Базы данных Монастырский М. О. С21-703

лаб 4 вар 1

```sql
SET DateStyle TO German;

DROP TABLE IF EXISTS JOB_HISTORY;
DROP TABLE IF EXISTS DEPARTMENTS CASCADE;
DROP TABLE IF EXISTS EMPLOYEES;
DROP TABLE IF EXISTS JOBS;
DROP TABLE IF EXISTS LOCATIONS;
DROP TABLE IF EXISTS COUNTRIES;
DROP TABLE IF EXISTS REGIONS;

CREATE TABLE REGIONS
(
  region_id integer PRIMARY KEY,
  region_name varchar(64) NOT NULL UNIQUE
);

INSERT INTO regions
VALUES(1, 'Europe '),
(2, 'Americas '),
(3, 'Asia '),
(4, 'Middle East and Africa ');
-- DELETE FROM COUNTRIES;

CREATE TABLE COUNTRIES
(
  country_id varchar(2) PRIMARY KEY,
  country_name varchar(64) NOT NULL UNIQUE,
  region_id integer REFERENCES REGIONS(region_id) NOT NULL
);

INSERT INTO COUNTRIES VALUES
('AR', 'Argentina', 2),
('AU', 'Australia', 3),
('BE', 'Belgium', 1),
('BR', 'Brazil', 2),
('CA', 'Canada', 2),
('CH', 'Switzerland', 1),
('CN', 'China', 3),
('DE', 'Germany', 1),
('DK', 'Denmark', 1),
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('EG', 'Egypt', 4),
('FR', 'France', 1),
('IL', 'Israel', 4),
('IN', 'India', 3),
('IT', 'Italy', 1),
('JP', 'Japan', 3),
('KW', 'Kuwait', 4),
('ML', 'Malaysia', 3),
('MX', 'Mexico', 2),
('NG', 'Nigeria', 4),
('NL', 'Netherlands', 1),
('SG', 'Singapore', 3),
('UK', 'United Kingdom', 1),
('US', 'United States of America', 2),
('ZM', 'Zambia', 4),
('ZW', 'Zimbabwe', 4);
-- DELETE FROM LOCATIONS;

CREATE TABLE LOCATIONS
(
  location_id integer PRIMARY KEY,
  street_address varchar(64) NOT NULL,
  postal_code varchar(16),
  city varchar(64),
  state_province varchar(64),
  country_id varchar(2) REFERENCES COUNTRIES(country_id) NOT NULL
);

INSERT INTO LOCATIONS VALUES
(1000, '1297 Via Cola di Rie', '989', 'Roma', '', 'IT'),
(1100, '93091 Calle della Testa', '10934', 'Venice', '', 'IT'),
(1200, '2017 Shinjuku-ku', '1689', 'Tokyo', 'Tokyo Prefecture', 'JP'),
(1300, '9450 Kamiya-cho', '6823', 'Hiroshima', '', 'JP'),
(1400, '2014 Jabberwocky Rd', '26192', 'Southlake', 'Texas', 'US'),
(1500, '2011 Interiors Blvd', '99236', 'South San Francisco',
'California', 'US'),
(1600, '2007 Zagora St', '50090', 'South Brunswick', 'New Jersey', 'US'),
(1700, '2004 Charade Rd', '98199', 'Seattle', 'Washington', 'US'),
(1800, '147 Spadina Ave', 'M5V 2L7', 'Toronto', 'Ontario', 'CA'),
(1900, '6092 Boxwood St', 'YSW 9T2', 'Whitehorse', 'Yukon', 'CA'),
(2000, '40-5-12 Laogianggen', '190518', 'Beijing', '', 'CN'),
(2100, '1298 Vileparle (E)', '490231', 'Bombay', 'Maharashtra', 'IN'),
(2200, '12-98 Victoria Street', '2901', 'Sydney', 'New South Wales',
'AU'),
(2300, '198 Clementi North', '540198', 'Singapore', '', 'SG'),
(2400, '8204 Arthur St', '', 'London', '', 'UK'),
(2500, 'Magdalen Centre, The Oxford Science Park', 'OX9 9ZB', 'Oxford',
'Oxford', 'UK'),
(2600, '9702 Chester Road', '9629850293', 'Stretford', 'Manchester',
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  'UK'),
(2700, 'Schwanthalerstr. 7031', '80925', 'Munich', 'Bavaria', 'DE'),
(2800, 'Rua Frei Caneca 1360 ', '01307-002', 'Sao Paulo', 'Sao Paulo',
'BR'),
(2900, '20 Rue des Corps-Saints', '1730', 'Geneva', 'Geneve', 'CH'),
(3000, 'Murtenstrasse 921', '3095', 'Bern', 'BE', 'CH'),
(3100, 'Pieter Breughelstraat 837', '3029SK', 'Utrecht', 'Utrecht',
'NL');
-- DELETE FROM JOBS;

CREATE TABLE JOBS(
  job_id varchar(16) PRIMARY KEY,
  job_title varchar(64) NOT NULL UNIQUE,
  min_salary numeric(8, 2) NOT NULL,
  max_salary numeric(8, 2) NOT NULL
);

INSERT INTO jobs VALUES
('AD_PRES', 'President', 20080, 40000),
('AD_VP', 'Administration Vice President', 15000, 30000),
('AD_ASST', 'Administration Assistant', 3000, 6000),
('FI_MGR', 'Finance Manager', 8200, 16000),
('FI_ACCOUNT', 'Accountant', 4200, 9000),
('AC_MGR', 'Accounting Manager', 8200, 16000),
('AC_ACCOUNT', 'Public Accountant', 4200, 9000),
('SA_MAN', 'Sales Manager', 10000, 20080),
('SA_REP', 'Sales Representative', 6000, 12008),
('PU_MAN', 'Purchasing Manager', 8000, 15000),
('PU_CLERK', 'Purchasing Clerk', 2500, 5500),
('ST_MAN', 'Stock Manager', 5500, 8500),
('ST_CLERK', 'Stock Clerk', 2008, 5000),
('SH_CLERK', 'Shipping Clerk', 2500, 5500),
('IT_PROG', 'Programmer', 4000, 10000),
('MK_MAN', 'Marketing Manager', 9000, 15000),
('MK_REP', 'Marketing Representative', 4000, 9000),
('HR_REP', 'Human Resources Representative', 4000, 9000),
('PR_REP', 'Public Relations Representative', 4500, 10500);
-- DELETE FROM DEPARTMENTS;

CREATE TABLE EMPLOYEES
(
  employee_id integer PRIMARY KEY,
  first_name varchar(64) NOT NULL,
  last_name varchar(64) NOT NULL,
  email varchar(64) NOT NULL UNIQUE,
  phone_integer varchar(64) NOT NULL,
  hire_date timestamp NOT NULL,
  job_id varchar(16) REFERENCES JOBS(job_id),
  salary numeric(8, 2) NOT NULL,
```

