

# Database Programming with SQL

## 16-2: Indexes and Synonyms

### Practice Activities

#### Objectives

- Define an index and its use as a schema object
- Name the conditions that cause an index to be created automatically
- Create and execute a CREATE INDEX and DROP INDEX statement
- Construct and execute a function-based index
- Construct a private and public synonym

#### Vocabulary

Identify the vocabulary word for each definition below.

	Confirms the existence of indexes from the USER_INDEXES data dictionary view
	Schema object that speeds up retrieval of rows
	To refer to a table by another name to simplify access
	An index that you create on multiple columns in a table
	The Oracle Server automatically creates this index when you define a column in a table to have a PRIMARY KEY or a UNIQUE KEY constraint
	Stores the indexed values and uses the index based on a SELECT statement to retrieve the data
	Removes an index
	Gives alternative names to objects

#### Try It / Solve It

1. What is an index and what is it used for?
2. What is a ROWID, and how is it used?
3. When will an index be created automatically?

4. Create a nonunique index (foreign key) for the DJs on Demand column (cd\_number) in the D\_TRACK\_LISTINGS table. Use the Oracle Application Developer SQL Workshop Data Browser to confirm that the index was created.
5. Use the join statement to display the indexes and uniqueness that exist in the data dictionary for the DJs on Demand D\_SONGS table.
6. Use a SELECT statement to display the index\_name, table\_name, and uniqueness from the data dictionary USER\_INDEXES for the DJs on Demand D\_EVENTS table.
7. Write a query to create a synonym called dj\_tracks for the DJs on Demand d\_track\_listings table.
8. Create a function-based index for the last\_name column in DJs on Demand D\_PARTNERS table that makes it possible not to have to capitalize the table name for searches. Write a SELECT statement that would use this index.
9. Create a synonym for the D\_TRACK\_LISTINGS table. Confirm that it has been created by querying the data dictionary.
10. Drop the synonym that you created in question 9.