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HHA 507 - Oracle SQL Training
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Database Programming with SQL 1-3: Anatomy of a SQL Statement Practice Activities

- *Vocabulary:* Identify the vocabulary word for each definition below
    - Display data from two or more related tables
        - Answer: join
    - A symbol used to perform an operation on some values
        - Answer: operator
    - An implementation of an attribute or relationship in a table
        - Answer: field
    - The capability in SQL to choose the columns in a table that you want returned from a query
        - Answer: projection
    - A value that is unavailable, unassigned, unknown, or inapplicable
        - Answer: null
    - Renames a column heading
        - Answer: alias
    - A mathematical equation
        - Answer: expression
    - The capability in SQL to choose the rows in a table returned from a query
        - Answer: selection
    - Retrieves information from the database
        - Answer: query
    - Specifies the columns to be displayed
        - Answer: SELECT
    - Specifies the table containing the column listed in the select clause
        - Answer: FROM
    - An individual SQL command
        - Answer: statement
    - Part of a SQL statement
        - Answer: clause
    - A combination of the two clauses
        - Answer: query
- *Try It / Solve It:* Now you know the basics of a SELECT statement, It's time to practice what you've learned
    - 1. Write a SQL statement that demonstrates projection
        - SELECT first_name, last_name, email

FROM employees;

- 2. Write a query that displays the last_name and email addresses for all the people in the DJs on Demand d_client table. The column headings should appear as "Client" and "Email Address"
  - SELECT last_name AS Client, email AS "Email Address"
    FROM d_client;
- 3. The manager of Global Fast Foods decided to give all employees at 5%/hour raise + a $.50 bonus/hour. However, when he looked at the results, he couldn't figure out why the new raises were not as he predicted. Ms. Doe should have a new salary of $7.59, Mr. Miller's salary should be $11.00, and Monique Tuttle should be $63.50. He used the following query. What should he have done?
  - SELECT last_name, salary *.05 +.50
    FROM f_staffs;
  - Answer: SELECT last_name, (salary *1.05) +.50
    FROM f_staffs;
- 4. Which of the following would be the easiest way to see all rows in the d_songs table?
  - a. SELECT id, title, duration, artist, type_code
  - b. SELECT columns
  - **c. SELECT ***
  - d. SELECT all
- 5. If tax = 8.5% * car_cost and license = car_cost * .01%, which value will produce the largest car payment?
  - a. Payment = (car_cost * 1.25) + 5.00 - (tax) - (license)
  - **b. Payment = car_cost * 1.25 + 5.00 - (tax - license)**
- 6. In the example below, identify the keywords, the clause(s), and the statement(s):
  - SELECT employee_id, last_name
  - FROM employees
    - Answer: the result will consist of the employee_id and last_name column and its instances from the employees table
- 7. Label each example as SELECTION or PROJECTION
  - a. Please give me Mary Adam's email address
    - Answer: SELECTION
  - b. I would like only the manager_id column, and none of the other columns
    - Answer: PROJECTION
- 8. Which of the following statements are true?
  - a. null * 25 = 0;
  - b. null * 6.00 = 6.00

        - **c. null * .05 = null**
        - d. (null + 1.00) + 5.00 = 5.00
    - 9. How will the column headings be labeled in the following example?
        - SELECT bear_id bears, color AS Color, age “age”
          FROM animals;
            - a. bears, color, age
            - b. BEARS, COLOR, AGE
            - **c. BEARS, COLOR, age**
            - d. Bears, Color, Age
    - 10. Which of the following words must be in a SELECT statement in order to return all rows?
        - a. SELECT only
        - b. SELECT and FROM
        - c. FROM only
        - **d. SELECT * only**

Database Programming with SQL 2-1:

- *Vocabulary:* Identify the vocabulary word for each definition below
    - A command that suppresses duplicates
        - Answer: DISTINCT
    - Links two columns together to form one character data column
        - Answer: CONCATENATE
    - A group of character data
        - Answer: STRING
    - An SQL plus command that displays the structure of a table
        - Answer: DESCRIBE
- *Try It / Solve It*
    - 1. The manager of Global Fast Foods would like to send out coupons for the upcoming sale. He wants to send one coupon to each household. Create the SELECT statement that returns the customer last name and a mailing address
        - SELECT last_name, mailing_address
    - 2. Each statement below has errors. Correct the errors and execute the query in Oracle Application Express
        - a. SELECT first_name
          FROM f_staffs;
        - b. SELECT first_name | | ‘’ | | last_name AS "DJs on Demand Clients"
          FROM d_clients;
        - c. SELECT DISTINCT quantity
          FROM f_order_lines;
        - d. SELECT order_number
          FROM f_orders;

