

EXERCISE 12

Intro to Constraints; NOT NULL and UNIQUE Constraints

Global Fast Foods has been very successful this past year and has opened several new stores. They need to add a table to their database to store information about each of their store's locations. The owners want to make sure that all entries have an identification number, date opened, address, and city and that no other entry in the table can have the same email address. Based on this information, answer the following questions about the global_locations table. Use the table for your answers.

NAME	TYPE	LENGTH	PRECISION	SCALE	NULLABLE	DEFAULT
Id	NUMBER				X	
name	VARCHAR				✓	
date_opened	DATE				✓	
address	VARCHAR				X	
city	VARCHAR				✓	
zip/postal code	VARCHAR				✓	
phone	VARCHAR				✓	
email	VARCHAR				X	
manager_id	NUMBER				✓	
Emergency contact	VARCHAR				✓	

1. What is a "constraint" as it relates to data integrity?

A constraint is a rule enforced at the id, date, phone, address and city.
No two stores share the same email address

2. What are the limitations of constraints that may be applied at the column level and at the table level?

Column level constraint. Can be applied to a given column.
Table level constraint. More complex to define but allows for column checks

3. Why is it important to give meaningful names to constraints?

Make debugging & maintaining easier
Clearly indicate the purpose of constraint
Helpfully constrain in system views like user's - constraints

4. Based on the information provided by the owners, choose a datatype for each column. Indicate the length, precision, and scale for each NUMBER datatype.

Id, NUMBER NOT NULL, name VARCHAR NULL, date, date

Check table

5. Use "(nullable)" to indicate those columns that can have null values.

Check table

6. Write the CREATE TABLE statement for the Global Fast Foods locations table to define the constraints at the column level. (CREATE TABLE global_locations (id NUMBER(4) NOT NULL, name VARCHAR(20), date_founded DATE CONSTRAINT loc_date_nn NOT NULL, address VARCHAR(80) CONSTRAINT loc_address_nn NOT NULL, city VARCHAR(20) CONSTRAINT loc_city_nn NOT NULL, zip_postal VARCHAR(10) CONSTRAINT loc_zip_nn NOT NULL, phone VARCHAR(15) CONSTRAINT loc_phone_nn NOT NULL, email VARCHAR(80) CONSTRAINT loc_email_nn NOT NULL, manager_id NUMBER(4) CONSTRAINT loc_mgr_fk FOREIGN KEY (manager_id) REFERENCES employees (employee_id) ON DELETE SET NULL, contact VARCHAR(40) CONSTRAINT loc_contact_nn NOT NULL);
7. Execute the CREATE TABLE statement in Oracle Application Express.

8. Execute a DESCRIBE command to view the Table Summary information.

DESC global_locations;

9. Rewrite the CREATE TABLE statement for the Global Fast Foods locations table to define the UNIQUE constraints at the table level. Do not execute this statement.

NAME	TYPE	LENGTH	PRECISION	SCALE	NULLABLE	DEFAULT
id	number	4				
loc_name	varchar2	20			X	
	date					
address	varchar2	80				
city	varchar2	20				
zip_postal	varchar2	20			X	
phone	varchar2	15			X	
email	varchar2	80			X	
manager_id	number	4			X	
contact	varchar2	40			X	