2/3/25

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.

Global Fast 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 that ensures data accuracy and integrity in a table.

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

Column level constraints apply to one column; table level can apply to many.

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

meaningful names. take constraints easy to identify and mange

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 (6) NOT NULL
name - VARCHAR (60) NOT NULL
address - VARCHAR2 (500) NOT NULL
city - VARCHAR (30) NOT NULL
Dom - VARCHAR (15)

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

NULLable columns;

zip - postal code, phone, manager_id, emergency contact.

6. Write the CREATE TABLE statement for the Global Fast Foods locations table to define the constraints at the column level

CREATE TABLE global_location(
id number(4) primary key VARCHAR(20) NOT NULL,
date opened DATE NOT NULL, address VARCHAR(50)
city VARCHAR 2(120) NOT NULL, zip_postal VARCHAR(20

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

execute this SQL in oracle application
campus window

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

Desc global_location.

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_location.
id_NUMBER(4)
loc_name VARCHAR 2(20), NOT NULL,
date_open. DATE NOT NULL.
city VARCHAR 2(20) NOT NULL,
constant VAR(HAR(20)
constraint PK_global_id primary key(id)
constraint emp_global_email unique (email);

PRIMARY KEY, FOREIGN KEY, and CHECK Constraints

1. What is the purpose of a
- PRIMARY KEY - uniquely identifies each row in a table
- FOREIGN KEY - links one table to another using
- CHECK CONSTRAINT - ensures value meet specific condition

2. Using the column information for the animals table below, name constraints where applicable at the table level, otherwise name them at the column level. Define the primary key (animal_id). The license_tag_number must be unique. The admit_date and vaccination_date columns cannot contain null values.

animal_id NUMBER(6) arrival-id -> Primary key
name VARCHAR2(25) Cause-tag-ntia-unique
license_tag_number NUMBER(10) ordinit-date
admit_date DATE
adoption_id NUMBER(5),
vaccination_date DATE vaccination-date -> NOT NULL

3. Create the animals table. Write the syntax you will use to create the table.

CRBTE -TABLE aminuls
animals-id number (6) primary key,
name varchar2(25), dicaouse, tag, number
Vaccivation -datc DATE NOT NULL, Number(
/

4. Enter one row into the table. Execute a SELECT * statement to verify your input. Refer to the graphic below for input.

ANIMAL_I D	NAM E	LICENSE_TAG_NUMBE R	ADMIT_DAT E	ADOPTION_I D	VACCINATION_DAT E
101	Spot	35540	10-Oct-2004	205	12-Oct-2004

INSERT INTO animals values (10,'Spot',355)o
SELECT* FROM animals,

5. Write the syntax to create a foreign key (adoption_id) in the animals table that has a corresponding primary-key reference in the adoptions table. Show both the column-level and table-level syntax. Note that because you have not actually created an adoptions table, no adoption_id primary key exists, so the foreign key cannot be added to the animals table.

CREATE TABLE global. Location C
id NUMBER(u)
constraint adopt foreign key (adoption id)
REFERENCE adoption (adoption-id),

6. What is the effect of setting the foreign key in the ANIMAL table as:

a. ON DELETE CASCADE → when the eperuend (parent) record as all deleted in the animaltable

b. ON DELETE SET NULL

↓ when the eperenced (Parent) record is deleted the forgin key fied in the animal is set to null

7. What are the restrictions on defining a CHECK constraint?

the condition must be a Problem esc pressions

It cannot erpremu other letter or subsquence

It applies only to the current u's colums

It cannot use aggregated functions (unlike SUM, AVG).

Evaluation Procedure	Marks awarded
Query(5)	5
Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	[signature]