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Федеральное государственное автономное образовательное учреждение
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Факультет инфокоммуникационных технологий
Мегафакультет информационных и трансляционных технологий

Проектирование и реализация баз данных

Лабораторная работа №1.2

"Создание БД PostgreSQL в pgAdmin. Резервное копирование и
восстановление БД"

Работу
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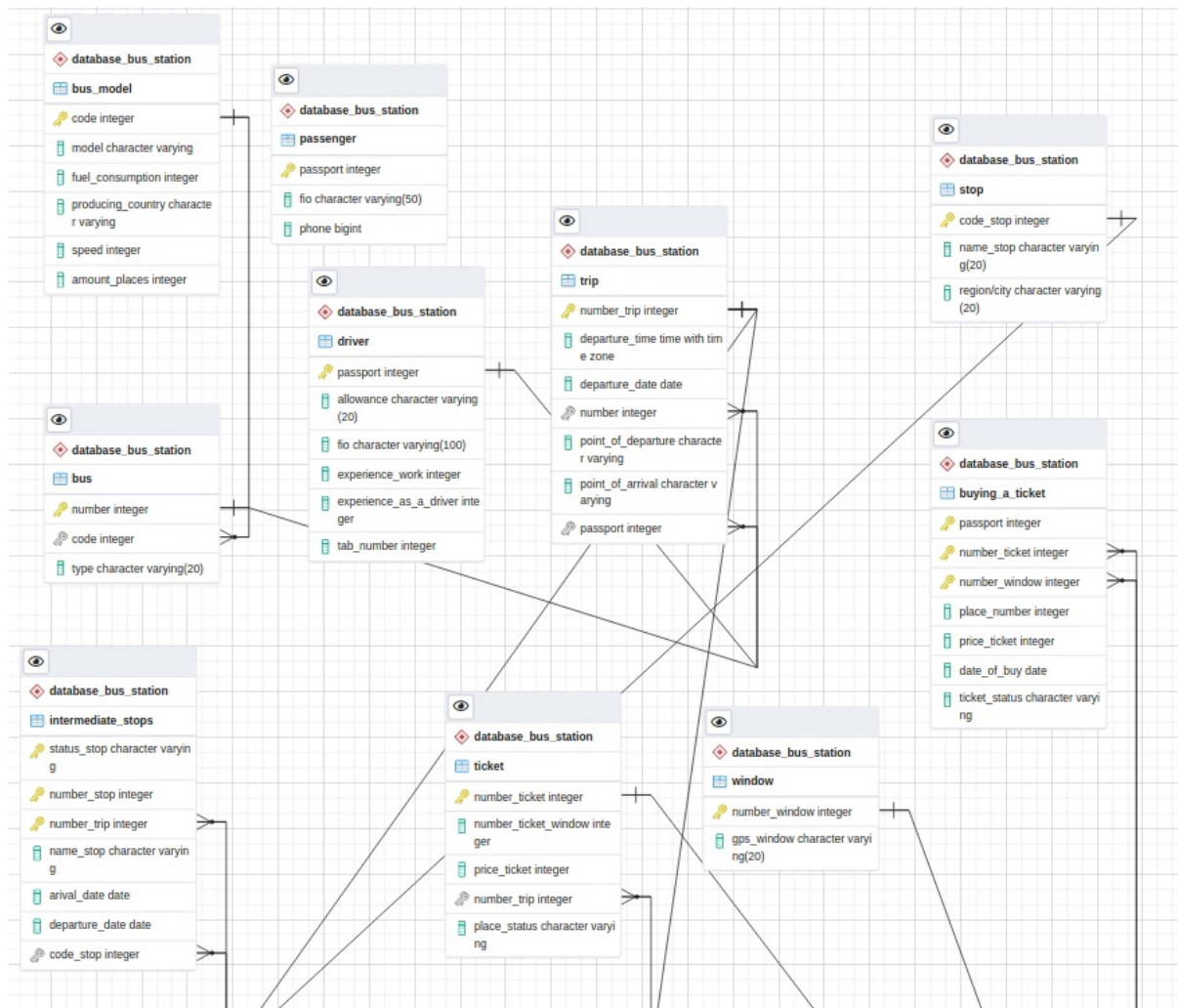
Санкт-Петербург
2022

Цель работы: овладеть практическими навыками построение БД с использованием PostgreSQL и pgAdmin 4.

