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HHA 507

SQL Database Programming: Section 4-1: Case and Character Manipulation

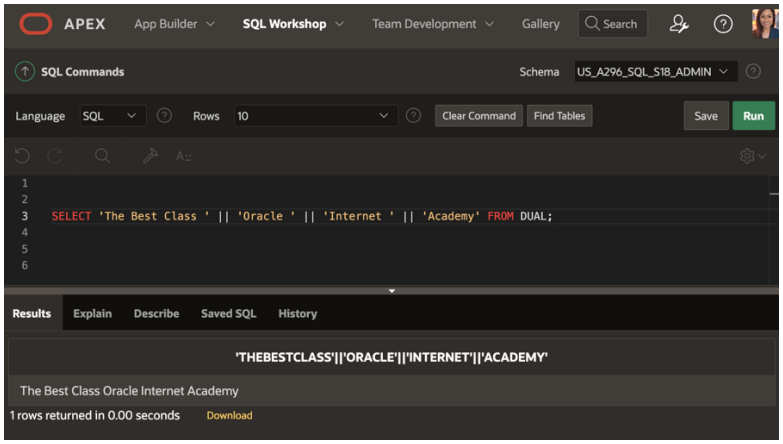
Vocabulary

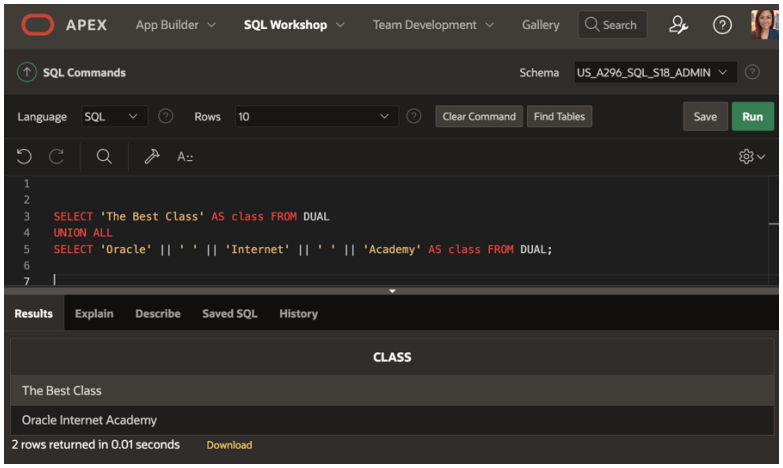
Dual Table	Dummy table used to view results from functions and calculations.
Format	The arrangement of data for storage or display.
Character functions	Converts alpha character values to uppercase for the first letter of each word, all other letters in lowercase.
Single-row functions	Functions that accept character data as input and can return both character and numeric values.
TRIM	Removes all specified characters from either the beginning or the ending of a string.
Operator	A symbol that represents a quantity or a relationship between quantities.
Single-row functions	Functions that operate on single rows only and return one result per row.
UPPER	Converts alpha characters to upper case.
Input	Raw data entered into the computer
CONCAT	Concatenates the first character value to the second character value; equivalent to concatenation operator (||).
Output	Data that is processed into information
LOWER	Converts alpha character values to lowercase.
LPAD	Pads the left side of a character, resulting in a right-justified value
SUBSTR	Returns specific characters from character value starting at a specific character position and going specified character positions long
REPLACE	Replaces a sequence of characters in a string with another set of characters.
INSTR	Returns the numeric position of a named string.
LENGTH	Returns the number of characters in the expression
RPAD	Pads the right-hand side of a character, resulting in a left- justified value.

