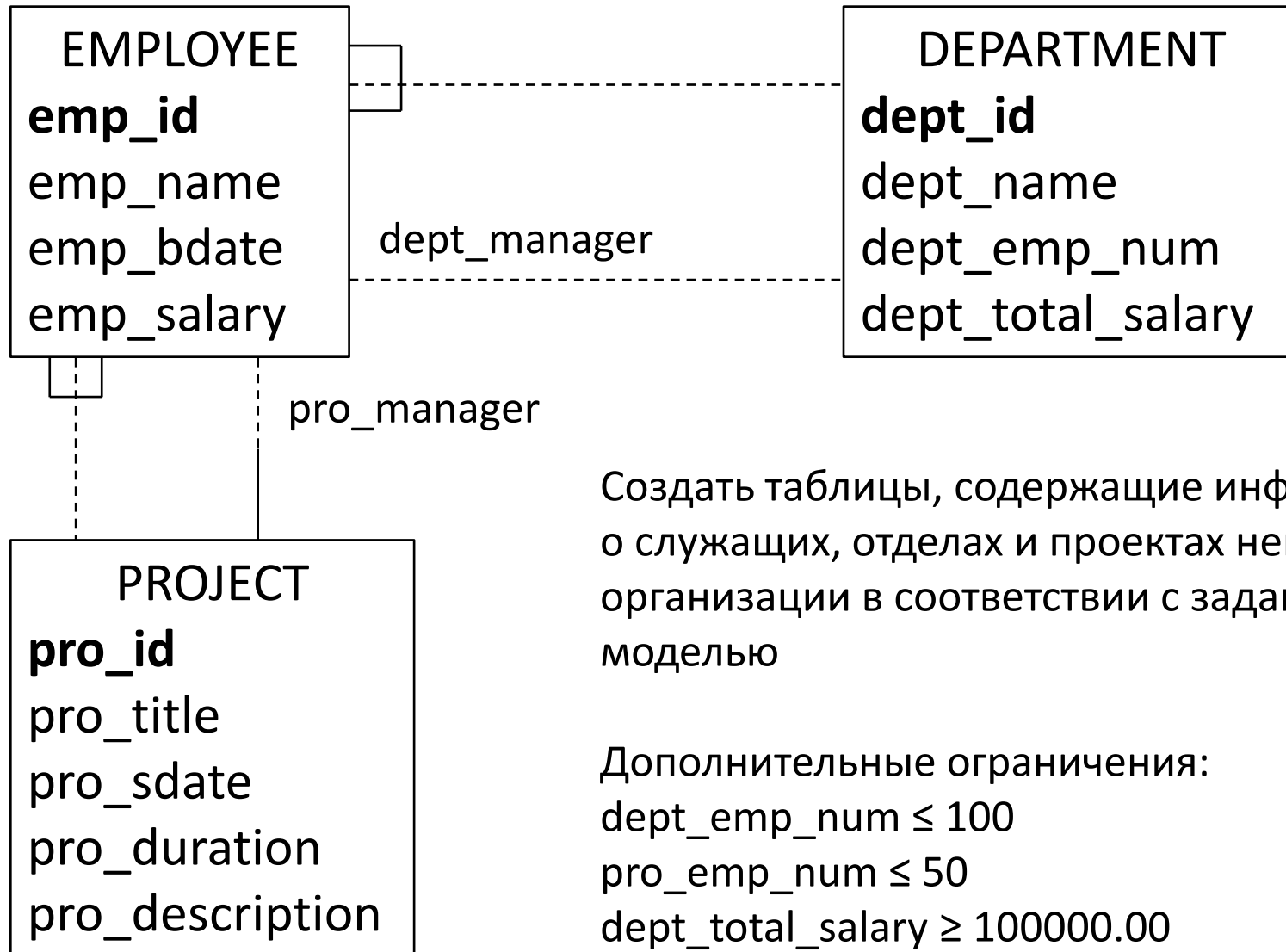


Учебный пример

<http://panda.ispras.ru/~step/DataBases/Sample.pdf>



Создать таблицы, содержащие информацию о служащих, отделах и проектах некоторой организации в соответствии с заданной ER-моделью

