INTO public."Reservation" VALUES  
(5, '2021-12-31', 5, 5, 42, 8, 1),  
(6, '2021-12-30', 4, 6, 44, 10, 1),  
(7, '2021-12-18', 0, 7, 43, 9, 1),  
(8, '2021-12-13', 0, 8, 44, 10, 1),  
(9, '2021-12-13', 5, 9, 42, 8, 1),  
(11, '2021-12-13', 7, 11, 41, 7, 1),  
(13, '2021-12-13', 3, 13, 42, 8, 2),  
(14, '2021-12-13', 7, 14, 42, 8, 1),  
(15, '2021-12-13', 9, 15, 42, 8, 5),  
(17, '2021-12-13', 1, 17, 44, 10, 5),  
(18, '2021-12-13', 5, 18, 44, 10, 1),  
(19, '2021-12-13', 0, 19, 46, 12, 5),  
(20, '2021-12-13', 8, 20, 44, 10, 1);  
  
--
```

```
-- Data for Name: Route; Type: TABLE DATA; Schema:  
public; Owner: postgres
```

```
--  
  
INSERT INTO public."Route" VALUES  
    (6, 'Ankara', 'Istanbul', '380', 17),  
    (7, 'Bursa', 'Istanbul', '250Km', 17),  
    (8, 'Bursa', 'Izmir', '350Km', 21),  
    (9, 'Sakarya', 'Izmir', '340Km', 21),  
    (10, 'Sakarya', 'Istanbul', '120Km', 17),  
    (11, 'Ankara', 'Sakarya', '450Km', 22),  
    (12, 'Ankara', 'Izmir', '450Km', 21),  
    (13, 'Izmir', 'Istanbul', '450Km', 17),  
    (14, 'Sakarya', 'Ankara', '340Km', 16),  
    (15, 'Bursa', 'Sakarya', '400Km', 22);
```

```
--  
-- Data for Name: SalaryChanges; Type: TABLE DATA;  
Schema: public; Owner: postgres
```

```
--  
  
INSERT INTO public."SalaryChanges" VALUES  
    (1, 4, 3000, 4000, '2021-12-09 17:24:23.13356'),  
    (2, 8, 7800, 6000, '2021-12-10 18:50:33.531276'),  
    (3, 5, 3000, 5000, '2021-12-10 18:52:25.737664'),  
    (4, 8, 6000, 5000, '2021-12-10 19:02:48.920452'),  
    (5, 7, 3500, 5222, '2021-12-10 20:20:47.700011'),  
    (6, 3, 3000, 2500, '2021-12-11 13:27:09.41792');
```



```
-- Data for Name: Station; Type: TABLE DATA; Schema:  
public; Owner: postgres
```

```
--
```

```
INSERT INTO public."Station" VALUES  
    (16, 'Ankara Terminal', 'Ankara'),  
    (17, 'Harem', 'Istanbul'),  
    (18, 'Bursa Terminal', 'Bursa'),  
    (19, 'Esenler', 'Istanbul'),  
    (20, 'Bursa Terminal', 'Bursa'),  
    (21, 'Izmir Terminal', 'Izmir'),  
    (22, 'Sakarya Terminal', 'Sakarya'),  
    (23, 'Izmir Terminal', 'Izmir'),  
    (24, 'Sakarya Terminal', 'Sakarya'),  
    (25, 'Esenler', 'Istanbul'),  
    (26, 'Ankara Terminal', 'Ankara'),  
    (27, 'Sakarya Terminal', 'Sakarya'),  
    (28, 'Ankara Terminal', 'Ankara'),  
    (29, 'Izmir Terminal', 'Izmir'),  
    (30, 'Izmir Terminal', 'Izmir'),  
    (31, 'Harem', 'Istanbul'),  
    (32, 'sakarya Terminal', 'Sakarya'),  
    (33, 'Ankara Terminal', 'Ankara'),  
    (34, 'Bursa Terminal', 'Bursa'),  
    (35, 'Sakarya Terminal', 'Sakarya');
```

```
--
```

```
-- Data for Name: Ticket; Type: TABLE DATA; Schema:  
public; Owner: postgres
```

```
--
```

```
INSERT INTO public."Ticket" VALUES
```

```
(1, '$75.00', NULL),
(2, '$120.00', NULL),
(3, '$55.00', NULL),
(4, '$120.00', NULL),
(5, '$120.00', NULL),
(6, '$450.00', NULL),
(10, '$250.00', 44),
(7, '$125.00', 41),
(8, '$75.00', 42),
(9, '$200.00', 43),
(12, '$90.00', 46),
(14, '$80.00', 48),
(15, '$90.00', 49);
```

```
--
-- Data for Name: Trip; Type: TABLE DATA; Schema:
public; Owner: postgres
--
```

```
INSERT INTO public."Trip" VALUES
    (40, '02:54:00', '04:00:00', '01:06:00',
'Unbooked', 1111, 10, 9),
    (41, '03:00:00', '05:00:00', '02:00:00',
'Unbooked', 12, 12, 10),
    (42, '06:00:00', '08:00:00', '02:00:00',
'Unbooked', 123456, 3, 10),
    (43, '07:00:00', '09:00:00', '02:00:00',
'Unbooked', 12, 13, 10),
    (46, '09:00:00', '12:30:00', '03:30:00', 'Booked',
333333, 7, 13),
    (44, '09:06:00', '11:00:00', '01:54:00', 'Booked',
124241124, 8, 8),
```