Try It / Solve It

1) Using the three separate words “Oracle,” “Internet,” and “Academy,” use one command to produce the following output:

The Best Class
Oracle Internet Academy

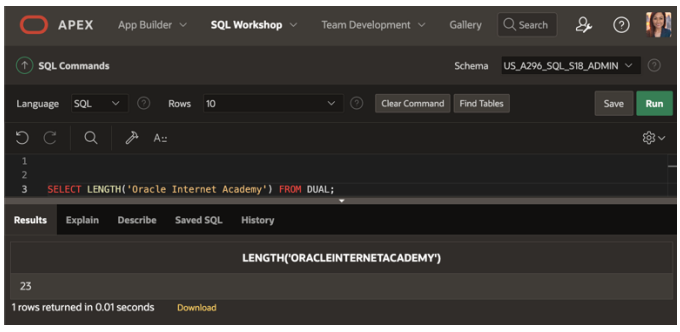




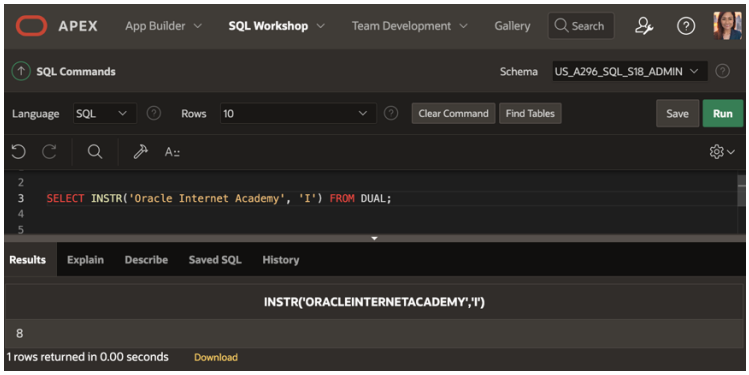
2) Use the string “Oracle Internet Academy” to produce the following output:

The Net
net

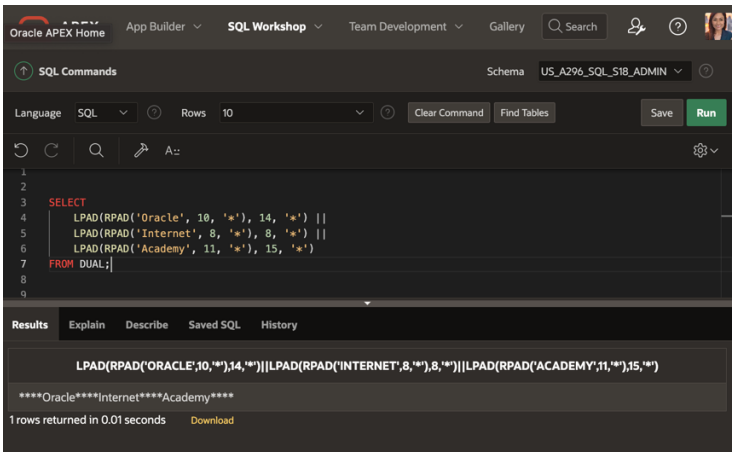
3) What is the length of the string “Oracle Internet Academy”?



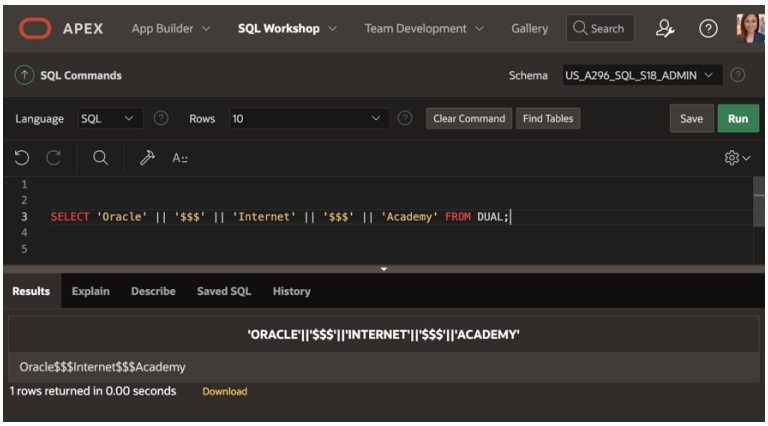
4) What's the position of "I" in "Oracle Internet Academy"?



