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Database Programming with SQL

1-2: Relational Database Technology

Practice Activities

Objectives

* Define and give an example of a relational database
* Identify table-key terms, including row, column, field, primary key, and foreign key
* Relate the importance of databases to everyday life

Vocabulary

Identify the vocabulary word for each definition below.

|  |  |
| --- | --- |
| row (ряд) | An entry in a table, consisting of values for each appropriate column. |
| primary key (первичный ключ) | The set of mandatory columns within a table that is used to enforce uniqueness of rows, and that is normally the most frequent means by which rows are accessed. |
| table (таблица) | An arrangement of data in rows and columns. |
| foreign key (внешний ключ) | A column or set of columns that refers to a primary key in the same table or another table. |
| relational dB (реляционная база данных) | Collections of objects or relations, set of operators to act on those relations, and data integrity for accuracy and consistency |
| field (поле) | Intersection of a row and column |
| data manipulation language (DML или язык манипулирования данными) | Used to modify the table data by entering, changing, or removing rows |
| data definition language (DDL или язык определения данных) | Creates, changes, and removes data structures from the database |
| transaction control language (TCL или язык управления транзакциями) | Used to manage the changes made by DML statements |
| data control language (DCL или язык управления данными) | Used to give or remove access rights to the database and the structures within it |

Try It / Solve It

1. The Global Fast Foods database consists of how many tables? Ответ: 9 Tables

F\_ORDER\_LINES

F\_FOOD\_ITEMS

F\_PROMOTIONAL\_MENUS

F\_REGULAR\_MENUS

F\_SHIFTS

F\_SHIFT\_ASSIGNMENTS

F\_STAFFS

F\_CUSTOMERS

F\_ORDERS

1. How is the F\_SHIFTS table related to the F\_STAFFS table?

Ответ:

Таблица F\_SHIFTS связана с таблицей F\_STAFFS таким образом, что обе имеют ссылку на внешний ключ в F\_SHIFT\_ASSIGNMENTS.

1. What are the names of the columns in the F\_CUSTOMERS table?

Ответ:

Код:

SELECT column\_name

FROM all\_tab\_cols

WHERE table\_name = 'F\_CUSTOMERS'

Результат:

COLUMN\_NAME:

ID

FIRST\_NAME

LAST\_NAME

ADDRESS

CITY

STATE

ZIP

PHONE\_NUMBER

1. How many rows of data have been entered in the F\_PROMOTIONAL\_MENUS table?

Ответ:

Код:

select count(\*) from F\_PROMOTIONAL\_MENUS

Результат: 2

1. In the F\_FOOD\_ITEMS table, column is a foreign-key column. What table and column

is this key referencing?

Ответ:

Код:

select \*

from user\_constraints

where table\_name = 'F\_FOOD\_ITEMS' and CONSTRAINT\_TYPE = 'R';

select table\_name from user\_constraints

where constraint\_name in

(

select r\_constraint\_name

from user\_constraints

where table\_name = 'F\_FOOD\_ITEMS' and CONSTRAINT\_TYPE = 'R'

);

Результат:

"REGULAR\_CODE" на столбец "CODE" в таблице "F\_REGULAR\_MENUS"

"PROMO\_CODE" на столбец "CODE" в таблице "F\_PROMOTIONAL\_MENUS"

1. List the primary key to foreign key relationships required to go from the F\_SHIFTS table to the F\_REGULAR\_MENUS table.

Ответ:

CODE -EKF-SHIFTS referenced as FK in F\_SHIFTS\_ASSIGNMENTS.

ID - PK in F\_STAFFS referenced as FK in F\_SHIFT\_ASSIGNMENTS

ID - PK in F\_STAFFS referenced as FK STAFFJD in FJDRDERS ORDER-NUMBER - PK in FJDRDERS referenced as FK in FJDRDERJJNES FOODJTEM\_NUMBER - PK in FJDRDERJJNES referenced as FK in F\_FOOD\_ITEMS

CODE - PK in F\_REGULAR\_MENUS referenced as FK REGULARJDODE in F\_FOOD\_ITEMS

1. Which table(s) contains null values?

Ответ:

F\_FOOD\_ITEMS

F\_STAFFS