

## EXERCISE 12

### Intro to Constraints; NOT NULL, and UNIQUE Constraints

Global East 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.

Global East Foods global_locations Table						
NAME	TYPE	LENGTH	PRECISION	SCALE	NULLABLE	DEFAULT
id						
name						
date_opened						
address						
city						
zip/postal code						
phone						
email						
manager_id						
Emergency contact						

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

A constraint is a rule enforced on data in a database to maintain data integrity and accuracy

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

**COLUMN - LEVEL:** can only be applied to a single column when column is by   
**TABLE - LEVEL:** can refer to multiple columns together.

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

- Identify the purpose of the constraint easily.
- Simplify debugging or when an error message references the constraint
- Maintain clarity in large databases

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 4 , name VARCHAR 255  
address , city , zip , emergency contact VARCHAR 255  
manager\_id NUMBER 4

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

- zip / postal code (nullable)
- phone (nullable)
- manager\_id (nullable)
- Emergency contact (nullable)

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) PRIMARY KEY,  
name VARCHAR2 (20) NOT NULL, date-opened DATE NOT NULL,  
address VARCHAR2 (30) NOT NULL, phone VARCHAR2(15),  
manager_id NUMBER (4), contact VARCHAR2(40));`

7. Execute the CREATE TABLE statement in Oracle Application Express.

`CREATE TABLE global_locations ;`

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	30				
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	

`CREATE TABLE global_locations ( id NUMBER (4),  
name VARCHAR2 (20) NOT NULL, date-opened DATE NOT NULL,  
address VARCHAR2 (30) NOT NULL, city VARCHAR2 (20)NOT NULL,  
ZIP-postal VARCHAR2(20));`

Evaluation Procedure	Marks awarded
Practice Evaluation (5)	5
Viva(5)	5
Total (10)	10
Faculty Signature	<u>DPL</u> 7/11/15