5) Starting with the string "Oracle Internet Academy", pad the string to create ****Oracle****Internet****Academy****

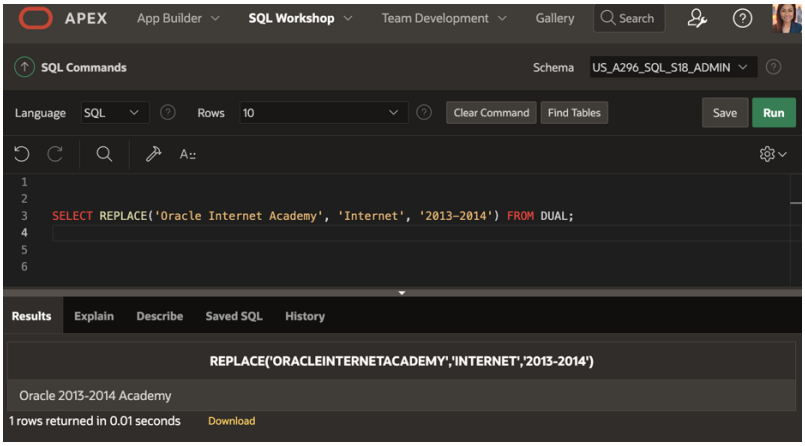


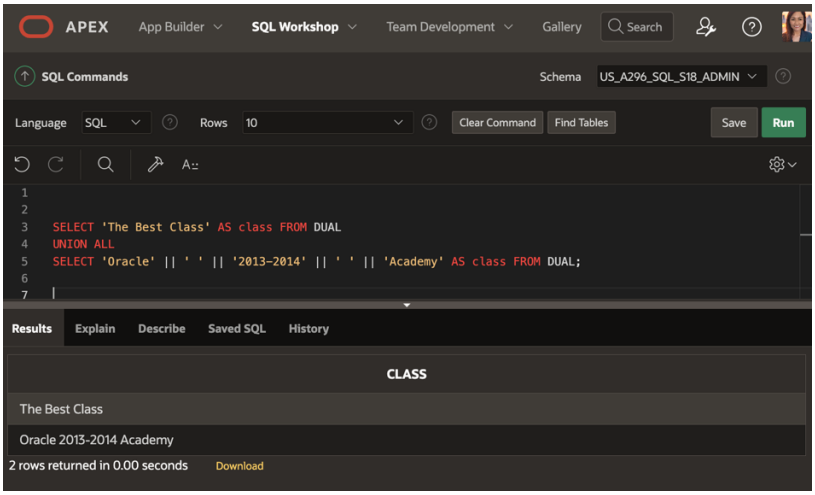
6) Starting with the string "Oracle Internet Academy", pad the string to produce: Oracle$$$Internet$$$Academy



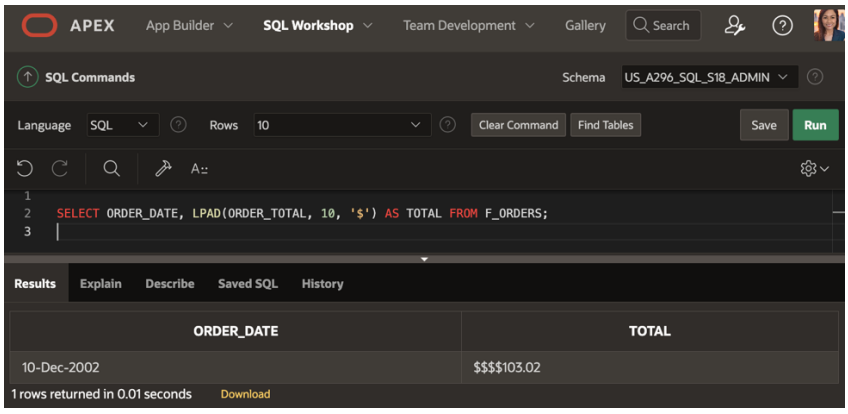
7) Using the string ‘Oracle Internet Academy’, produce the output shown using the REPLACE function.

