

When two tables refer to each other, which do you create first? Similarly, which record do you insert first?

```
jigarpandya@aharnish: ~  
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SQL> desc employees;  
Name Null? Type  
-----  
EMPLOYEE_ID NOT NULL NUMBER  
FIRST_NAME VARCHAR2(20)  
LAST_NAME VARCHAR2(20)  
EMAIL VARCHAR2(50)  
HIRE_DATE DATE  
SALARY NUMBER  
DEPARTMENT_ID NUMBER  
  
SQL> desc departments;  
Name Null? Type  
-----  
DEPARTMENT_ID NOT NULL NUMBER  
DEPARTMENT_NAME VARCHAR2(20)  
MANAGER_ID NUMBER  
LOCATION VARCHAR2(20)  
  
SQL> desc sales;  
Name Null? Type  
-----  
TRANSACTION_ID NOT NULL NUMBER  
TRANSACTION_DATE DATE  
PRODUCT_ID NUMBER  
AMOUNT NUMBER  
CUSTOMER_ID NUMBER  
  
SQL> 
```

```
select CONSTRAINT_NAME, CONSTRAINT_TYPE, TABLE_NAME,  
R_CONSTRAINT_NAME from all_constraints where table_name in  
( 'EMPLOYEES', 'DEPARTMENTS', 'SALES' );
```

CONSTRAINT_NAME

C

-

TABLE_NAME

R_CONSTRAINT_NAME

SYS_C0018043

R

DEPARTMENTS

SYS_C0018041

CONSTRAINT_NAME

C

-

TABLE_NAME

R_CONSTRAINT_NAME

SYS_C0018044

R

EMPLOYEES

SYS_C0018042

CONSTRAINT_NAME

C

-

TABLE_NAME

R_CONSTRAINT_NAME

SYS_C0018041

P

EMPLOYEES

CONSTRAINT_NAME

C

-

TABLE_NAME

R_CONSTRAINT_NAME

SYS_C0018042
P
DEPARTMENTS

CONSTRAINT_NAME

C

-

TABLE_NAME

R_CONSTRAINT_NAME

SYS_C0018045

P

SALES

create table employees (employee_id number primary key, first_name varchar2(20), last_name
varchar2(20), email varchar2(50), hire_date date, salary number);

create table departments (department_id number primary key, department_name varchar2(20),
manager_id number references employees(employee_id), location varchar2(20));

Alter table employees add (department_id number references departments(department_id));

create table sales (transaction_id number primary key, transaction_date date, product_id number,
amount number, customer_id number);

insert into departments (department_id,department_name,location) values (1,'Sales','New York');

insert into departments (department_id,department_name,location) values (2,'Marketing','Los
Angeles');

select * from departments;

Insert into employees (employee_id, first_name, last_name, email, hire_date,
salary,department_id) values (1,'John','Doe','john.doe@example.com','15-JAN-2023',50000,1);

Insert into employees (employee_id, first_name, last_name, email, hire_date, salary, department_id) values
(2,'Jane','Smith','jane.smith@example.com','20-FEB-2023',60000,2);

update departments set manager_id=1 where department_id=1;

update departments set manager_id=2 where department_id=2;

Insert into sales values (1, '01-JAN-2023',101,1000,1001);

Insert into sales values (2, '02-JAN-2023',102,1500,1002);

There is an analogy in C Programming with this problem and solution. That is when two structures are having data members of each other, how do you define them?

```
struct B; //Declaration of struct B
struct A
{
    struct B b;
};
struct B
{
    struct A a;
};
```