```
(47, '08:30:00', '12:00:00', '03:30:00',  
'Unbooked', 123456, 4, 15),  
(48, '10:55:00', '10:55:00', '00:00:00',  
'Unbooked', 895623, 15, 15),  
(49, '10:55:00', '10:55:00', '00:00:00',  
'Unbooked', 21, 16, 15);
```

```
--
```

```
-- Data for Name: Users; Type: TABLE DATA; Schema:  
public; Owner: postgres
```

```
--
```

```
INSERT INTO public."Users" VALUES
```

```
(2, 'admin', '456', 'admin@epix.com', 'A',  
'Passive'),  
(3, '123', 'signup', 'signup@gmail.com', 'P',  
'Passive'),  
(4, '123', 'signup', 'signup@gmail.com', 'P',  
'Passive'),  
(5, '123', 'signup', 'signup@gmail.com', 'P',  
'Passive'),  
(6, 'check', '1234', 'check@gmail.com', 'P',  
'Passive'),  
(7, 'deneme', '963', 'deneme@gmail.com', 'P',  
'Passive'),  
(1, 'test', '123', 'test@gmail.com', 'P',  
'Passive');
```

```
--
```

```
-- Name: Bus_plateNo_seq; Type: SEQUENCE SET; Schema:  
public; Owner: postgres
```

```
--  
  
SELECT pg_catalog.setval('public."Bus_plateNo_seq"', 1,  
false);  
  
--  
-- Name: City_cityID_seq; Type: SEQUENCE SET; Schema:  
public; Owner: postgres  
--  
  
SELECT pg_catalog.setval('public."City_cityID_seq"',  
22, true);  
  
--  
-- Name: Company_companyID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--  
  
SELECT  
pg_catalog.setval('public."Company_companyID_seq"', 1,  
true);  
  
--  
-- Name: ContactInformation_contactID_seq; Type:  
SEQUENCE SET; Schema: public; Owner: postgres  
--  
  
SELECT  
pg_catalog.setval('public."ContactInformation_contactID  
_seq"', 46, true);
```

```
--  
-- Name: Discount_discountID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--
```

```
SELECT  
pg_catalog.setval('public."Discount_discountID_seq"',  
5, true);
```

```
--  
-- Name: District_districtNo_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--
```

```
SELECT  
pg_catalog.setval('public."District_districtNo_seq"',  
44, true);
```

```
--  
-- Name: Driver_driverID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--
```

```
SELECT  
pg_catalog.setval('public."Driver_driverID_seq"', 16,  
true);
```

```
--  
-- Name: Passenger_passengerID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--
```

```
SELECT
pg_catalog.setval('public."Passenger_passengerID_seq"',
20, true);
```

```
--
-- Name: Payment_paymentID_seq; Type: SEQUENCE SET;
Schema: public; Owner: postgres
--
```

```
SELECT
pg_catalog.setval('public."Payment_paymentID_seq"', 20,
true);
```

```
--
-- Name: Reservation_reservationID_seq; Type: SEQUENCE
SET; Schema: public; Owner: postgres
--
```

```
SELECT
pg_catalog.setval('public."Reservation_reservationID_se
q"', 20, true);
```

```
--
-- Name: Route_routeID_seq; Type: SEQUENCE SET; Schema:
public; Owner: postgres
--
```

```
SELECT pg_catalog.setval('public."Route_routeID_seq"',
15, true);
```

```
--  
-- Name: SalaryChanges_recordNo_seq; Type: SEQUENCE  
SET; Schema: public; Owner: postgres  
--  
  
SELECT  
pg_catalog.setval('public."SalaryChanges_recordNo_seq"  
, 6, true);  
  
--  
-- Name: Station_stationID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--  
  
SELECT  
pg_catalog.setval('public."Station_stationID_seq"', 35,  
true);  
  
--  
-- Name: Ticket_ticketID_seq; Type: SEQUENCE SET;  
Schema: public; Owner: postgres  
--  
  
SELECT  
pg_catalog.setval('public."Ticket_ticketID_seq"', 15,  
true);  
  
--  
-- Name: Trip_tripID_seq; Type: SEQUENCE SET; Schema:  
public; Owner: postgres  
--
```

```
SELECT pg_catalog.setval('public."Trip_tripID_seq"',  
49, true);
```

```
--  
-- Name: Users_userID_seq; Type: SEQUENCE SET; Schema:  
public; Owner: postgres  
--
```

```
SELECT pg_catalog.setval('public."Users_userID_seq"',  
7, true);
```

```
--  
-- Name: Driver DriverPK; Type: CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Driver"  
    ADD CONSTRAINT "DriverPK" PRIMARY KEY ("driverID");
```

```
--  
-- Name: SalaryChanges PK; Type: CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."SalaryChanges"  
    ADD CONSTRAINT "PK" PRIMARY KEY ("recordNo");
```