The Best Class
Oracle 2013-2014 Academy

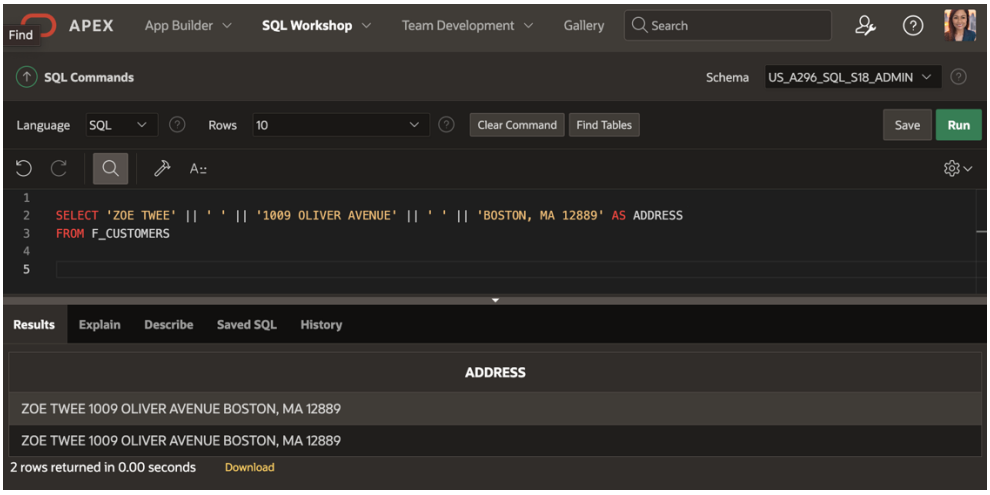




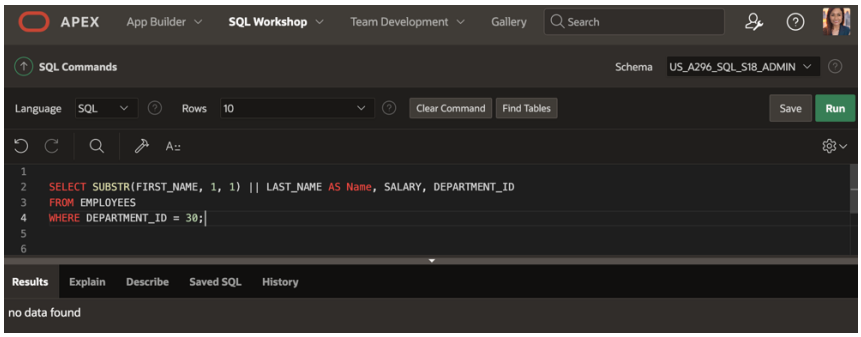
8) List the order date and the order total from the Global Fast Foods F_ORDERS table. Name the order total as TOTAL and fill in the empty spaces to the left of the order total with $.

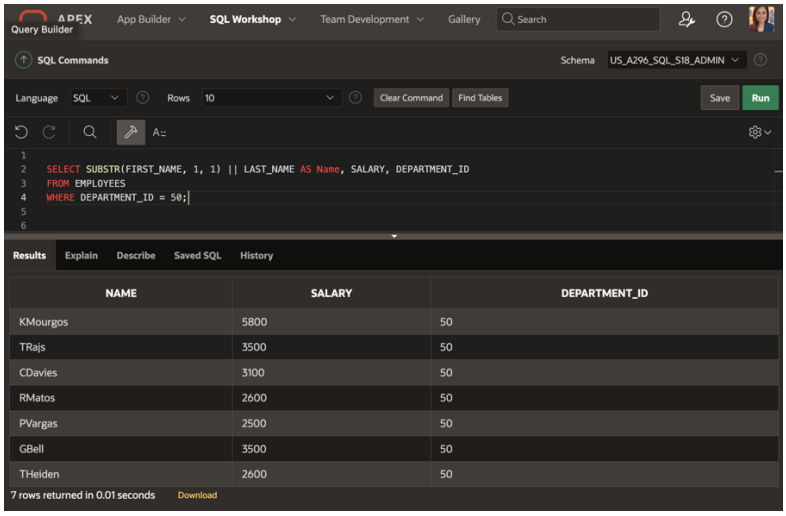


9) Write a query that will output a column called “ADDRESS” which has the following information:
ZOE TWEE 1009 OLIVER AVENUE BOSTON, MA 12889. Use the Global Fast Foods F_CUSTOMERS table.