Практическое задание:

1. схема логической модели базы данных, сгенерированная в Generate ERD
2. dump, содержащий скрипты работы с БД.

Схема логической модели базы данных, сгенерированная в Generate ERD



dump, содержащий скрипты работы с БД

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

-- Dumped from database version 12.9 (Ubuntu 12.9-0ubuntu0.20.04.1)
-- Dumped by pg_dump version 12.9 (Ubuntu 12.9-0ubuntu0.20.04.1)

-- Started on 2022-03-04 22:27:25 MSK

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;

--
-- TOC entry 6 (class 2615 OID 16386)
-- Name: database_bus_station; Type: SCHEMA; Schema: -; Owner: postgres
--

CREATE SCHEMA database_bus_station;

ALTER SCHEMA database_bus_station OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
-- TOC entry 204 (class 1259 OID 16432)
-- Name: bus; Type: TABLE; Schema: database_bus_station; Owner: postgres
--
```

Создание столбцов

```
CREATE TABLE database_bus_station.bus (  
    number integer NOT NULL,  
    code integer NOT NULL,  
    type character varying(20) NOT NULL  
);
```

```
ALTER TABLE database_bus_station.bus OWNER TO postgres;
```

```
--  
-- TOC entry 203 (class 1259 OID 16387)  
-- Name: bus_model; Type: TABLE; Schema: database_bus_station; Owner:  
postgres  
--
```

```
CREATE TABLE database_bus_station.bus_model (  
    code integer NOT NULL,  
    model character varying NOT NULL,  
    fuel_consumption integer NOT NULL,  
    producing_country character varying NOT NULL,  
    speed integer NOT NULL,  
    amount_places integer NOT NULL  
);
```

```
ALTER TABLE database_bus_station.bus_model OWNER TO postgres;
```

```
--  
-- TOC entry 211 (class 1259 OID 16551)  
-- Name: buying_a_ticket; Type: TABLE; Schema: database_bus_station;  
Owner: postgres  
--
```

```
CREATE TABLE database_bus_station.buying_a_ticket (  
    passport integer NOT NULL,  
    number_ticket integer NOT NULL,  
    number_window integer NOT NULL,  
    place_number integer NOT NULL,  
    price_ticket integer NOT NULL,  
    date_of_buy date NOT NULL,  
    ticket_status character varying NOT NULL
```

```
);
```

```
ALTER TABLE database_bus_station.buying_a_ticket OWNER TO postgres;
```

```
--  
-- TOC entry 206 (class 1259 OID 16461)  
-- Name: driver; Type: TABLE; Schema: database_bus_station; Owner: postgres  
--
```

```
CREATE TABLE database_bus_station.driver (  
    passport integer NOT NULL,  
    allowance character varying(20) NOT NULL,  
    fio character varying(100) NOT NULL,  
    experience_work integer NOT NULL,  
    experience_as_a_driver integer NOT NULL,  
    tab_number integer NOT NULL,  
        CONSTRAINT experience_as_a_driver_check CHECK  
((experience_as_a_driver > 5)),  
    CONSTRAINT experience_work_check CHECK ((experience_work > 1))  
);
```

```
ALTER TABLE database_bus_station.driver OWNER TO postgres;
```

```
--  
-- TOC entry 208 (class 1259 OID 16514)  
-- Name: intermediate_stops; Type: TABLE; Schema: database_bus_station;  
Owner: postgres  
--
```

```
CREATE TABLE database_bus_station.intermediate_stops (  
    status_stop character varying NOT NULL,  
    number_stop integer NOT NULL,  
    number_trip integer NOT NULL,  
    name_stop character varying NOT NULL,  
    arrival_date date NOT NULL,  
    departure_date date NOT NULL,  
    code_stop integer NOT NULL  
);
```

```
ALTER TABLE database_bus_station.intermediate_stops OWNER TO
postgres;
```

```
--
-- TOC entry 212 (class 1259 OID 16571)
-- Name: passenger; Type: TABLE; Schema: database_bus_station; Owner:
postgres
--
```

```
CREATE TABLE database_bus_station.passenger (
    passport integer NOT NULL,
    fio character varying(50) NOT NULL,
    phone bigint NOT NULL
);
```

