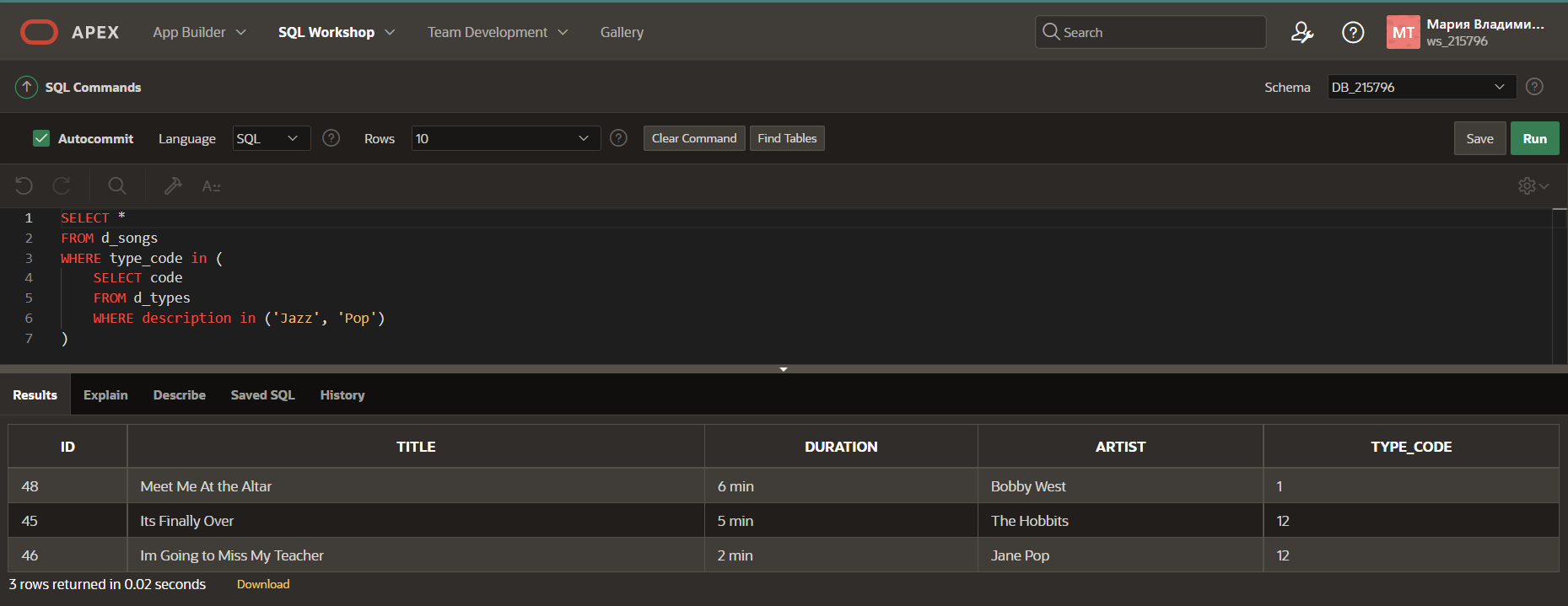
10-3: Multiple-Row Subqueries

1. What will be returned by a query if it has a subquery that returns a null ?

no data found

1. Write a query that returns jazz and pop songs. Write a multi-row subquery and use the d\_songs and d\_types tables. Include the id, title, duration, and the artist name.



1. Find the last names of all employees whose salaries are the same as the minimum salary for any department.

A screenshot of a computer

Description automatically generated with medium confidence

1. Which Global Fast Foods employee earns the lowest salary? Hint: You can use either a singlerow or a multiple-row subquery.

A screenshot of a computer

Description automatically generated with medium confidence

5. Place the correct multiple-row comparison operators in the outer query WHERE clause of each of

the following:

a. Which CDs in our d\_cds collection were produced before “Carpe Diem” was produced?

SELECT title, year

FROM d\_cds

WHERE year < (

SELECT year

FROM d\_cds

WHERE title = 'Carpe Diem');

A screenshot of a computer

Description automatically generated with medium confidence

b. Which employees have salaries lower than any one of the programmers in the IT department?

SELECT first\_name || ' ' || last\_name "NAME", salary

FROM employees

WHERE salary < ANY (

SELECT salary

FROM employees

WHERE department\_id = (

SELECT department\_id

FROM departments

WHERE department\_name = 'IT'

)

)

A screenshot of a computer

Description automatically generated with medium confidence

c. What CD titles were produced in the same year as “Party Music for All Occasions” or “Carpe

Diem”?

SELECT title, year

FROM d\_cds

WHERE year in (

SELECT year

FROM d\_cds

WHERE title in ('Carpe Diem', 'Party Music for All Occasions')

)

A screenshot of a computer

Description automatically generated with medium confidence

d. What song title has a duration longer than every type code 77 title?

SELECT title

FROM d\_songs

WHERE duration > ALL (

SELECT duration

FROM d\_songs

WHERE type\_code = 77

)

6. If each WHERE clause is from the outer query, which of the following are true?

\_\_T\_\_a. WHERE size > ANY -- If the inner query returns sizes ranging from 8 to 12, the value 9

could be returned in the outer query.

\_\_F\_\_b. WHERE book\_number IN -- If the inner query returns books numbered 102, 105, 437,

and 225 then 325 could be returned in the outer query.

\_\_F\_\_c. WHERE score <= ALL -- If the inner query returns the scores 89, 98, 65, and 72, then 82

could be returned in the outer query.

\_\_T\_\_d. WHERE color NOT IN -- If the inner query returns red, green, blue, black, and then the

outer query could return white.

\_\_F\_\_e. WHERE game\_date = ANY -- If the inner query returns 05-Jun-1997, 10-Dec-2002, and

2-Jan-2004, then the outer query could return 10-Sep-2002.

7. The goal of the following query is to display the minimum salary for each department whose minimum salary is less than the lowest salary of the employees in department 50. However, the subquery does not execute because it has five errors. Find them, correct them, and run the query.

SELECT department\_id, MIN(salary)

FROM employees

GROUP BY department\_id

HAVING MIN(salary) <

(SELECT MIN(salary)

FROM employees

WHERE department\_id = 50);

8. Which statements are true about the subquery below?

SELECT employee\_id, last\_name

FROM employees

WHERE salary =

(SELECT MIN(salary)

FROM employees

GROUP BY department\_id);

\_\_\_F\_\_\_ a. The inner query could be eliminated simply by changing the WHERE clause to

WHERE MIN(salary).

\_\_\_T\_\_\_ b. The query wants the names of employees who make the same salary as the smallest

salary in any department.

\_\_\_F\_\_\_ c. The query first selects the employee ID and last name, and then compares that to the

salaries in every department.

\_\_\_T\_\_\_ d. This query will not execute.

9. Write a pair-wise subquery listing the last\_name, first\_name, department\_id, and manager\_id for all employees that have the same department\_ id and manager\_id as employee 141. Exclude employee 141 from the result set.

A screenshot of a computer

Description automatically generated with medium confidence

10.Write a non-pair-wise subquery listing the last\_name, first\_name, department\_id, and manager\_id for all employees that have the same department\_ id and manager\_id as employee 141.

A screenshot of a computer

Description automatically generated with medium confidence