- 3. Sue, Bob, and Monique were the employees of the month. Using the f_staffs table, create a SELECT statement to display the results as shown in the Super Star chart

Super Star
*** Sue *** Sue ***
*** Bob *** Bob ***
*** Monique *** Monique ***

  - SELECT CONCAT('***' | | first_name | | '***' | | first_name | | '***' AS "Super Star"
    FROM f_staffs
    WHERE first_name IN ('Sue', 'Bob', 'Monique')
- 4. Which of the following is TRUE about the following query?
  - SELECT first_name, DISTINCT birthdate
    FROM f_staffs;
    - a. Only two rows will be returned
    - b. Four rows will be returned
    - c. Only Fred 05-Jan-1988 and Lizzie 10-Nov-1987 will be returned
    - **d. No rows will be returned**
- 5. Global Fast Foods has decided to give all staff members a 5% raise. Prepare a report that presents the output as shown in the chart

EMPLOYEE LAST NAME	CURRENT SALARY	SALARY WITH 5% RAISE

  - SELECT last_name AS "EMPLOYEE LAST NAME", salary AS "CURRENT SALARY", (salary * 1.05) AS "SALARY WITH 5% RAISE"
    FROM f_staffs;
- 6. Create a query that will return the structure of the Oracle database EMPLOYEES table. Which columns are marked "nullable"? What does this mean?
  - DESCRIBE EMPLOYEES;
  - Columns that are marked nullable can contain null values, which means that the rows do not require a value for that column
- 7. The owners of DJs on Demand would like a report of all items in their D_CDs table with the following column headings: Inventory Item, CD Title, Music Producer, and Year Purchased. Prepare this report
  - SELECT
    inventory_item AS "Inventory Item",
    cd_title AS "CD Title",
    music_producer AS "Music Producer",
    year_purchased AS "Year Purchased"
    FROM
    D_CDs;

- 8. True/False -- The following SELECT statement executes successfully:
  - SELECT last_name, job_id, salary AS Sal
    FROM employees;
    - Answer: TRUE
- 9. True/False -- The following SELECT statement executes successfully:
  - SELECT *
    FROM job_grades;
    - Answer: TRUE
- 10. There are four coding errors in this statement. Can you identify them?
  - SELECT employee_id, last_name sal x 12 ANNUAL SALARY
    FROM employees;
    - Answer: there is a comma missing after last_name, the AS keyword needs to be placed before the alias, the alias name has a space so it needs to be in quotation marks, multiplication needs to be represented by * instead of x
- 11. In the arithmetic expression salary*12 - 400, which operation will be evaluated first?
  - The multiplication of salary and the value twelve
- 12. Which of the following can be used in the SELECT statement to return all columns of data in the Global Fast Foods f_staffs table?
  - a. column names
  - **b. ***
  - c. DISTINCT id
  - d. both a and b
- 13. Using SQL to choose the columns in a table uses which capability?
  - a. selection
  - **b. projection**
  - c. partitioning
  - d. join
- 14. SELECT last_name AS "Employee". The column heading in the query result will appear as:
  - a. EMPLOYEE
  - b. employee
  - **c. Employee**
  - d. "Employee:
- 15. Which expression below will produce the largest value?
  - a. SELECT salary*6 + 100
  - **b. SELECT salary* (6 + 100)**
  - c. SELECT 6(salary+ 100)
  - d. SELECT salary+6*100