```
--
```



```
-- Name: Bus busPK; Type: CONSTRAINT; Schema: public;  
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Bus"  
    ADD CONSTRAINT "busPK" PRIMARY KEY ("plateNo");
```

```
--
```

```
-- Name: City cityPK; Type: CONSTRAINT; Schema: public;  
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."City"  
    ADD CONSTRAINT "cityPK" PRIMARY KEY ("cityID");
```

```
--
```

```
-- Name: Company companyPK; Type: CONSTRAINT; Schema:  
public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Company"  
    ADD CONSTRAINT "companyPK" PRIMARY KEY  
("companyID");
```

```
--
```

```
-- Name: ContactInformation contactInformationPK; Type:  
CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."ContactInformation"
```

```
    ADD CONSTRAINT "contactInformationPK" PRIMARY KEY
("contactID");

--
-- Name: Discount discountPK; Type: CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Discount"
    ADD CONSTRAINT "discountPK" PRIMARY KEY
("discountID");

--
-- Name: District districtPK; Type: CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."District"
    ADD CONSTRAINT "districtPK" PRIMARY KEY
("districtNo");

--
-- Name: Passenger passengerPK; Type: CONSTRAINT;
Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Passenger"
    ADD CONSTRAINT "passengerPK" PRIMARY KEY
("passengerID");
```

```
--  
-- Name: Payment paymentPK; Type: CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Payment"  
    ADD CONSTRAINT "paymentPK" PRIMARY KEY  
("paymentID");
```

```
--  
-- Name: Reservation reservationPK; Type: CONSTRAINT;  
Schema: public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Reservation"  
    ADD CONSTRAINT "reservationPK" PRIMARY KEY  
("reservationID");
```

```
--  
-- Name: Route routePK; Type: CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Route"  
    ADD CONSTRAINT "routePK" PRIMARY KEY ("routeID");
```

```
--  
-- Name: Station stationPK; Type: CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Station"
    ADD CONSTRAINT "stationPK" PRIMARY KEY
("stationID");

--
-- Name: Ticket ticketPK; Type: CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Ticket"
    ADD CONSTRAINT "ticketPK" PRIMARY KEY ("ticketID");

--
-- Name: Trip tripPK; Type: CONSTRAINT; Schema: public;
Owner: postgres
--

ALTER TABLE ONLY public."Trip"
    ADD CONSTRAINT "tripPK" PRIMARY KEY ("tripID");

--
-- Name: Users userPK; Type: CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Users"
    ADD CONSTRAINT "userPK" PRIMARY KEY ("userID");

--
```

```
-- Name: ContactInformation usersUnique1; Type:  
CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."ContactInformation"  
    ADD CONSTRAINT "usersUnique1" UNIQUE (email);
```

```
--
```

```
-- Name: ContactInformation usersUnique2; Type:  
CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."ContactInformation"  
    ADD CONSTRAINT "usersUnique2" UNIQUE ("phoneNo");
```

```
--
```

```
-- Name: Driver addingControl; Type: TRIGGER; Schema:  
public; Owner: postgres
```

```
--
```

```
CREATE TRIGGER "addingControl" BEFORE INSERT OR UPDATE  
ON public."Driver" FOR EACH ROW EXECUTE FUNCTION  
public."addDriverTR1"();
```

```
--
```

```
-- Name: ContactInformation createEmail; Type: TRIGGER;  
Schema: public; Owner: postgres
```

```
--
```

```
CREATE TRIGGER "createEmail" BEFORE INSERT ON
public."ContactInformation" FOR EACH ROW EXECUTE
FUNCTION public."addContactInformation"();

--
-- Name: Trip driverTR3; Type: TRIGGER; Schema: public;
Owner: postgres
--

CREATE TRIGGER "driverTR3" AFTER INSERT ON
public."Trip" FOR EACH ROW EXECUTE FUNCTION
public."setStatus"();

--
-- Name: Driver onSalaryUpdate; Type: TRIGGER; Schema:
public; Owner: postgres
--

CREATE TRIGGER "onSalaryUpdate" BEFORE UPDATE ON
public."Driver" FOR EACH ROW EXECUTE FUNCTION
public."salaryChangesTR"();

--
-- Name: Reservation reservationTR; Type: TRIGGER;
Schema: public; Owner: postgres
--

CREATE TRIGGER "reservationTR" AFTER INSERT ON
public."Reservation" FOR EACH ROW EXECUTE FUNCTION
public."updateTrip"();
```

```
--
-- Name: Trip tripTR1; Type: TRIGGER; Schema: public;
Owner: postgres
--

CREATE TRIGGER "tripTR1" BEFORE DELETE ON public."Trip"
FOR EACH ROW EXECUTE FUNCTION public."controlStatus"();

--
-- Name: Bus busFK; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."Bus"
    ADD CONSTRAINT "busFK" FOREIGN KEY (company)
REFERENCES public."Company"("companyID") ON UPDATE
CASCADE ON DELETE CASCADE;

--
-- Name: City cityFK; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--

ALTER TABLE ONLY public."City"
    ADD CONSTRAINT "cityFK" FOREIGN KEY ("districtNo")
REFERENCES public."District"("districtNo");