```
ALTER TABLE database_bus_station.passenger OWNER TO postgres;
```

```
--
-- TOC entry 209 (class 1259 OID 16529)
-- Name: stop; Type: TABLE; Schema: database_bus_station; Owner: postgres
--
```

```
CREATE TABLE database_bus_station.stop (
    code_stop integer NOT NULL,
    name_stop character varying(20) NOT NULL,
    "region/city" character varying(20) NOT NULL
);
```

```
ALTER TABLE database_bus_station.stop OWNER TO postgres;
```

```
--
-- TOC entry 207 (class 1259 OID 16488)
-- Name: ticket; Type: TABLE; Schema: database_bus_station; Owner: postgres
--
```

```
CREATE TABLE database_bus_station.ticket (
    number_ticket integer NOT NULL,
    number_ticket_window integer NOT NULL,
    price_ticket integer NOT NULL,
    number_trip integer NOT NULL,
    place_status character varying NOT NULL,
```

```
    CONSTRAINT price_ticket_check CHECK ((price_ticket > 0))
);
```

```
ALTER TABLE database_bus_station.ticket OWNER TO postgres;
```

```
--
-- TOC entry 205 (class 1259 OID 16444)
-- Name: trip; Type: TABLE; Schema: database_bus_station; Owner: postgres
--
```

```
CREATE TABLE database_bus_station.trip (
    number_trip integer NOT NULL,
    departure_time time with time zone NOT NULL,
    departure_date date NOT NULL,
    number integer NOT NULL,
    point_of_departure character varying NOT NULL,
    point_of_arrival character varying NOT NULL,
    passport integer NOT NULL
);
```

```
ALTER TABLE database_bus_station.trip OWNER TO postgres;
```

```
--
-- TOC entry 210 (class 1259 OID 16542)
-- Name: window; Type: TABLE; Schema: database_bus_station; Owner:
postgres
--
```

```
CREATE TABLE database_bus_station."window" (
    number_window integer NOT NULL,
    gps_window character varying(20) NOT NULL,
    CONSTRAINT chk_number_window CHECK ((number_window < 10))
);
```

```
ALTER TABLE database_bus_station."window" OWNER TO postgres;
```

```
--
-- TOC entry 3065 (class 0 OID 16432)
-- Dependencies: 204
```

-- Data for Name: bus; Type: TABLE DATA; Schema: database_bus_station;
Owner: postgres

--

Заполнение БД

COPY database_bus_station.bus (number, code, type) FROM stdin;

177	1	multi-seat
235	2	not multi-seat
956	3	for long trip
825	4	not for long trip

\\.

--

-- TOC entry 3064 (class 0 OID 16387)

-- Dependencies: 203

-- Data for Name: bus_model; Type: TABLE DATA; Schema:
database_bus_station; Owner: postgres

--

COPY database_bus_station.bus_model (code, model, fuel_consumption,
producing_country, speed, amount_places) FROM stdin;

1	comfort plus40	China	100	40
2	comfort 35	China	90	36
3	universal 36	Japan	87	30
4	minimum equipment 32	Russia	76	20

\\.

--

-- TOC entry 3072 (class 0 OID 16551)

-- Dependencies: 211

-- Data for Name: buying_a_ticket; Type: TABLE DATA; Schema:
database_bus_station; Owner: postgres

--

COPY database_bus_station.buying_a_ticket (passport, number_ticket,
number_window, place_number, price_ticket, date_of_buy, ticket_status)
FROM stdin;

1205768847	1	12	4600	2022-03-03	bought
1391594893	2	13	4600	2022-03-02	booked
1934857759	3	19	7700	2022-02-28	bought
1938476778	4	20	9523	2022-01-05	bought

\\.

```
--
-- TOC entry 3067 (class 0 OID 16461)
-- Dependencies: 206
-- Data for Name: driver; Type: TABLE DATA; Schema: database_bus_station;
Owner: postgres
--
```

COPY database_bus_station.driver (passport, allowance, fio, experience_work, experience_as_a_driver, tab_number) FROM stdin;

1234567890	admitted	Korobkovskiy Vadim Andreevich	3	6	324567
1345236896	admitted	Konakov Maksim Andreevich	5	16	524553
1562768456	admitted	Gergoriev Grigori Ruslanovich	5	10	343462
1654654123	admitted	Ryazonov Semen Denisovich	10	20	564323
1845349788	not admitted	Androsov Dmitry Borisovich	2	7	324456

\\.