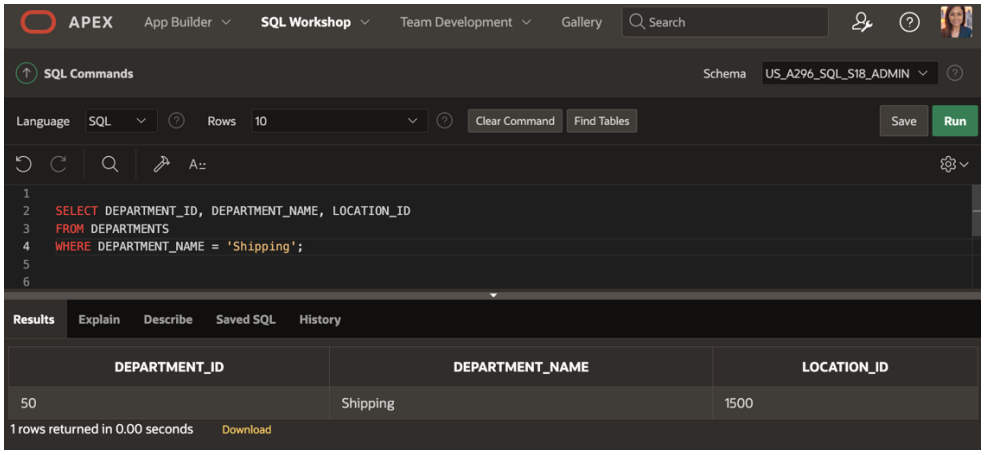


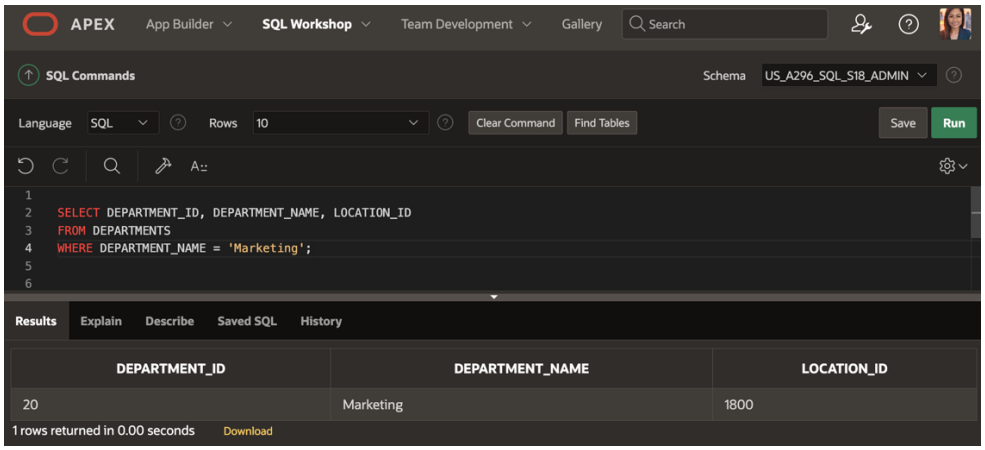
10) Write a query to return the first character of the first name concatenated to the last_name, the salary, and the department id for employees working in department 20. Give the first expression an alias of Name. Use the EMPLOYEES table. Change the query to use a substitution variable instead of the hard coded value 20 for department id. Run the query for department 30 and 50 without changing the original where-clause in your statement.



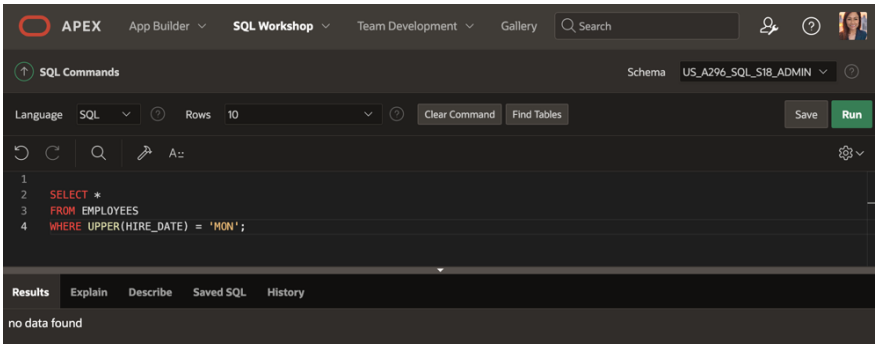


11) Using a substitution variable for the department name, write a query listing department id, department name, and location id for departments located in the_department_of_your_choice. Use the DEPARTMENTS table. Note: All substitution variables in OAE are treated as character strings, so no quotes (‘ ‘) are needed.