--
-- Name: Company companyFK; Type: FK CONSTRAINT;
Schema: public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Company"  
    ADD CONSTRAINT "companyFK" FOREIGN KEY  
("districtNo") REFERENCES  
public."District"("districtNo") ON UPDATE CASCADE ON  
DELETE CASCADE;
```

```
--  
-- Name: ContactInformation contactInformationFK1;  
Type: FK CONSTRAINT; Schema: public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."ContactInformation"  
    ADD CONSTRAINT "contactInformationFK1" FOREIGN KEY  
("districtNo") REFERENCES  
public."District"("districtNo");
```

```
--  
-- Name: ContactInformation contactInformationFK2;  
Type: FK CONSTRAINT; Schema: public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."ContactInformation"  
    ADD CONSTRAINT "contactInformationFK2" FOREIGN KEY  
(company) REFERENCES public."Company"("companyID");
```

```
--  
-- Name: Driver driverFK1; Type: FK CONSTRAINT; Schema:  
public; Owner: postgres  
--
```



```
ALTER TABLE ONLY public."Driver"  
    ADD CONSTRAINT "driverFK1" FOREIGN KEY ("plateNo")  
REFERENCES public."Bus"("plateNo") ON UPDATE CASCADE ON  
DELETE CASCADE;
```

```
--  
-- Name: Driver driverFK2; Type: FK CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Driver"  
    ADD CONSTRAINT "driverFK2" FOREIGN KEY (contact)  
REFERENCES public."ContactInformation"("contactID") ON  
UPDATE CASCADE ON DELETE CASCADE;
```

```
--  
-- Name: Driver driverFK3; Type: FK CONSTRAINT; Schema:  
public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Driver"  
    ADD CONSTRAINT "driverFK3" FOREIGN KEY (company)  
REFERENCES public."Company"("companyID") ON UPDATE  
CASCADE ON DELETE CASCADE;
```

```
--  
-- Name: Passenger passengerFK; Type: FK CONSTRAINT;  
Schema: public; Owner: postgres  
--
```

```
ALTER TABLE ONLY public."Passenger"
```

```
    ADD CONSTRAINT "passengerFK" FOREIGN KEY (contact)
REFERENCES public."ContactInformation"("contactID") ON
UPDATE CASCADE ON DELETE CASCADE;
```

```
--
```

```
-- Name: Payment paymentFK1; Type: FK CONSTRAINT;
Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Payment"
    ADD CONSTRAINT "paymentFK1" FOREIGN KEY (passenger)
REFERENCES public."Passenger"("passengerID") ON UPDATE
CASCADE ON DELETE CASCADE;
```

```
--
```

```
-- Name: Payment paymentFK2; Type: FK CONSTRAINT;
Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Payment"
    ADD CONSTRAINT "paymentFK2" FOREIGN KEY
(reservation) REFERENCES
public."Reservation"("reservationID") ON UPDATE CASCADE
ON DELETE CASCADE;
```

```
--
```

```
-- Name: Reservation reservationFK1; Type: FK
CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public."Reservation"
```

```
    ADD CONSTRAINT "reservationFK1" FOREIGN KEY
("passengerID") REFERENCES
public."Passenger"("passengerID") ON UPDATE CASCADE ON
DELETE CASCADE;

--
-- Name: Reservation reservationFK2; Type: FK
CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Reservation"
    ADD CONSTRAINT "reservationFK2" FOREIGN KEY
("tripID") REFERENCES public."Trip"("tripID") ON UPDATE
CASCADE ON DELETE CASCADE;

--
-- Name: Reservation reservationFK3; Type: FK
CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Reservation"
    ADD CONSTRAINT "reservationFK3" FOREIGN KEY
("ticketID") REFERENCES public."Ticket"("ticketID") ON
UPDATE CASCADE ON DELETE CASCADE;

--
-- Name: Reservation reservationFK4; Type: FK
CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."Reservation"
```

```
ADD CONSTRAINT "reservationFK4" FOREIGN KEY
(discount) REFERENCES public."Discount"("discountID")
ON UPDATE CASCADE ON DELETE CASCADE;
```

```
--
-- Name: Route routeFK; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Route"
    ADD CONSTRAINT "routeFK" FOREIGN KEY (station)
REFERENCES public."Station"("stationID") ON UPDATE
CASCADE ON DELETE CASCADE;
```

```
--
-- Name: Ticket ticketFK1; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Ticket"
    ADD CONSTRAINT "ticketFK1" FOREIGN KEY (trip)
REFERENCES public."Trip"("tripID") ON UPDATE CASCADE ON
DELETE CASCADE;
```

```
--
-- Name: Trip tripFK; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Trip"
```

```
    ADD CONSTRAINT "tripFK" FOREIGN KEY (bus)
REFERENCES public."Bus"("plateNo") ON UPDATE CASCADE ON
DELETE CASCADE;
```

```
--
-- Name: Trip tripFK2; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Trip"
    ADD CONSTRAINT "tripFK2" FOREIGN KEY (driver)
REFERENCES public."Driver"("driverID") ON UPDATE
CASCADE ON DELETE CASCADE;
```

```
--
-- Name: Trip tripFK3; Type: FK CONSTRAINT; Schema:
public; Owner: postgres
--
```