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  commission_pct numeric(5, 2),
  manager_id integer REFERENCES EMPLOYEES(employee_id),
  department_id integer
);

-- DELETE FROM EMPLOYEES;
INSERT INTO employees VALUES(100, 'Steven', 'King', 'SKING',
'515.123.4567', '17.06.2003', 'AD_PRES', 24000, NULL, NULL, 90);
INSERT INTO employees VALUES(101, 'Neena', 'Kochhar', 'NKOCHHAR',
'515.123.4568', '21.09.2005', 'AD_VP', 17000, NULL, 100, 90);
INSERT INTO employees VALUES(102, 'Lex', 'De Haan', 'LDEHAAN',
'515.123.4569', '13.01.2001', 'AD_VP', 17000, NULL, 100, 90);
INSERT INTO employees VALUES(103, 'Alexander', 'Hunold', 'AHUNOLD',
'590.423.4567', '03.01.2006', 'IT_PROG', 9000, NULL, 102, 60);
INSERT INTO employees VALUES(104, 'Bruce', 'Ernst', 'BERNST',
'590.423.4568', '21.05.2007', 'IT_PROG', 6000, NULL, 103, 60);
INSERT INTO employees VALUES(105, 'David', 'Austin', 'DAUSTIN',
'590.423.4569', '25.06.2005', 'IT_PROG', 4800, NULL, 103, 60);
INSERT INTO employees VALUES(106, 'Valli', 'Pataballa', 'VPATABAL',
'590.423.4560', '05.02.2006', 'IT_PROG', 4800, NULL, 103, 60);
INSERT INTO employees VALUES(107, 'Diana', 'Lorentz', 'DLORENTZ',
'590.423.5567', '07.02.2007', 'IT_PROG', 4200, NULL, 103, 60);
INSERT INTO employees VALUES(108, 'Nancy', 'Greenberg', 'NGREENBE',
'515.124.4569', '17.08.2002', 'FI_MGR', 12008, NULL, 101, 100);
INSERT INTO employees VALUES(109, 'Daniel', 'Faviet', 'DFAVIET',
'515.124.4169', '16.08.2002', 'FI_ACCOUNT', 9000, NULL, 108, 100);
INSERT INTO employees VALUES(110, 'John', 'Chen', 'JCHEN',
'515.124.4269', '28.09.2005', 'FI_ACCOUNT', 8200, NULL, 108, 100);
INSERT INTO employees VALUES(111, 'Ismael', 'Sciarra', 'ISCIARRA',
'515.124.4369', '30.09.2005', 'FI_ACCOUNT', 7700, NULL, 108, 100);
INSERT INTO employees VALUES(112, 'Jose Manuel', 'Urman', 'JMURMAN',
'515.124.4469', '07.03.2006', 'FI_ACCOUNT', 7800, NULL, 108, 100);
INSERT INTO employees VALUES(113, 'Luis', 'Popp', 'LPOPP',
'515.124.4567', '07.12.2007', 'FI_ACCOUNT', 6900, NULL, 108, 100);
INSERT INTO employees VALUES(114, 'Den', 'Raphaely', 'DRAPHEAL',
'515.127.4561', '07.12.2002', 'PU_MAN', 11000, NULL, 100, 30);
INSERT INTO employees VALUES(115, 'Alexander', 'Khoo', 'AKHOO',
'515.127.4562', '18.05.2003', 'PU_CLERK', 3100, NULL, 114, 30);
INSERT INTO employees VALUES(116, 'Shelli', 'Baida', 'SBAIDA',
'515.127.4563', '24.12.2005', 'PU_CLERK', 2900, NULL, 114, 30);
INSERT INTO employees VALUES(117, 'Sigal', 'Tobias', 'STOBIAS',
'515.127.4564', '24.07.2005', 'PU_CLERK', 2800, NULL, 114, 30);
INSERT INTO employees VALUES(118, 'Guy', 'Himuro', 'GHIMURO',
'515.127.4565', '15.11.2006', 'PU_CLERK', 2600, NULL, 114, 30);
INSERT INTO employees VALUES(119, 'Karen', 'Colmenares', 'KCOLMENA',
'515.127.4566', '10.08.2007', 'PU_CLERK', 2500, NULL, 114, 30);
INSERT INTO employees VALUES(120, 'Matthew', 'Weiss', 'MWEISS',
'650.123.1234', '18.07.2004', 'ST_MAN', 8000, NULL, 100, 50);
INSERT INTO employees VALUES(121, 'Adam', 'Fripp', 'AFRIPP',
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'650.123.2234', '10.04.2005', 'ST_MAN', 8200, NULL, 100, 50);
INSERT INTO employees VALUES(122, 'Payam', 'Kaufling', 'PKAUFLIN',
'650.123.3234', '01.05.2003', 'ST_MAN', 7900, NULL, 100, 50);
INSERT INTO employees VALUES(123, 'Shanta', 'Vollman', 'SVOLLMAN',
'650.123.4234', '10.10.2005', 'ST_MAN', 6500, NULL, 100, 50);
INSERT INTO employees VALUES(124, 'Kevin', 'Mourgos', 'KMOURGOS',
'650.123.5234', '16.11.2007', 'ST_MAN', 5800, NULL, 100, 50);
INSERT INTO employees VALUES(125, 'Julia', 'Nayer', 'JNAYER',
'650.124.1214', '16.07.2005', 'ST_CLERK', 3200, NULL, 120, 50);