```
--
-- TOC entry 3069 (class 0 OID 16514)
-- Dependencies: 208
-- Data for Name: intermediate_stops; Type: TABLE DATA; Schema:
database_bus_station; Owner: postgres
--
```

COPY database_bus_station.intermediate_stops (status_stop, number_stop, number_trip, name_stop, arival_date, departure_date, code_stop) FROM stdin;

rest	1	17	Tver	2022-03-11	2022-03-11	1
rest	1	23	Okylovka	2022-03-10	2022-03-10	2
overnight stay	1	82	Omsk	2022-03-02	2022-03-01	3
overnight stay	1	95	Krasoyarsk	2022-03-31	2022-03-30	4

\\.

```
--
-- TOC entry 3073 (class 0 OID 16571)
-- Dependencies: 212
-- Data for Name: passenger; Type: TABLE DATA; Schema:
database_bus_station; Owner: postgres
--
```

```
COPY database_bus_station.passenger (passport, fio, phone) FROM stdin;
```

```
1205768847 Krasko Sergey Andreevich      79825783877
```

```
1391594893 Ivano Ivan Ivanovich      79119489399
```

```
1934857759 Kryp Ilia Igorevich      79118888388
```

```
1938476778 Gtup Arsenii Vitalevich 79118002233
```

```
\.
```

```
--
```

```
-- TOC entry 3070 (class 0 OID 16529)
```

```
-- Dependencies: 209
```

```
-- Data for Name: stop; Type: TABLE DATA; Schema: database_bus_station;  
Owner: postgres
```

```
--
```

```
COPY database_bus_station.stop (code_stop, name_stop, "region/city") FROM  
stdin;
```

```
1      Moscow      Moscow
```

```
2      St.Peterburg St.Peterburg
```

```
3      Krasnoyarsk Krasnoyarsky kray
```

```
4      Irkutsk      Irkutsk obl
```

```
\.
```

```
--
```

```
-- TOC entry 3068 (class 0 OID 16488)
```

```
-- Dependencies: 207
```

```
-- Data for Name: ticket; Type: TABLE DATA; Schema: database_bus_station;  
Owner: postgres
```

```
--
```

```
COPY database_bus_station.ticket (number_ticket, number_ticket_window,  
price_ticket, number_trip, place_status) FROM stdin;
```

```
3      3      7700 82      booked
```

```
4      4      9523 95      booked
```

```
1      1      4600 17      not selected
```

```
2      2      4600 23      not selected
```

```
\.
```

```
--
```

```
-- TOC entry 3066 (class 0 OID 16444)
```

```
-- Dependencies: 205
-- Data for Name: trip; Type: TABLE DATA; Schema: database_bus_station;
Owner: postgres
--
```

```
COPY database_bus_station.trip (number_trip, departure_time, departure_date,
number, point_of_departure, point_of_arrival, passport) FROM stdin;
```

```
17    10:00:00+032022-03-11 177    St.Peterburg Moscow    1234567890
```

```
23    09:00:00+032022-03-10 235    Moscow    St.Peterburg 1562768456
```

```
82    23:06:00+032022-03-01 825    Ufa    Krasnoyarsk 1345236896
```

```
95    06:05:00+032022-03-30 956    Novosibirsk Irkutsk    1654654123
```

```
\\.
```

```
--
-- TOC entry 3071 (class 0 OID 16542)
-- Dependencies: 210
-- Data for Name: window; Type: TABLE DATA; Schema:
database_bus_station; Owner: postgres
--
```

```
COPY database_bus_station."window" (number_window, gps_window) FROM
stdin;
```

```
1      at the entrance
```

```
2      near he entrance
```

```
3      in the middle
```

```
4      at the end
```

```
\\.
```

Ключи и ограничения

```
--
-- TOC entry 2874 (class 2606 OID 16426)
-- Name: bus_model amount_places_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.bus_model
    ADD CONSTRAINT amount_places_check CHECK ((amount_places <=
40)) NOT VALID;
```