```
ALTER TABLE ONLY public."Trip"
    ADD CONSTRAINT "tripFK3" FOREIGN KEY (route)
REFERENCES public."Route"("routeID") ON UPDATE CASCADE
ON DELETE CASCADE;
```

```
--
-- PostgreSQL database dump complete
--
```

Fonksiyonlar(4)

1. Şehirlerin sayısı bulan fonksiyon

CREATE OR REPLACE FUNCTION **countCity**(cityName TEXT, OUT counts INT)

AS

\$\$

BEGIN

counts:= (SELECT COUNT(*) FROM "City"

WHERE "name" = cityName);

END;

\$\$

LANGUAGE "plpgsql";

2. Müsait olan otobüsleri getiren fonksiyon

CREATE OR REPLACE FUNCTION **bringAvailableBuses()**

RETURNS TEXT

AS

\$\$

DECLARE

buses "Bus"%ROWTYPE;

busPlateNo Text;

BEGIN

busPlateNo := '';

FOR buses IN SELECT * FROM "Bus"

LEFT JOIN "Driver" ON "Bus"."plateNo" = "Driver"."plateNo"

WHERE "driverID" IS NULL LOOP

busPlateNo := busPlateNo || buses."plateNo" || E'\r\n';

END LOOP;

RETURN busPlateNo;

END;

\$\$

```
LANGUAGE 'plpgsql';
```

3. Girilen doğum tarihinin İndirim kodun getiren fonksiyon

```
CREATE OR REPLACE FUNCTION getDiscountID(birthdate DATE)
```

```
RETURNS INT
```

```
AS
```

```
$$
```

```
DECLARE
```

```
    discountID INT;
```

```
    age INT;
```

```
BEGIN
```

```
    age := EXTRACT(year FROM age(current_date,birthdate));
```

```
    discountID := 5;
```

```
    IF age < 24 THEN
```

```
        discountID := 1;
```

```
    END IF;
```

```
    IF age > 60 THEN
```

```
        discountID := 2;
```

```
    END IF;
```

```
    RETURN discountID;
```

```
END;
```

```
$$
```

```
LANGUAGE 'plpgsql';
```

4. Yolcunun yaşına göre indirimi hesaplayıp son fiyatı getiren fonksiyon

CREATE OR REPLACE FUNCTION **calculatePrice**(basePrice INT, birthdate DATE)

RETURNS INT

AS

\$\$

DECLARE

age INT;

finalPrice INT;

BEGIN

age := EXTRACT(year FROM age(current_date, birthdate));

finalPrice := baseprice;

IF **getDiscountID**(birthdate) = 1 THEN

finalPrice := baseprice * 0.7;

END IF;

IF **getDiscountID**(birthdate) = 2 THEN

finalPrice := basePrice * 0.8;

END IF;

RETURN finalPrice;

END;

\$\$

LANGUAGE 'plpgsql';

Trigger fonksiyonlar(6)

1. Yeni şoför eklendiği zaman ad ve soyadı biçimlendirilir ve ayrıca maaşı askeri ücretten az olmaması sağlanır aksi takdirde hata fırlatılır.

```
CREATE OR REPLACE FUNCTION "addDriverTR1"()
```

```
RETURNS TRIGGER
```

```
AS
```

```
$$
```

```
BEGIN
```

```
    NEW."name" = LTRIM(NEW."name");
```

```
    NEW."surname" = LTRIM(NEW."surname");
```

```
    NEW."surname" = UPPER(NEW."surname");
```

```
    IF NEW."salary" < 4250 THEN
```

```
        RAISE EXCEPTION 'Salary should be greater than minimum wage - 4250 ₺';
```

```
    END IF;
```

```
    RETURN NEW;
```

```
END;
```

```
$$
```

```
LANGUAGE "plpgsql";
```

```
CREATE TRIGGER "addingControl"
```

```
BEFORE INSERT OR UPDATE ON "Driver"
```

```
FOR EACH ROW
```

```
EXECUTE PROCEDURE "addDriverTR1"();
```

2. Yeni şoför eklendiği zaman otobüs şirketinin uzantısıyla yeni eposta hesabı Şoför için oluşturulur.

CREATE OR REPLACE FUNCTION "addContactInformation"()

RETURNS TRIGGER

AS

\$\$

BEGIN

IF NEW."email" NOT LIKE '%@%' THEN

NEW."email" := CONCAT(NEW.email,
'@epixtravels.com');

END IF;

RETURN NEW;

END;

\$\$

LANGUAGE "plpgsql";

3. Yeni bir sefer eklendiği zaman ilgili otobüs ve şoför meşgul edilir

CREATE OR REPLACE FUNCTION "setStatus"()

RETURNS TRIGGER AS

\$BODY\$

BEGIN

UPDATE "Driver"

SET "status" = 'Busy'

WHERE "Driver"."driverID" = NEW."driver";

UPDATE "Bus"

SET "status" = 'Busy'

WHERE "Bus"."plateNo" = NEW."bus";

```
RETURN NEW;  
  
END;  
  
$BODY$  
  
language plpgsql;  
  
CREATE TRIGGER "driverTR3"  
  
AFTER INSERT ON "Trip"  
  