INSERT INTO employees VALUES(126, 'Irene', 'Mikkilineni', 'IMIKKILI',
'650.124.1224', '28.09.2006', 'ST_CLERK', 2700, NULL, 120, 50);
INSERT INTO employees VALUES(127, 'James', 'Landry', 'JLANDRY',
'650.124.1334', '14.01.2007', 'ST_CLERK', 2400, NULL, 120, 50);
INSERT INTO employees VALUES(128, 'Steven', 'Markle', 'SMARKLE',
'650.124.1434', '08.03.2008', 'ST_CLERK', 2200, NULL, 120, 50);
INSERT INTO employees VALUES(129, 'Laura', 'Bissot', 'LBISSOT',
'650.124.5234', '20.08.2005', 'ST_CLERK', 3300, NULL, 121, 50);
INSERT INTO employees VALUES(130, 'Mozhe', 'Atkinson', 'MATKINSO',
'650.124.6234', '30.10.2005', 'ST_CLERK', 2800, NULL, 121, 50);
INSERT INTO employees VALUES(131, 'James', 'Marlow', 'JAMRLOW',
'650.124.7234', '16.02.2005', 'ST_CLERK', 2500, NULL, 121, 50);
INSERT INTO employees VALUES(132, 'TJ', 'Olson', 'TJOLSON',
'650.124.8234', '10.04.2007', 'ST_CLERK', 2100, NULL, 121, 50);
INSERT INTO employees VALUES(133, 'Jason', 'Mallin', 'JMALLIN',
'650.127.1934', '14.06.2004', 'ST_CLERK', 3300, NULL, 122, 50);
INSERT INTO employees VALUES(134, 'Michael', 'Rogers', 'MROGERS',
'650.127.1834', '26.08.2006', 'ST_CLERK', 2900, NULL, 122, 50);
INSERT INTO employees VALUES(135, 'Ki', 'Gee', 'KGEE', '650.127.1734',
'12.12.2007', 'ST_CLERK', 2400, NULL, 122, 50);
INSERT INTO employees VALUES(136, 'Hazel', 'Philtanker', 'HPHILTAN',
'650.127.1634', '06.02.2008', 'ST_CLERK', 2200, NULL, 122, 50);
INSERT INTO employees VALUES(137, 'Renske', 'Ladwig', 'RLADWIG',
'650.121.1234', '14.07.2003', 'ST_CLERK', 3600, NULL, 123, 50);
INSERT INTO employees VALUES(138, 'Stephen', 'Stiles', 'SSTILES',
'650.121.2034', '26.10.2005', 'ST_CLERK', 3200, NULL, 123, 50);
INSERT INTO employees VALUES(139, 'John', 'Seo', 'JSEO', '650.121.2019',
'12.02.2006', 'ST_CLERK', 2700, NULL, 123, 50);
INSERT INTO employees VALUES(140, 'Joshua', 'Patel', 'JPATEL',
'650.121.1834', '06.04.2006', 'ST_CLERK', 2500, NULL, 123, 50);
INSERT INTO employees VALUES(141, 'Trenna', 'Rajs', 'TRAJS',
'650.121.8009', '17.10.2003', 'ST_CLERK', 3500, NULL, 124, 50);
INSERT INTO employees VALUES(142, 'Curtis', 'Davies', 'CDAVIES',
'650.121.2994', '29.01.2005', 'ST_CLERK', 3100, NULL, 124, 50);
INSERT INTO employees VALUES(143, 'Randall', 'Matos', 'RMATOS',
'650.121.2874', '15.03.2006', 'ST_CLERK', 2600, NULL, 124, 50);
INSERT INTO employees VALUES(144, 'Peter', 'Vargas', 'PVARGAS',
'650.121.2004', '09.07.2006', 'ST_CLERK', 2500, NULL, 124, 50);
INSERT INTO employees VALUES(145, 'John', 'Russell', 'JRUSSEL',
'011.44.1344.429268', '01.10.2004', 'SA_MAN', 14000, '0.4', 100, 80);
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INSERT INTO employees VALUES(146, 'Karen', 'Partners', 'KPARTNER',
'011.44.1344.467268', '05.01.2005', 'SA_MAN', 13500, '0.3', 100, 80);
INSERT INTO employees VALUES(147, 'Alberto', 'Errazuriz', 'AERRAZUR',
'011.44.1344.429278', '10.03.2005', 'SA_MAN', 12000, '0.3', 100, 80);
INSERT INTO employees VALUES(148, 'Gerald', 'Cambrault', 'GCAMBRAU',
'011.44.1344.619268', '15.10.2007', 'SA_MAN', 11000, '0.3', 100, 80);
INSERT INTO employees VALUES(149, 'Eleni', 'Zlotkey', 'EZLOTKEY',
'011.44.1344.429018', '29.01.2008', 'SA_MAN', 10500, '0.2', 100, 80);
INSERT INTO employees VALUES(150, 'Peter', 'Tucker', 'PTUCKER',
'011.44.1344.129268', '30.01.2005', 'SA_REP', 10000, '0.3', 145, 80);
INSERT INTO employees VALUES(151, 'David', 'Bernstein', 'DBERNSTE',
'011.44.1344.345268', '24.03.2005', 'SA_REP', 9500, '0.25', 145, 80);
INSERT INTO employees VALUES(152, 'Peter', 'Hall', 'PHALL',
'011.44.1344.478968', '20.08.2005', 'SA_REP', 9000, '0.25', 145, 80);