- 16. Which statement below will return a list of employees in the following format? Mr./Ms. Steven King is an employee of our company.
  - a. SELECT "Mr./Ms."||first_name||' '||last_name 'is an employee of our company.' AS "Employees" FROM employees;
  - b. SELECT 'Mr./Ms. 'first_name,last_name ||' '||'is an employee of our company.' FROM employees;
  - **c. SELECT 'Mr./Ms. '||first_name||' '||last_name ||' '||'is an employee of our company.' AS "Employees" FROM employees;**
  - d. SELECT Mr./Ms. ||first_name||' '||last_name ||' '||"is an employee of our company." AS "Employees" FROM employees
- 17. Which is true about SQL statements?
  - a. SQL statements are case-sensitive
  - b. SQL clauses should not be written on separate lines
  - **c. Keywords cannot be abbreviated or split across lines**
  - d. SQL keywords are typically entered in lowercase; all other words in uppercase
- 18. Which queries will return three columns each with UPPERCASE column headings?
  - a. SELECT "Department_id", "Last_name", "First_name" FROM employees;
  - **b. SELECT DEPARTMENT_ID, LAST_NAME, FIRST_NAME FROM employees;**
  - c. SELECT department_id, last_name, first_name AS UPPER CASE FROM employees
  - d. SELECT department_id, last_name, first_name FROM employees;
- 19. Which statement below will likely fail?
  - **a. SELCT * FROM employees;**
  - b. Select * FROM employees;
  - c. SELECT * FROM EMPLOYEES;
  - d. SelecT* FROM employees;
- 20. Click on the History link at the bottom of the SQL Commands window. Scroll or use the arrows at the bottom of the page to find the statement you wrote to solve problem 3 above. (The one with the column heading SuperStar). Click on the statement to load it back into the command window. Execute the command again, just to make sure it is the correct one that works. Once you know it works, click on the SAVE button in the top right corner of the SQL Commands window, and enter a name for your saved statement. Use your own initials and "_superstar.sql", so if your initials are CT then the filename will be CT_superstar.sql. Log out of OAE, and log in again immediately. Navigate back to the SQL Commands window, click the Saved SQL link at the bottom of the

page and load your saved SQL statement into the Edit window. This is done by clicking on the script name. Edit the statement, to make it display + instead of *. Run your amended statement and save it as initials_superplus.sql

- SELECT '*** ' || first_name || ' *** ' || first_name || ' ***' AS "Super Star"
  FROM f_staffs
  WHERE first_name IN ('Sue', 'Bob', 'Monique');
- SELECT '+++ ' || first_name || '+++ ' || first_name || '+++ ' AS "Super Star"
  FROM f_staffs
  WHERE first_name IN ('Sue', 'Bob', 'Monique');

Database Programming with SQL 2-2:

- *Vocabulary:* Identify the vocabulary word for each definition below
  - Restricts the rows returned by a select statement
    - Answer: WHERE
  - Compares one expression to another value or expression
    - Answer: comparison operators
- *Try It / Solve It*
  - 1. Using the Global Fast Foods database, retrieve the customer's first name, last name, and address for the customer who uses ID 456
    - SELECT first_name, last_name, address
      FROM customers
      WHERE customer_id = 456;
  - 2. Show the name, start date, and end date for Global Fast Foods' promotional item "ballpen and highlighter" giveaway
    - SELECT first_name, start_date, end_date
      FROM promotion_items
      WHERE Item_name = 'ballpen and highlighter';
  - 3. Create a SQL statement that produces the following output:

Oldest
The 1997 recording in our database is The Celebrants Live in Concert

    - SELECT 'The' | | title | | 'recording in our database is' || title AS "Oldest"
      FROM recordings
      WHERE release_year = 1997;
  - 4. The following query was supposed to return the CD title "Carpe Diem" but no rows were returned. Correct the mistake in the statement and show the output.
    - SELECT produce, title
      FROM d_cds
      WHERE title = 'Carpe Diem';
  - 5. The manager of DJs on Demand would like a report of all the CD titles and years of CDs that were produced before 2000

        - SELECT title, year_produced
          FROM D_CDs
          WHERE year_produced < 2000;
    - 6. Which values will be selected in the following query?
        - SELECT salary
          FROM employees WHERE salary < = 5000;
            - a. 5000
            - **b. 0 - 4999**
            - c. 2500
            - d. 5
- For the next three questions, use the following table information:
    - TABLE NAME: students
      COLUMNS:
      studentno NUMBER(6)
      fname VARCHAR2(12)
      lname VARCHAR(20)
      sex CHAR(1)
      major VARCHAR2(24)
        - 7. Write a SQL statement that will display the student number (studentno), first name (fname), and last name (lname) for all students who are female (F) in the table named students
            - SELECT studentno, fname, name
              FROM students
              WHERE sex = 'F';
        - 8. Write a SQL statement that will display the student number (studentno) of any student who has a PE major in the table named students. Title the studentno column Student Number
            - SELECT studentno as 'Student Number'
              FROM students
              WHERE major = 'PE';
        - 9. Write a SQL statement that lists all information about all male students in the table named students
            - SELECT *
              FROM students
              WHERE sex = 'M';
        - 10. Write a SQL statement that will list the titles and years of all the DJs on Demand CDs that were not produced in 2000
            - SELECT title, year_produced
              FROM D_CDs
              WHERE year_produced <> 2000;