```
--  
-- TOC entry 2903 (class 2606 OID 16391)  
-- Name: bus_model bus_model_pkey; Type: CONSTRAINT; Schema:  
database_bus_station; Owner: postgres  
--
```

```
ALTER TABLE ONLY database_bus_station.bus_model  
ADD CONSTRAINT bus_model_pkey PRIMARY KEY (code);
```

```
--  
-- TOC entry 2905 (class 2606 OID 16443)  
-- Name: bus bus_pkey; Type: CONSTRAINT; Schema: database_bus_station;  
Owner: postgres  
--
```

```
ALTER TABLE ONLY database_bus_station.bus  
ADD CONSTRAINT bus_pkey PRIMARY KEY (number);
```

```
--  
-- TOC entry 2907 (class 2606 OID 16436)  
-- Name: bus bus_unique; Type: CONSTRAINT; Schema:  
database_bus_station; Owner: postgres  
--
```

```
ALTER TABLE ONLY database_bus_station.bus  
ADD CONSTRAINT bus_unique UNIQUE (number);
```

```
--  
-- TOC entry 2927 (class 2606 OID 16556)  
-- Name: buying_a_ticket buying_a_ticket_pkey; Type: CONSTRAINT;  
Schema: database_bus_station; Owner: postgres  
--
```

```
ALTER TABLE ONLY database_bus_station.buying_a_ticket  
ADD CONSTRAINT buying_a_ticket_pkey PRIMARY KEY (passport,  
number_ticket, number_window);
```

```
--  
-- TOC entry 2878 (class 2606 OID 16587)
```

```
-- Name: bus_code_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.bus
ADD CONSTRAINT code_check CHECK ((code > 0)) NOT VALID;
```

```
--
-- TOC entry 2875 (class 2606 OID 16600)
-- Name: bus_model_code_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.bus_model
ADD CONSTRAINT code_check CHECK ((code > 0)) NOT VALID;
```

```
--
-- TOC entry 2919 (class 2606 OID 16523)
-- Name: intermediate_stops_code_stop; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.intermediate_stops
ADD CONSTRAINT code_stop UNIQUE (code_stop);
```

```
--
-- TOC entry 2890 (class 2606 OID 16594)
-- Name: intermediate_stops_code_stop_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.intermediate_stops
ADD CONSTRAINT code_stop_check CHECK ((code_stop > 0)) NOT
VALID;
```

```
--
-- TOC entry 2893 (class 2606 OID 16644)
-- Name: stop_code_stop_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.stop
    ADD CONSTRAINT code_stop_check CHECK ((code_stop > 0)) NOT
VALID;
```

--

```
-- TOC entry 2911 (class 2606 OID 16471)
-- Name: driver driver_pkey; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
```

--

```
ALTER TABLE ONLY database_bus_station.driver
    ADD CONSTRAINT driver_pkey PRIMARY KEY (passport);
```

--

```
-- TOC entry 2876 (class 2606 OID 16427)
-- Name: bus_model fuel_consumption_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.bus_model
    ADD CONSTRAINT fuel_consumption_check CHECK ((fuel_consumption
<= 46)) NOT VALID;
```

--

```
-- TOC entry 2921 (class 2606 OID 16521)
-- Name: intermediate_stops intermediate_stops_pkey; Type: CONSTRAINT;
Schema: database_bus_station; Owner: postgres
```

--

```
ALTER TABLE ONLY database_bus_station.intermediate_stops
    ADD CONSTRAINT intermediate_stops_pkey PRIMARY KEY
(status_stop, number_stop, number_trip);
```

--

```
-- TOC entry 2879 (class 2606 OID 16581)
-- Name: bus number_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.bus
  ADD CONSTRAINT number_check CHECK ((number > 0)) NOT VALID;
```

--

```
-- TOC entry 2880 (class 2606 OID 16599)
-- Name: trip number_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.trip
  ADD CONSTRAINT number_check CHECK ((number > 0)) NOT VALID;
```

--

```
-- TOC entry 2891 (class 2606 OID 16592)
-- Name: intermediate_stops number_stop_check; Type: CHECK
CONSTRAINT; Schema: database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.intermediate_stops
  ADD CONSTRAINT number_stop_check CHECK ((number_stop > 0))
NOT VALID;
```

--