FOR EACH ROW  
  
EXECUTE PROCEDURE "setStatus"();
```

4. Bir sefer rezerve edildiği zaman ilgili seferin satın alındığı ilan edilir. (silinmemesi adına)

```
CREATE OR REPLACE FUNCTION "updateTrip"  
  
RETURNS TRIGGER AS  
  
$BODY$  
  
BEGIN  
  
UPDATE "Trip"  
  
SET "status" = 'Booked'  
  
WHERE "Trip"."tripID" = NEW."tripID";  
  
RETURN NEW;  
  
  
END;  
  
$BODY$  
  
language plpgsql;  
  
  
CREATE TRIGGER "reservationTR"  
  
AFTER INSERT ON "Reservation"  
  
FOR EACH ROW  
  
EXECUTE PROCEDURE "updateTrip"();
```

5. Bir sefer silinmeden önce o sefer satın alınıp alınmadığı kontrol edilir ve ayrıca ilgili şoför ve otobüs serbest bırakılır.

CREATE OR REPLACE FUNCTION "controlStatus"()

RETURNS TRIGGER AS

\$BODY\$

BEGIN

IF OLD."status" != 'Unbooked' THEN

RAISE EXCEPTION 'Trip can not be deleted since it is already booked';

ELSE

UPDATE "Driver"

SET "status" = 'Available'

WHERE "Driver"."driverID" = OLD."driver";

UPDATE "Bus"

SET "status" = 'Available'

WHERE "Bus"."plateNo" = OLD."bus";

END IF;

RETURN OLD;

END;

\$BODY\$

language plpgsql;

CREATE TRIGGER "tripTR1"

BEFORE DELETE ON "Trip"

FOR EACH ROW

EXECUTE PROCEDURE "controlStatus"();

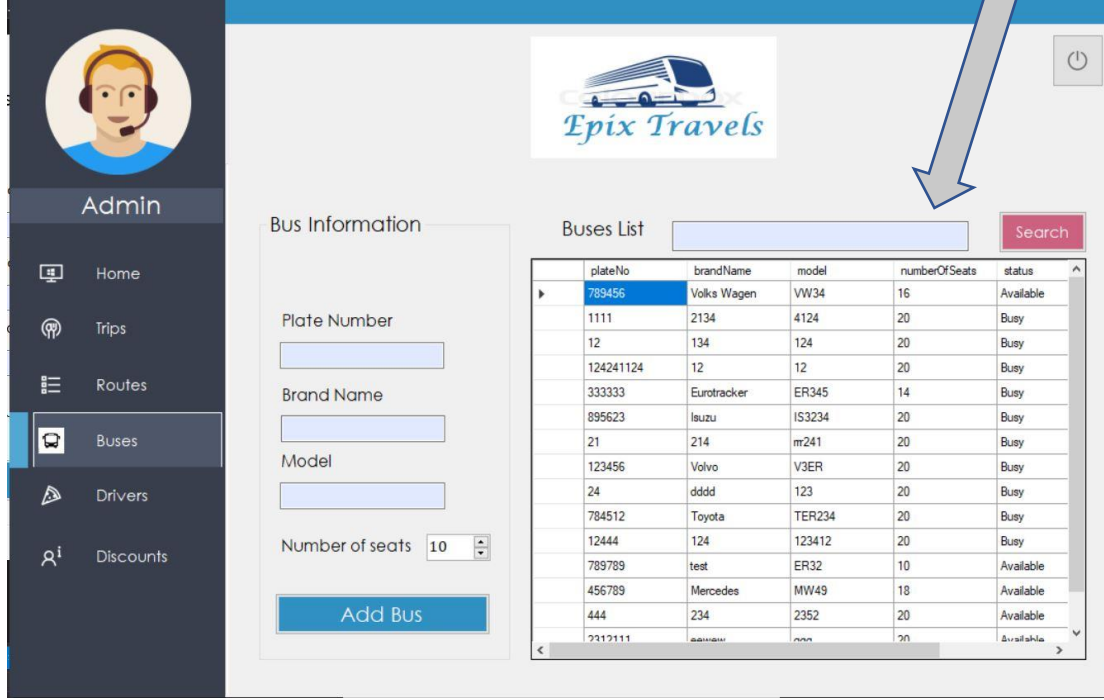
6. Bir şöfürün maaşı güncellendiği zaman değişiklikleri izlemek için bir tabloda bilgileri saklanır .

```
CREATE TABLE "public"."SalaryChanges" (  
    "recordNo" serial,  
    "driverID" SmallInt NOT NULL,  
    "oldSalary" Real NOT NULL,  
    "newSalary" Real NOT NULL,  
    "updatedOn" TIMESTAMP NOT NULL,  
    CONSTRAINT "PK" PRIMARY KEY ("recordNo")  
);
```

```
CREATE OR REPLACE FUNCTION "salaryChangesTR"()  
RETURNS TRIGGER  
AS  
$$  
BEGIN  
    IF NEW."salary" <> OLD."salary" THEN  
        INSERT INTO "SalaryChanges"("driverID", "oldSalary", "newSalary", "updatedOn")  
        VALUES(OLD."driverID", OLD."salary", NEW."salary", CURRENT_TIMESTAMP::TIMESTAMP);  
    END IF;  
  