        - 11. Write a SQL statement that lists the Global Fast Foods employees who were born before 1980
            - SELECT *
              FROM employees
              WHERE birthdate < TO_DATE('1980-01-01', 'YYYY-MM-DD');

Database Programming with SQL 2-3: Comparison Operators Practice Activities

- *Vocabulary:* Identify the vocabulary word for each definition below
    - This option identifies that the escape characters should be interpreted literally
        - Answer: LIKE
    - Condition tests for null values
        - Answer: IS NULL
    - Displays rows based on a range of values Including the specified limits and the area between them; the numbers 1-10, inclusive
        - Answer: BETWEEN…AND
    - Selects rows that match a character pattern
        - Answer: LIKE
    - Tests for values in a specified list of values
        - Answer: IN
- *Try It / Solve It*
    - 1. Display the first name, last name, and salary of all Global Fast Foods staff whose salary is between $5.00 and $10.00 per hour
        - SELECT first_name, last_name, salary
          FROM global_fast_foods_staff
          WHERE salary BETWEEN 5.00 AND 10.00;
    - 2. Display the location type and comments for all DJs on Demand venues that are Private Home
        - SELECT location_type, comments
          FROM djs_on_demand_venues
          WHERE location_type = ‘private_home’;
    - 3. Using only the less than, equal, or greater than operators, rewrite the following query:
        - SELECT first_name, last_name
          FROM f_staffs
          WHERE salary >= 20.00 AND <= 60.00;
    - 4. Create a list of all the DJs on Demand CD titles that have “a” as the second letter in the title
        - SELECT cd_title
          FROM djs_on_demand_cds
          WHERE cd_title LIKE ‘_a%’;

- 5. Who are the partners of DJs on Demand who do not get an authorized expense amount?
  - SELECT partner_name
    FROM djs_on_demand_partners
    WHERE authorized_expense IS NULL
- 6. Select all the Oracle database employees whose last names end with “s”. Change the heading of the column to read Possible Candidates
  - SELECT last_name AS “possible_candidates”
    FROM employees
    WHERE last_name LIKE ‘%s’;
- 7. Which statement(s) are valid?
  - a. WHERE quantity <> NULL;
  - b. WHERE quantity = NULL;
  - **c. WHERE quantity IS NULL;**
  - d. WHERE quantity != NULL;
- 8. Write a SQL statement that lists the songs in the DJs on Demand inventory that are type code 77, 12, or 1
  - SELECT song_title
    FROM djs_on_demand_inventory
    WHERE type_code IN (77, 12, 1);

Database Programming with SQL 3-1: Logical Comparisons and Precedence Rules Practice Activities

- *Vocabulary:* Identify the vocabulary word for each definition below
  - Inverts the value of the condition
    - Answer: NOT
  - Both conditions must be true for a record to be selected
    - Answer: AND
  - Rules that determine the order in which expressions are evaluated and calculated
    - Answer: Precedence
  - Either condition can be true for a record to be selected
    - Answer: OR
- *Try It / Solve It*
  - 1. Execute the two queries below. Why do these nearly identical statements produce two different results? Name the difference and explain why
    - SELECT code, description
      FROM d_themes
      WHERE code >200 AND description IN ('Tropical', 'Football', 'Carnival');
    - SELECT code, description
      FROM d_themes

WHERE code >200 OR description IN ('Tropical', 'Football', 'Carnival');

- Answer: The nearly identical statements produce different results because they contain different operators in WHERE. For the first query, it will return results where the code is greater than 200 and the description is 'Tropical', 'Football', or 'Carnival'. Whereas the second query, will only return results either where the code is greater than 200 or the description is 'Tropical', 'Football', or 'Carnival'