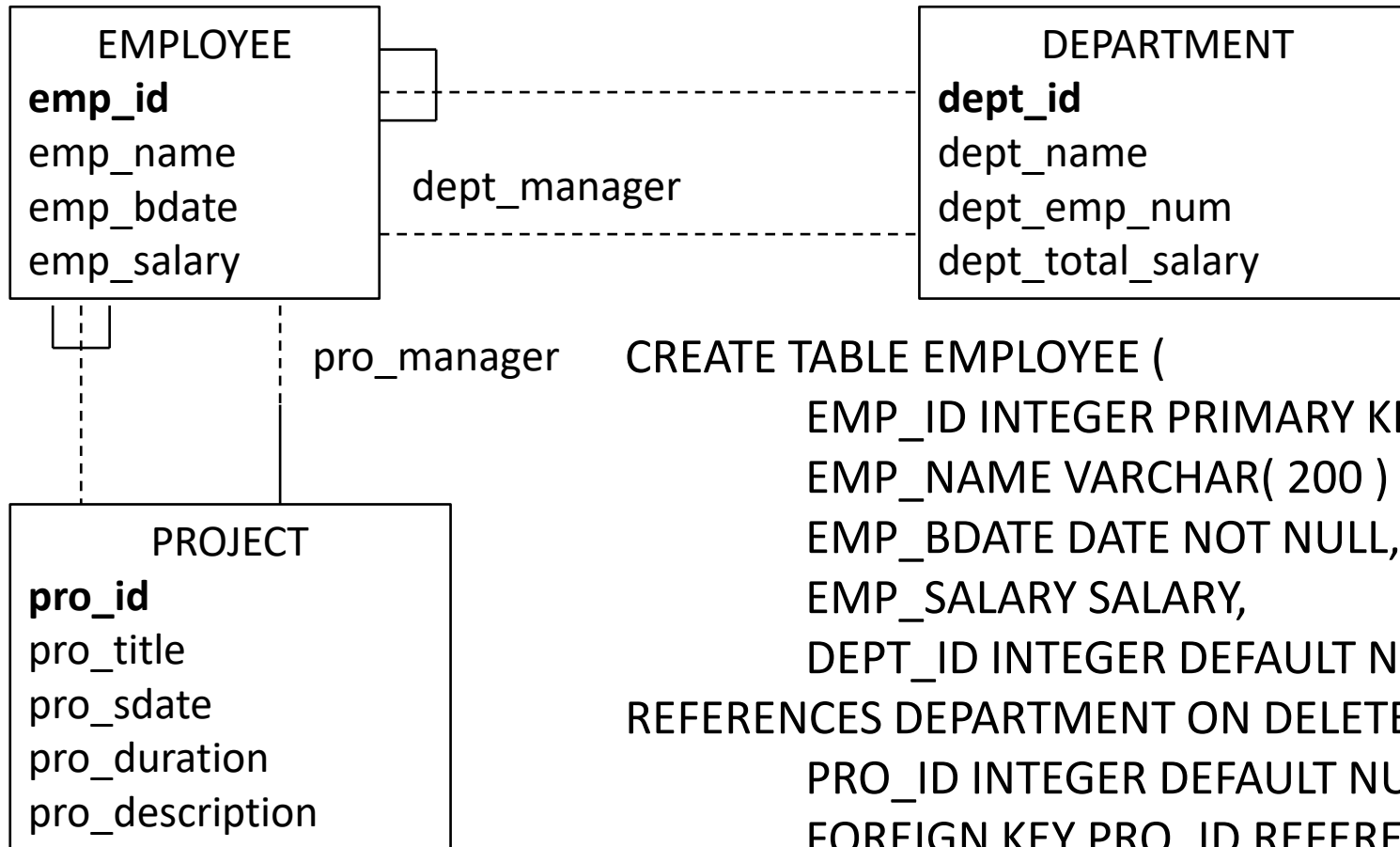
Дополнительные ограничения:

$\text{dept_emp_num} \leq 100$

$\text{pro_emp_num} \leq 50$

$\text{dept_total_salary} \geq 100000.00$

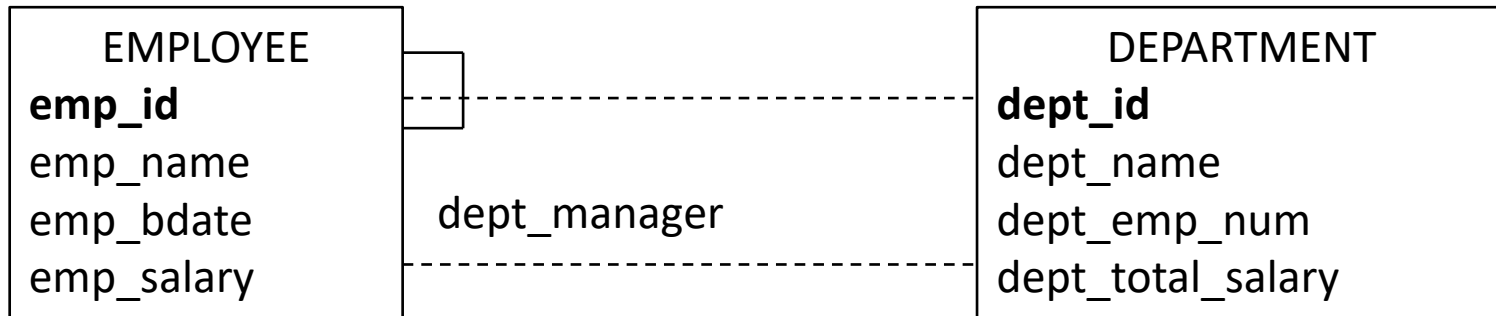
Учебный пример



pro_emp_num ≤ 50

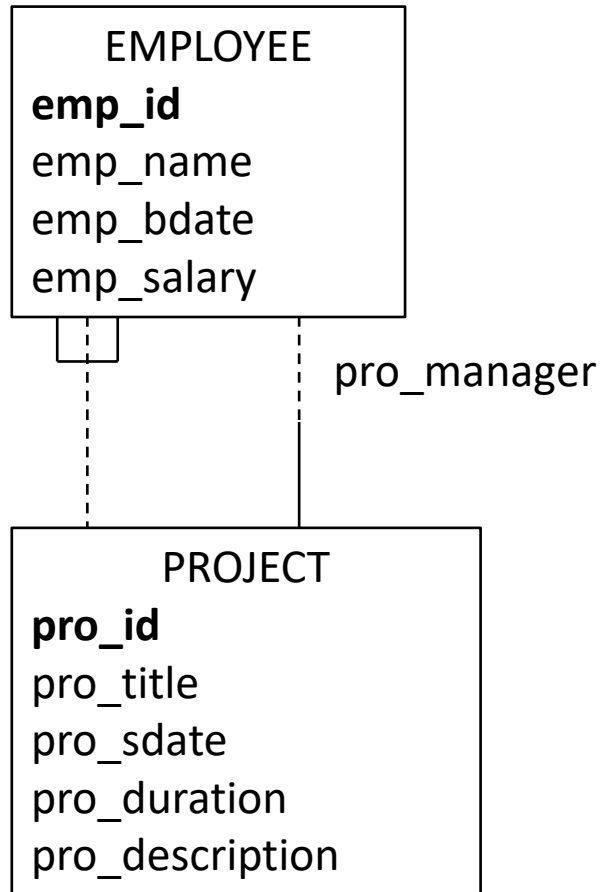
```
CREATE TABLE EMPLOYEE (
    EMP_ID INTEGER PRIMARY KEY,
    EMP_NAME VARCHAR( 200 ) NOT NULL,
    EMP_BDATE DATE NOT NULL,
    EMP_SALARY SALARY,
    DEPT_ID INTEGER DEFAULT NULL
REFERENCES DEPARTMENT ON DELETE SET NULL,
    PRO_ID INTEGER DEFAULT NULL,
    FOREIGN KEY PRO_ID REFERENCES PROJECT(
    PRO_ID ) ON DELETE SET NULL,
    CONSTRAINT PRO_EMP_NUM CHECK( (
    SELECT COUNT(*) FROM EMPLOYEE E WHERE
    E.PRO_ID = PRO_ID ) <= 50 ) );
```

Учебный пример



```
CREATE TABLE DEPARTMENT (  
    DEPT_ID INTEGER PRIMARY KEY,  
    DEPT_NAME VARCHAR( 200 ) NOT NULL,  
    DEPT_EMP_NUM INTEGER NOT NULL CHECK( VALUE <= 100 ),  
    DEPT_TOTAL_SALARY SALARY DEFAULT 1000000.00 CHECK( VALUE >=  
100000.00 ),  
    DEPT_MANAGER INTEGER DEFAULT NULL REFERENCES EMPLOYEE ON  
DELETE SET NULL CHECK( IF( VALUE IS NOT NULL) THEN (( SELECT COUNT(*) FROM  
DEPARTMENT D WHERE D.DEPT_MANAGER = VALUE ) = 1 ),  
    CHECK ( DEPT_EMP_NUM = ( SELECT COUNT(*) FROM EMPLOYEE WHERE  
DEPT_ID = EMPLOYEE.DEPT_ID )),  
    CHECK ( DEPT_TOTAL_SALARY >= ( SELECT SUM( EMP_SALARY ) FROM  
EMPLOYEE WHERE DEPT_ID = EMPLOYEE.DEPT_ID )) );
```

Учебный пример



```
CREATE TABLE PROJECT (
    PRO_ID INTEGER PRIMARY KEY,
    PRO_TITLE VARCHAR( 200 ) DEFAULT
    'Untitled' NOT NULL,
    PRO_SDATE DATE DEFAULT CURRENT_DATE
    NOT NULL,
    PRO_DURATION INTERVAL YEAR DEFAULT
    INTERVAL '1' YEAR NOT NULL,
    PRO_DESCRIPTION CLOB( 10M ),
    PRO_MANAGER INTEGER UNIQUE NOT
    NULL REFERENCES EMPLOYEE ON DELETE NO
    ACTION
);
```