INSERT INTO employees VALUES(153, 'Christopher', 'Olsen', 'COLSEN',
'011.44.1344.498718', '30.03.2006', 'SA_REP', 8000, '0.2', 145, 80);
INSERT INTO employees VALUES(154, 'Nanette', 'Cambrault', 'NCAMBRAU',
'011.44.1344.987668', '09.12.2006', 'SA_REP', 7500, '0.2', 145, 80);
INSERT INTO employees VALUES(155, 'Oliver', 'Tuvault', 'OTUVAULT',
'011.44.1344.486508', '23.11.2007', 'SA_REP', 7000, '0.15', 145, 80);
INSERT INTO employees VALUES(156, 'Janette', 'King', 'JKING',
'011.44.1345.429268', '30.01.2004', 'SA_REP', 10000, '0.35', 146, 80);
INSERT INTO employees VALUES(157, 'Patrick', 'Sully', 'PSULLY',
'011.44.1345.929268', '04.03.2004', 'SA_REP', 9500, '0.35', 146, 80);
INSERT INTO employees VALUES(158, 'Allan', 'McEwen', 'AMCEWEN',
'011.44.1345.829268', '01.08.2004', 'SA_REP', 9000, '0.35', 146, 80);
INSERT INTO employees VALUES(159, 'Lindsey', 'Smith', 'LSMITH',
'011.44.1345.729268', '10.03.2005', 'SA_REP', 8000, '0.3', 146, 80);
INSERT INTO employees VALUES(160, 'Louise', 'Doran', 'LDORAN',
'011.44.1345.629268', '15.12.2005', 'SA_REP', 7500, '0.3', 146, 80);
INSERT INTO employees VALUES(161, 'Sarath', 'Sewall', 'SSEWALL',
'011.44.1345.529268', '03.11.2006', 'SA_REP', 7000, '0.25', 146, 80);
INSERT INTO employees VALUES(162, 'Clara', 'Vishney', 'CVISHNEY',
'011.44.1346.129268', '11.11.2005', 'SA_REP', 10500, '0.25', 147, 80);
INSERT INTO employees VALUES(163, 'Danielle', 'Greene', 'DGREENE',
'011.44.1346.229268', '19.03.2007', 'SA_REP', 9500, '0.15', 147, 80);
INSERT INTO employees VALUES(164, 'Mattea', 'Marvins', 'MMARVINS',
'011.44.1346.329268', '24.01.2008', 'SA_REP', 7200, '0.1', 147, 80);
INSERT INTO employees VALUES(165, 'David', 'Lee', 'DLEE',
'011.44.1346.529268', '23.02.2008', 'SA_REP', 6800, '0.1', 147, 80);
INSERT INTO employees VALUES(166, 'Sundar', 'Ande', 'SANDE',
'011.44.1346.629268', '24.03.2008', 'SA_REP', 6400, '0.1', 147, 80);
INSERT INTO employees VALUES(167, 'Amit', 'Banda', 'ABANDA',
'011.44.1346.729268', '21.04.2008', 'SA_REP', 6200, '0.1', 147, 80);
INSERT INTO employees VALUES(168, 'Lisa', 'Ozer', 'LOZER',
'011.44.1343.929268', '11.03.2005', 'SA_REP', 11500, '0.25', 148, 80);
INSERT INTO employees VALUES(169, 'Harrison', 'Bloom', 'HBLOOM',
'011.44.1343.829268', '23.03.2006', 'SA_REP', 10000, '0.2', 148, 80);
INSERT INTO employees VALUES(170, 'Tayler', 'Fox', 'TFOX',
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'011.44.1343.729268', '24.01.2006', 'SA_REP', 9600, '0.2', 148, 80);
INSERT INTO employees VALUES(171, 'William', 'Smith', 'WSMITH',
'011.44.1343.629268', '23.02.2007', 'SA_REP', 7400, '0.15', 148, 80);
INSERT INTO employees VALUES(172, 'Elizabeth', 'Bates', 'EBATES',
'011.44.1343.529268', '24.03.2007', 'SA_REP', 7300, '0.15', 148, 80);
INSERT INTO employees VALUES(173, 'Sundita', 'Kumar', 'SKUMAR',
'011.44.1343.329268', '21.04.2008', 'SA_REP', 6100, '0.1', 148, 80);
INSERT INTO employees VALUES(174, 'Ellen', 'Abel', 'EABEL',
'011.44.1644.429267', '11.05.2004', 'SA_REP', 11000, '0.3', 149, 80);
INSERT INTO employees VALUES(175, 'Alyssa', 'Hutton', 'AHUTTON',
'011.44.1644.429266', '19.03.2005', 'SA_REP', 8800, '0.25', 149, 80);
INSERT INTO employees VALUES(176, 'Jonathon', 'Taylor', 'JTAYLOR',
'011.44.1644.429265', '24.03.2006', 'SA_REP', 8600, '0.2', 149, 80);
INSERT INTO employees VALUES(177, 'Jack', 'Livingston', 'JLIVINGS',
'011.44.1644.429264', '23.04.2006', 'SA_REP', 8400, '0.2', 149, 80);
INSERT INTO employees VALUES(178, 'Kimberely', 'Grant', 'KGRANT',
'011.44.1644.429263', '24.05.2007', 'SA_REP', 7000, '0.15', 149, NULL);
INSERT INTO employees VALUES(179, 'Charles', 'Johnson', 'CJOHNSON',