- 2. Display the last names of all Global Fast Foods employees who have “e” and “i” in their last names
  - SELECT last_name
    FROM employees
    WHERE last_name LIKE ‘%e%’ AND last_name LIKE ‘%i%’;
- 3. I need to know who the Global Fast Foods employees are that make more than $6.50/hour and their position is not order taker
  - SELECT *
    FROM employees
    WHERE salary > 6.50 AND position != ‘order_taker’;
- 4. Using the employees table, write a query to display all employees whose last names start with “D” and have “a” and “e” anywhere in their last name
  - SELECT last_name
    FROM employees
    WHERE last_name LIKE ‘D%’ AND last_name LIKE ‘%a%’AND last_name LIKE ‘%e%’;
- 5. In which venues did DJs on Demand have events that were not in private homes?
  - SELECT location_type
    FROM djs_on_demand_venues
    WHERE location_type != ‘private_home’
- 6. Which list of operators is in the correct order from highest precedence to lowest precedence?
  - a. AND, NOT, OR
  - b. NOT, OR, AND
  - **c. NOT, AND, OR**
- 7. Write SQL statements that will produce the desired output: Who am I? I was hired by Oracle after May 1998 but before June of 1999. My salary is less than $8000 per month, and I have an “en” in my last name
  - SELECT *
    FROM employees
    WHERE hire_date > ‘1998-05-31’ AND hire_date < ‘1999-06-01’ AND salary < 8000 AND last_name LIKE ‘%en%’;

- 8. Write SQL statements that will produce the desired output: What's my email address? Because I have been working for Oracle since the beginning of 1996, I make more than $9000 per month. Because I make so much money, I don't get a commission
  - SELECT *
    FROM employees
    WHERE hire date >= '1996-01-01' AND salary >= 9000 AND commission IS NULL;

Database Programming with SQL 3-2:

- *Vocabulary:* Identify the vocabulary word for each definition below
  - Orders the rows in ascending order (the default order); A-Z
    - Answer: ORDER BY ASC
  - Orders the rows in descending order: Z-A
    - Answer: ORDER BY DESC
  - To arrange according to class, kind, or size
    - Answer: ORDER BY
- *Try It / Solve It*
  - 1. In the example below, assign the employee_id column the alias of "Number." Complete the SQL statement to order the result set by the column alias.
    - SELECT employee_id AS number
      FROM employees
      ORDER BY number;
  - 2. Create a query that will return all the DJs on Demand CD titles ordered by year with titles in alphabetical order by year
    - SELECT title, year
      FROM djs_on_demand_cds
      ORDER BY year, title;
  - 3. Order the DJs on Demand songs by descending title. Use the alias "Our Collection" for the song title
    - SELECT title AS "our_collection"
      FROM djs_on_demand_cds
      ORDER BY title DESC;
  - 4. Write a SQL statement using the ORDER BY clause that could retrieve the information needed. Do not run the query. Create a list of students who are in their first year of school. Include the first name, last name, student ID number, and parking place number. Sort the results alphabetically by student last name and then by first name. If more than one student has the same last name, sort each first name in Z to A order. All other results should be in alphabetical order (A to Z)
    - SELECT first_name, last_name, student_id, parking_number

FROM students
WHERE year = 1
ORDER BY last_name ASC, first_name DESC

- 5. Write a SQL statement using the employees table and the ORDER BY clause that could retrieve the information in the following table. Return only those employees with employee_id<125

DEPARTMENT_ID	LAST_NAME	MANAGER_ID
90	Kochhar	100
90	King	(null)
90	De Haan	100
60	Lorentz	103
60	Hunold	102
60	Ernst	103
50	Mourgos	100

  - SELECT *
    FROM employees
    WHERE employee_id < 125
    ORDER BY employee

- *Extension Activities*
  - 1. Limiting values with the WHERE clause is an example of:
    - a. Projection
    - b. Ordering
    - c. Joining
    - d. Grouping
    - **e. Selection**
  - 2. You want to sort your CD collection by title, and then by artist. This can be accomplished using:
    - a. WHERE
    - b. SELECT
    - **c. ORDER BY**
    - d. DISTINCT
  - 3. Which of the following are SQL keywords?
    - **a. SELECT**
    - b. ALIAS
    - c. COLUMN
    - **d. FROM**
  - 4. Which of the following are true?
    - **a. Multiplication and division take priority over addition**
    - **b. Operators of the same priority are evaluated from left to right**
    - **c. Parentheses can be used to override the rules of precedence**
    - d. None of the above are true
  - 5. The following query was written:

        - SELECT DISTINCT last_name
          FROM students
            - a. To select all the outstanding students
            - b. To choose last names that are duplicates
            - **c. To select last names without duplicates**
            - d. To select all last names
    - 6. The following string was created using which SELECT clause? Abby Rogers is an order taker for Global Fast Foods
        - a. SELECT first_name ||' ' ||last_name ||' is an ' staff_type ' for Global Fast Foods'
        - b. SELECT Abby Rogers is an ||staff_type||' for Global Fast Foods'
        - c. SELECT first_name,last_name '||staff_type||' for Global Fast Foods'
        - **d. SELECT first_name ||' ' ||last_name ||' is an '||staff_type||' for Global Fast Foods'**
    - 7. Which of the following SELECT clauses will return uppercase column headings?
        - a. SELECT id, last_name, address, city, state, zip, phone_number;
        - b. SELECT ID, LAST_NAME, ADDRESS, CITY, STATE, ZIP, PHONE_NUMBER;
        - c. SELECT Id, Last_name, Address, City, State, Zip, Phone_number;
        - **d. SELECT id AS ID, last_name AS NAME, address AS ADDRESS, city AS CITY, state AS STATE, zip AS ZIP, phone_number AS PHONE_NUMBER;**
    - 8. Which SELECT statement will **always** return the last names in alphabetical order?
        - a. SELECT last_name AS ORDER BY FROM employees
        - **b. SELECT last_name FROM employees ORDER BY last_name**
        - c. SELECT last_name FROM employees
        - d. SELECT ASC last_name FROM employees
    - 9. Which SELECT clause will return a column heading for employee_id called “New Employees”?
        - a. SELECT last_name AS "New Employees"
        - b. SELECT employee_id AS New Employees
        - c. SELECT employee AS "New Employees”
        - **d. SELECT employee_id AS "New Employees"**
    - 10. Examine the following query. Which results could not have been returned from this query?
        - SELECT last_name, job_id, salary
          FROM employees

WHERE job_id = 'SA_REP' OR job_id = 'AD_PRES' AND salary >15000;

- a. Joe Everyone, sales representative, salary 15000
- b. Jane Hendricks, sales manager, salary 15500
- **c. Arnie Smithers, administration president, 20000**
- d. Jordan Lim, sales representative, salary 14000

- 11. Finish this query so it returns all employees whose last names start with "St".
  - SELECT last_name
    FROM employees
    WHERE last_name LIKE 'St%';
- 12. What salary values will not be returned from this query?
  - SELECT last_name, first_name, salary
    FROM employees
    WHERE salary BETWEEN 1900 AND 2100;
    - Answer: Salaries under 1900 and above 2100 will not be returned
- 13. Correct each WHERE clause:
  - a. WHERE department_id NOT IN 101,102,103;
    - WHERE department_id NOT IN (101,102,103);
  - b. WHERE last_name = King
    - b. WHERE last_name = 'King'
  - c. WHERE start date LIKE "05-May-1998"
    - WHERE start date LIKE '05-May-1998'
  - d. WHERE salary IS BETWEEN 5000 AND 7000
    - WHERE salary BETWEEN 5000 AND 7000
  - e. WHERE id =! 10
    - WHERE id != 10

Database Programming with SQL 3-3:

- *Try It / Solve It*
  - 1. For each task, choose whether a single-row or multiple row function would be most appropriate:
    - a. Showing all of the email addresses in upper case letters
      - Answer: single-row
    - b. Determining the average salary for the employees in the sales department
      - Answer: multiple row
    - c. Showing hire dates with the month spelled out (September 1, 2004)
      - Answer: single-row
    - d. Finding out the employees in each department that had the most seniority (the earliest hire date)

        - Answer: multiple row
    - e. Displaying the employees' salaries rounded to the hundreds place
        - Answer: single-row
    - f. Substituting zeros for null values when displaying employee commissions
        - Answer: single-row
- 2. The most common multiple-row functions are: AVG, COUNT, MAX, MIN, and SUM. Give your own definition for each of these functions
    - AVG: will calculate the average values of a numeric column
    - COUNT: will count the number of instances in a column for a variable
    - MAX: will find the highest value in a numeric column
    - MIN: will find the lowest value in a numeric column
    - SUM: will calculate the sum of a numeric column
- 3. Test your definitions by substituting each of the multiple-row functions into this query. Write out each query and its results.
    - SELECT FUNCTION(salary)
      FROM employees
        - SELECT AVG(salary) AS average_salary
          FROM employees;
        - SELECT COUNT(salary) AS employee_number
          FROM employees;
        - SELECT MAX(salary) AS highest_salary
          FROM employees;
        - SELECT MIN(salary) AS lowest_salary
          FROM employees;
        - SELECT SUM(salary) AS total_salaries
          FROM employees;