    RETURN NEW;  
END;  
$$  
LANGUAGE "plpgsql";  
CREATE TRIGGER "onSalaryUpdate"  
BEFORE UPDATE ON "Driver"  
FOR EACH ROW  
EXECUTE PROCEDURE "salaryChangesTR"();
```

1. Arama işlemi

1.1 Otobüs arama...



The screenshot shows the Epix Travels Admin interface. On the left is a sidebar with a user profile (Admin) and navigation links: Home, Trips, Routes, Buses (selected), Drivers, and Discounts. The main content area has a header with the Epix Travels logo and a power button. Below the header, there are two sections: "Bus Information" and "Buses List".

Bus Information

Plate Number:

Brand Name:

Model:

Number of seats: 10


Buses List

	plateNo	brandName	model	numberOfSeats	status
▶	789456	Vols Wagen	VW34	16	Available
	1111	2134	4124	20	Busy
	12	134	124	20	Busy
	124241124	12	12	20	Busy
	333333	Eurotracker	ER345	14	Busy
	895623	Isuzu	IS3234	20	Busy
	21	214	m241	20	Busy
	123456	Volvo	V3ER	20	Busy
	24	dddd	123	20	Busy
	784512	Toyota	TER234	20	Busy
	12444	124	123412	20	Busy
	789789	test	ER32	10	Available
	456789	Mercedes	MW49	18	Available
	444	234	2352	20	Available
	2312111			20	Available

Buses List

	plateNo	brandName	model	numberOfSeats	status
▶	456789	Mercedes	MW49	18	Available
*					

1.2 Seferler arama...



Dashboard

- Home
- My Trips

Welcome bedru!

From(departure)

To(destination)

Date

Search

Sakarya

Ankara

Bursa

Istanbul

Izmir

12/16/2021

From(departur	To(destination)	Date	
Sakarya	Istanbul	12/17/2021	Search
41	03:00:00	02:00:00 Hrs	05:00:00
Sakarya	Istanbul		125 ₺
42	06:00:00	02:00:00 Hrs	08:00:00
Sakarya	Istanbul		75 ₺
52	10:45:00	01:30:00 Hrs	12:15:00
Sakarya	Istanbul		75 ₺
53	01:00:00	01:00:00 Hrs	02:00:00
			60 ₺

2. Ekleme işlemi

2.1 Otobüs ekleme...

Bus Information

Plate Number
784125

Brand Name
Scania



Model
DA3ERMAX-32

Number of seats 20

Add Bus

Buses List

plateNo	brandName	model	numberOfSeats	status
333333	Eurotracker	ER345	14	Busy
895623	Isuzu	IS3234	20	Busy
21	214	m241	20	Busy
123456	Volvo	V3ER	20	Busy
24	dddd	123	20	Busy
784512	Toyota	TER234	20	Busy
12444	124	123412	20	Busy
7812184	Volvo	VR2314	20	Available
784125	Scania	DA3ERMAX-32	20	Available
789789	test	ER32	10	Available
456789	Mercedes	MW49	18	Available
444	234	2352	20	Available
2312111	eeew	qqq	20	Available



2.2 Şoför ekleme...

Add Update

Driver Information

Name
Aydın

Phone Number
0545125413

Assign bus
789456

Surname
Göz

City
Ankara


Salary
3500

District
Kahramankaz

Add Driver

Clean

driverID	name	surname	salary	status	plateNo	contact	com
3	SMALLL...	SMALLL...	3000	Busy	123456	1	1
22	Aydın	GÖZ	3500	Available	789456	53	1
5	triggert...	SMALLL...	5000	Busy	123456	1	1
10	Check	AGAIN	6000	Busy	1111		1
12	Checking	AGAA...	4500	Busy	12	19	1



Route Information

Departure

Destination

Distance
 Km

Station Info

Station 1 name

Station 2 name

Routes List...

	routeID	departure	destination	distance	station
▶	6	Ankara	Istanbul	380	17
	7	Bursa	Istanbul	250Km	17
	8	Bursa	Izmir	350Km	21
	9	Sakarya	Izmir	340Km	21
	10	Sakarya	Istanbul	120Km	17
	11	Ankara	Sakarya	450Km	22
	12	Ankara	Izmir	450Km	21
	13	Izmir	Istanbul	450Km	17
	14	Sakarya	Ankara	340Km	16
	15	Bursa	Sakarya	400Km	22
	16	Izmir	Sakarya	120Km	22
	17	Sakarya	Izmir	499Km	21
	18	Bursa	Ankara	450Km	16
*					

< >

Add

Delete

Update

Trip Information

From

Sakarya

Arrival time

11:45:58 PM

To

Ankara

Assign Driver

26

Departure time

7:15:00 AM

Ticket Price

110 ₺