```
-- TOC entry 2895 (class 2606 OID 16588)
-- Name: buying_a_ticket number_ticket_check; Type: CHECK
CONSTRAINT; Schema: database_bus_station; Owner: postgres
```

--

```
ALTER TABLE database_bus_station.buying_a_ticket
  ADD CONSTRAINT number_ticket_check CHECK ((number_ticket > 0))
NOT VALID;
```

--

```
-- TOC entry 2915 (class 2606 OID 16496)
-- Name: ticket number_ticket_unique; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
```

--

```
ALTER TABLE ONLY database_bus_station.ticket
    ADD CONSTRAINT number_ticket_unique PRIMARY KEY
(number_ticket);
```

```
--
-- TOC entry 2887 (class 2606 OID 16596)
-- Name: ticket number_ticket_window_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.ticket
    ADD CONSTRAINT number_ticket_window_check CHECK
((number_ticket_window > 0)) NOT VALID;
```

```
--
-- TOC entry 2909 (class 2606 OID 16451)
-- Name: trip number_trip; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.trip
    ADD CONSTRAINT number_trip PRIMARY KEY (number_trip);
```

```
--
-- TOC entry 2892 (class 2606 OID 16593)
-- Name: intermediate_stops number_trip_check; Type: CHECK
CONSTRAINT; Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.intermediate_stops
    ADD CONSTRAINT number_trip_check CHECK ((number_trip > 0)) NOT
VALID;
```

```
--
-- TOC entry 2888 (class 2606 OID 16597)
-- Name: ticket number_trip_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```



```
ALTER TABLE database_bus_station.ticket
    ADD CONSTRAINT number_trip_check CHECK ((number_trip > 0)) NOT
VALID;
```

```
--
-- TOC entry 2881 (class 2606 OID 16598)
-- Name: trip number_trip_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.trip
    ADD CONSTRAINT number_trip_check CHECK ((number_trip > 0)) NOT
VALID;
```

```
--
-- TOC entry 2917 (class 2606 OID 16498)
-- Name: ticket number_trip_unique; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.ticket
    ADD CONSTRAINT number_trip_unique UNIQUE (number_trip);
```

```
--
-- TOC entry 2896 (class 2606 OID 16567)
-- Name: buying_a_ticket number_window_check; Type: CHECK
CONSTRAINT; Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.buying_a_ticket
    ADD CONSTRAINT number_window_check CHECK ((number_window <
10)) NOT VALID;
```

```
--
-- TOC entry 2929 (class 2606 OID 16580)
-- Name: passenger passenger_pkey; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.passenger
  ADD CONSTRAINT passenger_pkey PRIMARY KEY (passport);
```

```
--
-- TOC entry 2882 (class 2606 OID 16602)
-- Name: trip passport_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.trip
  ADD CONSTRAINT passport_check CHECK ((passport > 0)) NOT VALID;
```

```
--
-- TOC entry 2897 (class 2606 OID 16632)
-- Name: buying_a_ticket passport_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.buying_a_ticket
  ADD CONSTRAINT passport_check CHECK ((passport > 0)) NOT VALID;
```

```
--
-- TOC entry 2900 (class 2606 OID 16633)
-- Name: passenger passport_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.passenger
  ADD CONSTRAINT passport_check CHECK ((passport > 0)) NOT VALID;
```

```
--
-- TOC entry 2885 (class 2606 OID 16603)
-- Name: driver passport_check ; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.driver
```

```
ADD CONSTRAINT "passport_check " CHECK ((passport > 0)) NOT
VALID;
```

```
--
-- TOC entry 2901 (class 2606 OID 16639)
-- Name: passenger phone_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.passenger
ADD CONSTRAINT phone_check CHECK ((phone > 0)) NOT VALID;
```

```
--
-- TOC entry 2898 (class 2606 OID 16589)
-- Name: buying_a_ticket place_number_check; Type: CHECK
CONSTRAINT; Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.buying_a_ticket
ADD CONSTRAINT place_number_check CHECK ((place_number > 0))
NOT VALID;
```

```
--
-- TOC entry 2899 (class 2606 OID 16590)
-- Name: buying_a_ticket price_ticket_check; Type: CHECK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.buying_a_ticket
ADD CONSTRAINT price_ticket_check CHECK ((price_ticket > 0)) NOT
VALID;
```

```
--
-- TOC entry 2877 (class 2606 OID 16428)
-- Name: bus_model speed_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE database_bus_station.bus_model
```

```

ADD CONSTRAINT speed_check CHECK ((speed <= 100)) NOT VALID;

--
-- TOC entry 2923 (class 2606 OID 16533)
-- Name: stop_stop_pkey; Type: CONSTRAINT; Schema: database_bus_station;
Owner: postgres
--

ALTER TABLE ONLY database_bus_station.stop
ADD CONSTRAINT stop_pkey PRIMARY KEY (code_stop);

--
-- TOC entry 2913 (class 2606 OID 16473)
-- Name: driver_tab_number; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--

ALTER TABLE ONLY database_bus_station.driver
ADD CONSTRAINT tab_number UNIQUE (tab_number);

--
-- TOC entry 2886 (class 2606 OID 16591)
-- Name: driver_tab_number_check; Type: CHECK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--

ALTER TABLE database_bus_station.driver
ADD CONSTRAINT tab_number_check CHECK ((tab_number > 0)) NOT
VALID;

--
-- TOC entry 2925 (class 2606 OID 16547)
-- Name: window_window_pkey; Type: CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--

ALTER TABLE ONLY database_bus_station."window"
ADD CONSTRAINT window_pkey PRIMARY KEY (number_window);

