

## Lab 7 DDL Statements

1. Write a SQL statement that adds an index to the order\_date column in the Orders\_mgs table.
2. Given the following tables, their columns, and constraints.

Table Name	Column Names	Constraints
Users_ex	user_id email_address first_name last_name	Primary key: user_id first_name, last_name cannot have null values. email_address must be unique.
Downloads_ex	download_id user_id download_date filename product_id	Primary key: download_id No column value can be null. The column user_id is a foreign key that references the column user_id in the table users. The column product_id is a foreign key that references the column product_id in the table products
Products_ex	product_id product_name	Primary key: product_id product_name must be unique.

Create three sequences to generate values for the three columns (one sequence per column): user\_id, download\_id, and product\_id. You can use all default values for your sequences.

Create the three tables with the constraints listed above. Decide on the appropriate data types and lengths for these columns based on your judgement.

Include statements that drop tables and sequences before you create them in case they exist.

**NOTE – You are required to submit totally 12 statements for this question.**

3. Write SQL statements that add rows to the tables that you created in Question 2 using the data in the following table.

EMAIL_ADDRESS	FIRST_NAME	LAST_NAME	DOWNLOAD_DATE	FILENAME	PRODUCT_NAME
johnsmith@gmail.com	John	Smith	08-OCT-24	pedals_are_falling.mpd	Local Music Vol 1
janedoe@yahoo.com	Jane	Doe	08-OCT-24	turn_signal.mp3	Local Music Vol 1
janedoe@yahoo.com	Jane	Doe	08-OCT-24	one_horse_town.mpd	Local Music Vol 2

Add two rows to the Users\_ex and Products\_ex tables.

Add three rows to the Downloads\_ex table: one row for user 1 and product 2; one row for user 2 and product 1; and one row for user 2 and product 2. Use the SYSDATE function to insert the current date into the download\_date column. The download date values will be different from the table above.

Use the sequences created in the previous exercise to get the values for the user\_id, download\_id, and product\_id columns.

**NOTE – You are required to submit totally 7 INSERT statements for this question.**

4. Write two ALTER TABLE statements that add two new columns to the Products\_ex table created in Question 2.

Add one column for product price that provides for three digits to the left of the decimal point and two to the right. This column should have a default value of 9.99.

Add one column for the date and time that the product was added to the database.

You can choose meaningful names for these two columns.

**NOTE – You are required to submit two ALTER TABLE statements.**

5. Write an ALTER TABLE statement that modifies the Users\_ex table created in Question 2 so the first\_name column can store NULL values and can store a maximum of 20 characters.

Code an UPDATE statement that changes a value in this column to a NULL value. It should work since this column now allows NULL values.

Code another UPDATE statement that attempts to insert a first name that's longer than 20 characters. It should fail due to the length of the column. You can use a fake name like fake\_firstname\_1234567890 for testing purpose.

**NOTE – You are required to submit one ALTER TABLE statement and two UPDATE statements.**