'011.44.1644.429262', '04.01.2008', 'SA_REP', 6200, '0.1', 149, 80);
INSERT INTO employees VALUES(180, 'Winston', 'Taylor', 'WTAYLOR',
'650.507.9876', '24.01.2006', 'SH_CLERK', 3200, NULL, 120, 50);
INSERT INTO employees VALUES(181, 'Jean', 'Fleaur', 'JFLEAUR',
'650.507.9877', '23.02.2006', 'SH_CLERK', 3100, NULL, 120, 50);
INSERT INTO employees VALUES(182, 'Martha', 'Sullivan', 'MSULLIVA',
'650.507.9878', '21.06.2007', 'SH_CLERK', 2500, NULL, 120, 50);
INSERT INTO employees VALUES(183, 'Girard', 'Geoni', 'GGEONI',
'650.507.9879', '03.02.2008', 'SH_CLERK', 2800, NULL, 120, 50);
INSERT INTO employees VALUES(184, 'Nandita', 'Sarchand', 'NSARCHAN',
'650.509.1876', '27.01.2004', 'SH_CLERK', 4200, NULL, 121, 50);
INSERT INTO employees VALUES(185, 'Alexis', 'Bull', 'ABULL',
'650.509.2876', '20.02.2005', 'SH_CLERK', 4100, NULL, 121, 50);
INSERT INTO employees VALUES(186, 'Julia', 'Dellinger', 'JDELLING',
'650.509.3876', '24.06.2006', 'SH_CLERK', 3400, NULL, 121, 50);
INSERT INTO employees VALUES(187, 'Anthony', 'Cabrio', 'ACABRIO',
'650.509.4876', '07.02.2007', 'SH_CLERK', 3000, NULL, 121, 50);
INSERT INTO employees VALUES(188, 'Kelly', 'Chung', 'KCHUNG',
'650.505.1876', '14.06.2005', 'SH_CLERK', 3800, NULL, 122, 50);
INSERT INTO employees VALUES(189, 'Jennifer', 'Dilly', 'JDILLY',
'650.505.2876', '13.08.2005', 'SH_CLERK', 3600, NULL, 122, 50);
INSERT INTO employees VALUES(190, 'Timothy', 'Gates', 'TGATES',
'650.505.3876', '11.07.2006', 'SH_CLERK', 2900, NULL, 122, 50);
INSERT INTO employees VALUES(191, 'Randall', 'Perkins', 'RPERKINS',
'650.505.4876', '19.12.2007', 'SH_CLERK', 2500, NULL, 122, 50);
INSERT INTO employees VALUES(192, 'Sarah', 'Bell', 'SBELL',
'650.501.1876', '04.02.2004', 'SH_CLERK', 4000, NULL, 123, 50);
INSERT INTO employees VALUES(193, 'Britney', 'Everett', 'BEVERETT',
'650.501.2876', '03.03.2005', 'SH_CLERK', 3900, NULL, 123, 50);
INSERT INTO employees VALUES(194, 'Samuel', 'McCain', 'SMCCAIN',
'650.501.3876', '01.07.2006', 'SH_CLERK', 3200, NULL, 123, 50);
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INSERT INTO employees VALUES(195, 'Vance', 'Jones', 'VJONES',
'650.501.4876', '17.03.2007', 'SH_CLERK', 2800, NULL, 123, 50);
INSERT INTO employees VALUES(196, 'Alana', 'Walsh', 'AWALSH',
'650.507.9811', '24.04.2006', 'SH_CLERK', 3100, NULL, 124, 50);
INSERT INTO employees VALUES(197, 'Kevin', 'Feeney', 'KFEENEY',
'650.507.9822', '23.05.2006', 'SH_CLERK', 3000, NULL, 124, 50);
INSERT INTO employees VALUES(198, 'Donald', 'OConnell', 'DOCONNEL',
'650.507.9833', '21.06.2007', 'SH_CLERK', 2600, NULL, 124, 50);
INSERT INTO employees VALUES(199, 'Douglas', 'Grant', 'DGRANT',
'650.507.9844', '13.01.2008', 'SH_CLERK', 2600, NULL, 124, 50);
INSERT INTO employees VALUES(200, 'Jennifer', 'Whalen', 'JWHALEN',
'515.123.4444', '17.09.2003', 'AD_ASST', 4400, NULL, 101, 10);
INSERT INTO employees VALUES(201, 'Michael', 'Hartstein', 'MHARTSTE',
'515.123.5555', '17.02.2004', 'MK_MAN', 13000, NULL, 100, 20);
INSERT INTO employees VALUES(202, 'Pat', 'Fay', 'PFAY', '603.123.6666',
'17.08.2005', 'MK_REP', 6000, NULL, 201, 20);
INSERT INTO employees VALUES(203, 'Susan', 'Mavris', 'SMAVRIS',
'515.123.7777', '07.06.2002', 'HR_REP', 6500, NULL, 101, 40);
INSERT INTO employees VALUES(204, 'Hermann', 'Baer', 'HBAER',
'515.123.8888', '07.06.2002', 'PR_REP', 10000, NULL, 101, 70);
INSERT INTO employees VALUES(205, 'Shelley', 'Higgins', 'SHIGGINS',
'515.123.8080', '07.06.2002', 'AC_MGR', 12008, NULL, 101, 110);
INSERT INTO employees VALUES(206, 'William', 'Gietz', 'WGIETZ',
'515.123.8181', '07.06.2002', 'AC_ACCOUNT', 8300, NULL, 205, 110);