```

```
--
-- TOC entry 2930 (class 2606 OID 16437)
--   Name:    bus    fk_code;    Type:    FK    CONSTRAINT;    Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.bus
    ADD CONSTRAINT fk_code FOREIGN KEY (code) REFERENCES
database_bus_station.bus_model(code) NOT VALID;
```

```
--
-- TOC entry 2935 (class 2606 OID 16534)
-- Name: intermediate_stops fk_code_stop; Type: FK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.intermediate_stops
    ADD CONSTRAINT fk_code_stop FOREIGN KEY (code_stop)
REFERENCES database_bus_station.stop(code_stop) NOT VALID;
```

```
--
-- TOC entry 2931 (class 2606 OID 16452)
--   Name:    trip    fk_number;    Type:    FK    CONSTRAINT;    Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.trip
    ADD CONSTRAINT fk_number FOREIGN KEY (number) REFERENCES
database_bus_station.bus(number);
```

```
--
-- TOC entry 2936 (class 2606 OID 16557)
-- Name: buying_a_ticket fk_number_ticket; Type: FK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.buying_a_ticket
    ADD CONSTRAINT fk_number_ticket FOREIGN KEY (number_ticket)
REFERENCES database_bus_station.ticket(number_ticket) NOT VALID;
```

```
--
-- TOC entry 2933 (class 2606 OID 16499)
-- Name: ticket fk_number_trip; Type: FK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.ticket
    ADD CONSTRAINT fk_number_trip FOREIGN KEY (number_trip)
REFERENCES database_bus_station.trip(number_trip);
```

```
--
-- TOC entry 2934 (class 2606 OID 16524)
-- Name: intermediate_stops fk_number_trip; Type: FK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.intermediate_stops
    ADD CONSTRAINT fk_number_trip FOREIGN KEY (number_trip)
REFERENCES database_bus_station.trip(number_trip);
```

```
--
-- TOC entry 2937 (class 2606 OID 16562)
-- Name: buying_a_ticket fk_number_window; Type: FK CONSTRAINT;
Schema: database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.buying_a_ticket
    ADD CONSTRAINT fk_number_window FOREIGN KEY
(number_window) REFERENCES
database_bus_station."window"(number_window) NOT VALID;
```

```
--
-- TOC entry 2932 (class 2606 OID 16474)
-- Name: trip fk_passport; Type: FK CONSTRAINT; Schema:
database_bus_station; Owner: postgres
--
```

```
ALTER TABLE ONLY database_bus_station.trip
```

```
ADD CONSTRAINT fk_passport FOREIGN KEY (passport)
REFERENCES database_bus_station.driver(passport) NOT VALID;
```

```
-- Completed on 2022-03-04 22:27:25 MSK
```

```
--
```

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

```
--
```

Вывод: в ходе лабораторной работы была спроектирована БД с использованием программы pgAdmin 4 и PostgreSQL.