|  |
| --- |
| https://lh6.googleusercontent.com/QcftzNtI05T0Y6fjdSh1Rr2rt8oqZ1IvnLvbn1jLJ7CCyteVir3k-xBLv4SL1wAgWJsRhmmJSR0UW-RP63_GQenE4vVWv05BRoZTsmIcBccVTnfxwmsnNMvjg599x9SqZd8E3dkd |
| МИНОБРНАУКИ РОССИИ |
| Федеральное государственное бюджетное образовательное учреждение высшего образования«МИРЭА - Российский технологический университет»РТУ МИРЭА |

Институт перспективных технологий и индустриального программирования (ИПТИП)

|  |  |
| --- | --- |
| **ОТЧЕТ ПО ЛАБОРАТОРНЫМ РАБОТАМ** | |
| **по дисциплине** | |
| «Базы данных и анализ промышленных данных» | |
| **Лабораторная работа №1** | |
| Выполнил студент группы ЭФМО-02-23 | Мурадов Н.Н. |

Москва 2023

Задача

Необходимо создать базу данных с использованием СУБД PostgreSQL и ввести новые данные.

Решение

Листинг кода:

CREATE DATABASE transport;

\c transport;

CREATE TABLE COUNTRY (

ID BIGINT PRIMARY KEY,

NAME CHARACTER(30) NOT NULL

);

CREATE TABLE CITY (

ID BIGINT PRIMARY KEY,

NAME CHARACTER(30) NOT NULL,

COUNTRY\_ID BIGINT REFERENCES COUNTRY (ID)

);

CREATE TABLE ROUTE (

ID BIGINT PRIMARY KEY,

DEPARTURE\_POINT BIGINT REFERENCES CITY (ID),

ARRIVAL\_POINT BIGINT REFERENCES CITY (ID),

TRAIN\_NUMBER CHARACTER(30) NOT NULL

);

CREATE TABLE JOURNEY (

ID BIGINT PRIMARY KEY,

ROUTE\_ID BIGINT REFERENCES ROUTE (ID),

TIME\_OF\_DEPARTURE timestamp NOT NULL,

TIME\_OF\_ARRIVAL timestamp NOT NULL

);

CREATE TABLE WAY\_STATION (

ID BIGINT PRIMARY KEY,

JOURNEY\_ID BIGINT REFERENCES JOURNEY (ID),

CITY\_ID BIGINT REFERENCES CITY (ID),

TIME\_OF\_DEPARTURE timestamp NOT NULL,

TIME\_OF\_ARRIVAL timestamp NOT NULL

);

CREATE TABLE TICKET (

ID BIGINT PRIMARY KEY,

JOURNEY\_ID BIGINT REFERENCES JOURNEY (ID),

TYPE\_WAGON BIGINT NOT NULL,

PLACE BIGINT NOT NULL,

PRICE BIGINT NOT NULL,

STATE BIGINT NOT NULL DEFAULT 1

);

INSERT INTO COUNTRY VALUES

(0, 'россия'),

(1, 'казахстан')

RETURNING ID;

INSERT INTO CITY VALUES

(2, 'москва', 0),

(3, 'омск', 0),

(4, 'саратов', 0),

(5, 'екатеринбург', 0),

(6, 'астрахань', 0),

(7, 'павлодар', 1),

(8, 'петропавловск', 1),

(9, 'уральск', 1),

(10, 'курчатов', 1),

(11, 'усть-каменогорск', 1)

RETURNING ID;

INSERT INTO ROUTE VALUES

(12, 2, 3, '#5341'),

(13, 2, 4, '#5342'),

(14, 2, 5, '#5343'),

(15, 2, 6, '#5344'),

(16, 2, 7, '#5345'),

(17, 2, 8, '#5346'),

(18, 2, 9, '#5347'),

(19, 2, 10, '#5348'),

(20, 2, 11, '#5349'),

(21, 7, 2, '#5340')

RETURNING ID;

INSERT INTO JOURNEY VALUES

(22, 12, '2016-07-22 19:10:25', '2016-07-22 21:10:25'),

(23, 13, '2016-07-23 19:10:25', '2016-07-23 21:10:25'),

(24, 14, '2016-07-24 19:10:25', '2016-07-24 21:10:25'),

(25, 15, '2016-07-25 19:10:25', '2016-07-25 21:10:25'),

(26, 16, '2016-07-26 19:10:25', '2016-07-26 21:10:25'),

(27, 17, '2016-07-27 19:10:25', '2016-07-27 21:10:25'),

(28, 18, '2016-07-28 19:10:25', '2016-07-28 21:10:25'),

(29, 19, '2016-07-29 19:10:25', '2016-07-29 21:10:25'),

(30, 20, '2016-07-30 19:10:25', '2016-07-30 21:10:25'),

(31, 21, '2016-07-31 19:10:25', '2016-07-31 21:10:25')

RETURNING ID;

INSERT INTO WAY\_STATION VALUES

(32, 22, 2, '2016-07-22 19:10:25', '2016-07-22 20:10:25'),

(33, 23, 2, '2016-07-23 19:10:25', '2016-07-23 20:10:25'),

(34, 24, 2, '2016-07-24 19:10:25', '2016-07-24 20:10:25'),

(35, 25, 2, '2016-07-25 19:10:25', '2016-07-25 20:10:25'),

(36, 26, 2, '2016-07-26 19:10:25', '2016-07-26 20:10:25'),

(37, 27, 2, '2016-07-27 19:10:25', '2016-07-27 21:10:25'),

(38, 28, 2, '2016-07-28 19:10:25', '2016-07-28 21:10:25'),

(39, 29, 2, '2016-07-29 19:10:25', '2016-07-29 21:10:25'),

(40, 30, 2, '2016-07-30 19:10:25', '2016-07-30 21:10:25'),

(41, 31, 2, '2016-07-31 19:10:25', '2016-07-31 21:10:25'),

(42, 22, 3, '2016-07-22 20:10:25', '2016-07-22 21:10:25'),

(43, 23, 4, '2016-07-23 20:10:25', '2016-07-23 21:10:25'),

(44, 24, 5, '2016-07-24 20:10:25', '2016-07-24 21:10:25'),

(45, 25, 6, '2016-07-25 20:10:25', '2016-07-25 21:10:25'),

(46, 26, 7, '2016-07-26 20:10:25', '2016-07-26 21:10:25')

RETURNING ID;

INSERT INTO TICKET VALUES

(47, 22, 1, 0, 100, 1),

(48, 23, 1, 0, 200, 1),

(49, 24, 2, 0, 300, 1),

(50, 25, 1, 0, 400, 1),

(51, 26, 1, 0, 500, 1),

(52, 27, 1, 0, 600, 1),

(53, 28, 1, 0, 700, 1),

(54, 29, 2, 0, 800, 1),

(55, 30, 1, 0, 900, 1),

(56, 31, 1, 0, 1000, 1),

(57, 22, 1, 1, 1100, 1),

(58, 23, 1, 1, 1200, 1),

(59, 24, 2, 1, 1300, 1),

(60, 25, 1, 1, 1400, 1),

(61, 26, 1, 1, 1500, 1),

(62, 22, 1, 0, 1600, 2),

(63, 23, 1, 0, 1700, 2),

(64, 24, 1, 0, 1800, 2),

(65, 25, 2, 0, 1900, 2),

(66, 26, 1, 0, 2000, 2)

RETURNING ID;

Результаты