CREATE TABLE DEPARTMENTS
(
  department_id integer PRIMARY KEY,
  department_name varchar(64) NOT NULL UNIQUE,
  manager_id integer REFERENCES EMPLOYEES(employee_id),
  location_id integer REFERENCES LOCATIONS(location_id)
);

INSERT INTO departments VALUES
(10, 'Administration', 200, 1700),
(20, 'Marketing', 201, 1800),
(30, 'Purchasing', 114, 1700),
(40, 'Human Resources', 203, 2400),
(50, 'Shipping', 121, 1500),
(60, 'IT', 103, 1400),
(70, 'Public Relations', 204, 2700),
(80, 'Sales', 145, 2500),
(90, 'Executive', 100, 1700),
(100, 'Finance', 108, 1700),
(110, 'Accounting', 205, 1700),
(120, 'Treasury', NULL, 1700),
(130, 'Corporate Tax', NULL, 1700),
(140, 'Control And Credit', NULL, 1700),
(150, 'Shareholder Services', NULL, 1700),
```

```sql
(160, 'Benefits', NULL, 1700),
(170, 'Manufacturing', NULL, 1700),
(180, 'Construction', NULL, 1700),
(190, 'Contracting', NULL, 1700),
(200, 'Operations', NULL, 1700),
(210, 'IT Support', NULL, 1700),
(220, 'NOC', NULL, 1700),
(230, 'IT Helpdesk', NULL, 1700),
(240, 'Government Sales', NULL, 1700),
(250, 'Retail Sales', NULL, 1700),
(260, 'Recruiting', NULL, 1700),
(270, 'Payroll', NULL, 1700);