Add Trip

tripID	departure	destination	travelDura	status	driver	bus	price
56	Bursa	Izmir	03:15:00	Unbook...	23	456789	89
57	Bursa	Izmir	02:15:00	Unbook...	24	789456	89
58	Bursa	Izmir	03:15:00	Unbook...	25	2312111	89
41	Sakarya	Istanbul	02:00:00	Unbook...	12	12	55
59	Sakarya	Ankara	04:30:00	Unbook...	26	444	110

3. Silme işlemi

Sefer silme...

Add

Delete

Update

TripID

60

Delete Trip

	tripID	departure	destination	travelDura	status	driver	bus
	52	Sakarya	Istanbul	01:30:00	Unbook...	19	784512
	53	Sakarya	Istanbul	01:30:00	Unbook...	20	12444
	54	Sakarya	Istanbul	01:45:00	Unbook...	21	12444
	43	Sakarya	Istanbul	02:00:00	Booked	13	12
	44	Bursa	Izmir	01:54:00	Booked	8	124241...
	55	Bursa	Izmir	02:15:00	Unbook...	22	789456
	56	Bursa	Izmir	03:15:00	Unbook...	23	456789
	57	Bursa	Izmir	02:15:00	Unbook...	24	789456
	58	Bursa	Izmir	03:15:00	Unbook...	25	2312111
	41	Sakarya	Istanbul	02:00:00	Unbook...	12	12
	59	Sakarya	Ankara	04:30:00	Unbook...	26	444
	60	Sakarya	Istanbul	02:15:00	Unbook...	3	123456
	*						

Success

Trip has been deleted!

OK

	tripID	departure	destination	travelDura	status
	52	Sakarya	Istanbul	01:30:00	Unbook...
	53	Sakarya	Istanbul	01:30:00	Unbook...
	54	Sakarya	Istanbul	01:45:00	Unbook...
	43	Sakarya	Istanbul	02:00:00	Booked
	44	Bursa	Izmir	01:54:00	Booked
	55	Bursa	Izmir	02:15:00	Unbook...
	56	Bursa	Izmir	03:15:00	Unbook...
	57	Bursa	Izmir	02:15:00	Unbook...
	58	Bursa	Izmir	03:15:00	Unbook...
	41	Sakarya	Istanbul	02:00:00	Unbook...
	59	Sakarya	Ankara	04:30:00	Unbook...
	60	Sakarya	Istanbul	02:15:00	Unbook...
	*				

Silindi...

	57	Bursa	Izmir	02:15:00	Unbook...	24	789456
	58	Bursa	Izmir	03:15:00	Unbook...	25	2312111
	41	Sakarya	Istanbul	02:00:00	Unbook...	12	12
	59	Sakarya	Ankara	04:30:00	Unbook...	26	444
	*						

4. Güncelleme işlemi

4.1 Şoför maaşı güncelleme...

Add

Update

Update Salary

DriverID

22

Salary

Name

Aydin

4000


₺

Surname


GÖZ

Update

Clean



	driverID	name	surname	salary	status	plateNo	contact	compa
▶	22	Aydin	GÖZ	3500	Busy	789456	53	1
	23	Wasiq	MASOOD	5000	Busy	456789	54	1
	24	Mehmet	OĞUZ	4500	Busy	789456	55	1
	25	Murat	YILMAZ	4700	Busy	2312111	56	1
	27	Andy	ROBERTSON	4900	Available	784125	58	1
	28	Mert	YILMAZ	5500	Available	4515699	59	1



	driverID	name	surname	salary	status	plateNo	contact	compa
	29	Ibrahim	YAPMAZ	6500	Available	7812184	60	1
	26	Alexander	ARNOLD	7800	Busy	444	57	1
	3	SMALLETERS	SMALLETERS	3000	Available	123456	1	1
	22	Aydin	GÖZ	4000	Busy	789456	53	1
	5	triggertest	SMALLETERS	5000	Busy	123456	1	1
	10	Check	AGAIN	6000	Busy	1111		1

4.2 İndirim oranı güncelleme...

Update Discounts

Type

Student Under 24 ▾

Discount Rate (%) 30

Update

Discounts List

	discountID	name	discountRate
▶	2	Above 60	0.2
	5	Normal	0
	1	Student Under 24	0.2
*			

Success

Discount Rate has been updated successfully!

OK

Discounts List

	discountID	name	discountRate
▶	2	Above 60	0.2
	5	Normal	0
	1	Student Under 24	0.3
*			

4.3 Seferin fiyatı güncelleme...

Add Delete Update

Update Price

Trip ID

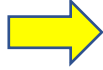
New Price

59

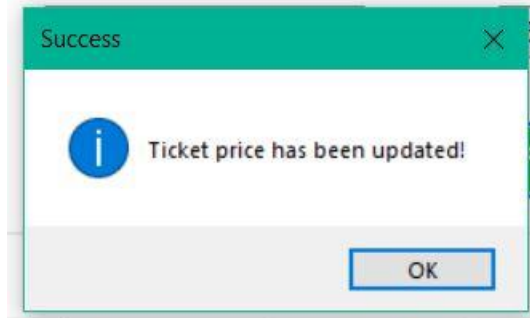
150

₺

Update Price



	tripID	departure	destinatio	price
	57	Bursa	Izmir	89
	58	Bursa	Izmir	89
	41	Sakarya	Istanbul	55
	59	Sakarya	Ankara	100
	*			



	tripID	departure	destinatio	price
	57	Bursa	Izmir	89
	58	Bursa	Izmir	89
	41	Sakarya	Istanbul	55
	59	Sakarya	Ankara	150
	*			

Github link :

Youtube video link :