ALTER TABLE EMPLOYEES ADD CONSTRAINT DE FOREIGN KEY(department_id)
  REFERENCES DEPARTMENTS(department_id);

CREATE TABLE JOB_HISTORY
(
  employee_id integer REFERENCES EMPLOYEES(employee_id),
  start_date timestamp,
  PRIMARY KEY(employee_id, start_date),
  end_date timestamp,
  job_id varchar(16) REFERENCES JOBS(job_id) NOT NULL,
  department_id integer REFERENCES DEPARTMENTS(department_id) NOT NULL
);

INSERT INTO job_history VALUES
(102, '13.01.2001', '24.07.2006', 'IT_PROG', 60),
(101, '21.09.1997', '27.10.2001', 'AC_ACCOUNT', 110),
(101, '28.10.2001', '15.03.2005', 'AC_MGR', 110),
(201, '17.02.2004', '19.12.2007', 'MK_REP', 20),
(114, '24.03.2006', '31.12.2007', 'ST_CLERK', 50),
(122, '01.01.2007', '31.12.2007', 'ST_CLERK', 50),
(200, '17.09.1995', '17.06.2001', 'AD_ASST', 90),
(176, '24.03.2006', '31.12.2006', 'SA_REP', 80),
(176, '01.01.2007', '31.12.2007', 'SA_MAN', 80),
(200, '01.07.2002', '31.12.2006', 'AC_ACCOUNT', 90);


--1
create table staff(
id integer primary key,
name varchar(64) not null,
department varchar(64) not null
);

--2
CREATE SEQUENCE staff_id_seq INCREMENT BY 8 START WITH 12 CYCLE CACHE
100;
```

```sql
--3
insert into staff(id, name, department)
values(nextval('staff_id_seq'),'Ivan Makarenko', 'Director')
returning *;

--4
INSERT INTO staff
SELECT nextval('staff_id_seq'),last_name, department_name
FROM employees JOIN departments USING (department_id) RETURNING *;

--5
update staff set department = 'Innovations department'
where id < 40 returning *;

--6
delete from staff where name like '%K%'
returning *;

--8
WITH RECURSIVE inheritants (employee_id,manager_id) AS
(
SELECT employee_id,manager_id FROM EMPLOYEES WHERE manager_id = 100
UNION ALL
SELECT employees.employee_id, employees.manager_id FROM EMPLOYEES
JOIN inheritants ON inheritants.employee_id = employees.manager_id
)
SELECT * FROM inheritants;
```

вар 9 лаб 5

```sql
--lab4

--7
CREATE VIEW dep_staff_counts AS
SELECT department,count(distinct e.employee_id)ecount
FROM staff s, employees e, departments d WHERE (e.department_id =
d.department_id
and d.department_name=s.department) GROUP BY department;

--lab5
--1
SELECT * FROM bd_employees where phone_number::TEXT ~* '^\d+$';

--2
SELECT * FROM bd_employees e join bd_departments deps
on(deps.id = e.department_id) where (street ~*'[^A-Z\s]');
```

```sql
--3
SELECT (last_name,REGEXP_REPLACE(phone_number,'^\+7','8')) FROM
bd_employees;

--4a
SET ROLE POSTGRES;
REVOKE ALL ON bd_departments from my_colleague;
REVOKE ALL ON bd_employees from my_colleague;
DROP ROLE my_colleague;
CREATE ROLE my_colleague;
GRANT ALL ON bd_departments to my_colleague;

--4b
SET ROLE POSTGRES;
REVOKE ALL ON bd_employees from my_colleague;
REVOKE ALL ON bd_departments from my_colleague;
DROP ROLE my_colleague;
CREATE ROLE my_colleague;
GRANT SELECT ON bd_employees to my_colleague;

--4c
SET ROLE POSTGRES;
REVOKE ALL ON bd_employees from my_colleague;
REVOKE ALL ON bd_departments from my_colleague;
DROP ROLE my_colleague;
CREATE ROLE my_colleague;
GRANT UPDATE, DELETE ON bd_departments to my_colleague;

--5
SELECT * FROM bd_employees where
(REGEXP_COUNT(last_name,'[qwrtpsdfghjklzxcvbnm\-]',1,'i')
= 2 * REGEXP_COUNT(last_name,'[aeouiy]',1,'i'));



SELECT last_name,
        REGEXP_REPLACE(
                REGEXP_REPLACE(
                        REGEXP_REPLACE(
                                REGEXP_REPLACE(
                                        REGEXP_REPLACE(
                                                REGEXP_REPLACE(

REGEXP_REPLACE(last_name,'y',to_char(ASCII('y'),'RN'),'gi'),

'i',to_char(ASCII('i'),'RN'),'gi'),
```

```
'i',to_char(ASCII('i'),'RN'),'gi'),


'u',to_char(ASCII('u'),'RN'),'gi'),
                              'o',to_char(ASCII('o'),'RN'),'gi'),


'e',to_char(ASCII('e'),'RN'),'gi'),'a',to_char(ASCII('a'),'RN'),'gi')


FROM bd_employees



--6
SELECT phone_number,(REGEXP_COUNT(phone_number,'9')*9 +
REGEXP_COUNT(phone_number,'8')*8 +
REGEXP_COUNT(phone_number,'7')*7 + REGEXP_COUNT(phone_number,'6')*6 +
REGEXP_COUNT(phone_number,'5')*5 + REGEXP_COUNT(phone_number,'4')*4 +
REGEXP_COUNT(phone_number,'3')*3 + REGEXP_COUNT(phone_number,'2')*2 +
REGEXP_COUNT(phone_number,'1')*1) summ FROM bd_employees;
```

вар 2 лаб 6

```
--1a
with recursive rmanager (id,manager_id) as (
select id, manager_id from bd6_employees where id  = 6 -- ИДшник
union all
select bd6_employees.id, bd6_employees.manager_id
from bd6_employees join rmanager on rmanager.manager_id =
bd6_employees.id
)
select * from rmanager;

--1b
CREATE OR REPLACE PROCEDURE manager_printer() as $$
DECLARE
i integer;
emp record;
BEGIN
i =6;
WHILE i >= 1 LOOP
FOR emp in  SELECT id,manager_id,last_name from bd6_employees where id =
i LOOP
RAISE INFO      '% %', emp.id, emp.last_name;
i  = emp.manager_id;


        END LOOP;
        END LOOP;


END
```

```sql
        $$
LANGUAGE plpgsql;
CALL manager_printer();
-- ИЛИ --- Если спросит рекурсивно сделать


CREATE OR REPLACE PROCEDURE remployees(e_id integer) AS $$
DECLARE
  manager integer := (select manager_id from bd6_employees where id =
e_id);
  e_last_name varchar := (select last_name from bd6_employees where id =
e_id);
BEGIN
  raise info '% % %', e_id, e_last_name, manager;
  if manager is not null then
    call remployees(manager);
  end if;
END
$$ LANGUAGE plpgsql;
call remployees(6);

--2
CREATE OR REPLACE FUNCTION t2() RETURNS integer AS $$
DECLARE
curs_em CURSOR FOR select * from bd6_employees order by department_id,
salary_in_euro;
person bd6_employees%ROWTYPE;
a integer;
dep numeric(38);
BEGIN
OPEN curs_em;
FETCH curs_em INTO person;
dep:=0;
while found
loop
if dep != person.department_id then dep:=person.department_id;
a:=1;
else
a:=a+1;
end if;
RAISE INFO '% % % Доб.%', person.last_name,person.first_name,
person.phone_number,a;
fetch curs_em into person;
end loop;
return 1;
END;
$$
LANGUAGE plpgsql;
SELECT t2();
```

```sql
--3
CREATE OR REPLACE PROCEDURE update_managers() AS $$
DECLARE
  e_attrs record;
BEGIN
  FOR e_attrs IN
    (SELECT b6.id, b.manager_id as manager2
      from bd6_employees b6 join (select b1.id, b2.manager_id from
bd6_employees b1 join bd6_employees b2 on b1.manager_id = b2.id) b
      on b6.id = b.id where b6.manager_id != 1 order by b6.manager_id,
b6.salary_in_euro offset 3)
  LOOP
    --raise info '% %', e_attrs.id, e_attrs.manager2;
    update bd6_employees
    set manager_id = e_attrs.manager2 where id = e_attrs.id;
  END LOOP;
END
$$ LANGUAGE plpgsql;
call update_managers();


--4
DROP TABLE IF EXISTS spiral;
CREATE TABLE spiral( f1 integer, f2 integer, f3 integer, f4 integer, f5
integer );
CREATE OR REPLACE FUNCTION fspiral() RETURNS integer AS $$
DECLARE
i integer := 1;
n integer := 0;
BEGIN
WHILE n < 1000
LOOP
CASE mod(i,4)
WHEN 1 THEN INSERT INTO spiral VALUES (n + 1, n + 3, n + 5, n + 7, n +
9);
WHEN 2 THEN INSERT INTO spiral VALUES (n + 2, n + 4, n + 6, n + 8, n +
10);
n := n + 10;
WHEN 3 THEN INSERT INTO spiral VALUES (n + 10, n + 8, n + 6, n + 4, n +
2);
WHEN 0 THEN INSERT INTO spiral VALUES (n + 9, n + 7, n + 5, n + 3, n +
1);
n := n + 10;
END CASE;
i := i + 1;
END LOOP;
return 1;
```

```
END;
$$
LANGUAGE plpgsql;
select spiral();
SELECT * from spiral;
```