12) Write a query that returns all the employee data depending on the month of their hire date. Use the EMPLOYEES table. The statement should return the month part of the hire date which is then compared to an abbreviated month (JAN, FEB, MAR) passed into the query via a substitution variable.



SQL Database Programming: Section 4-2: Number Functions

Vocabulary

TRUNC: Used to terminate the column, expression, or value to a specified number of decimal places

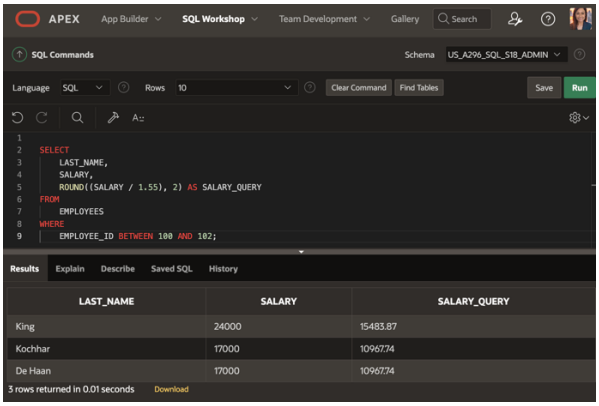
Number functions: These functions accept numeric input and return numeric values.

MOD function: Returns the remainder of a division.

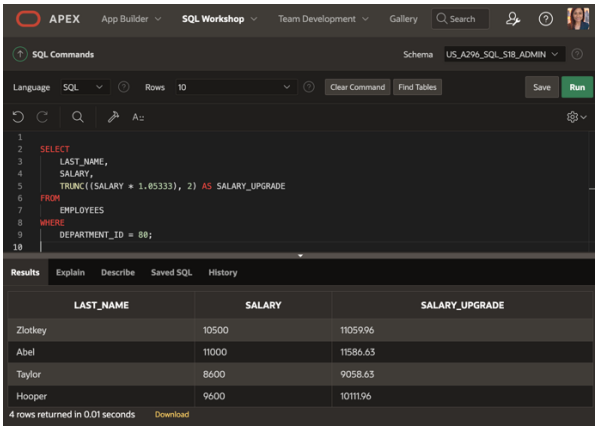
ROUND: Rounds the column, expression, or value to a set number of decimal places.

Try It / Solve It

1) Display Oracle database employee last_name and salary for employee_ids between 100 and 102. Include a third column that divides each salary by 1.55 and rounds the result to two decimal places.

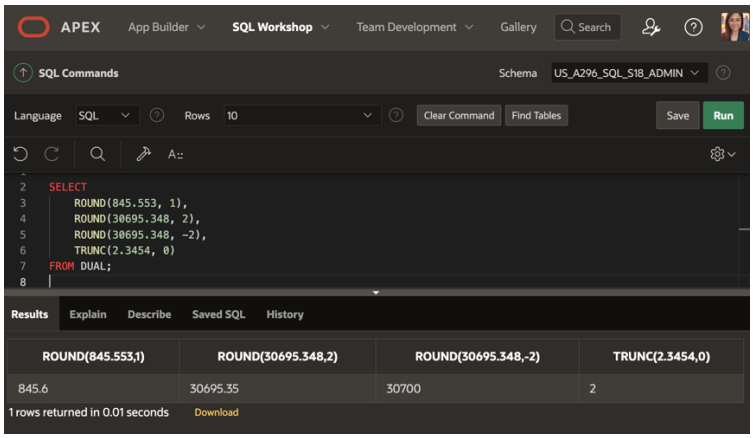


2) Display employee last_name and salary for those employees who work in department 80. Give each of them a raise of 5.333% and truncate the result to two decimal places.

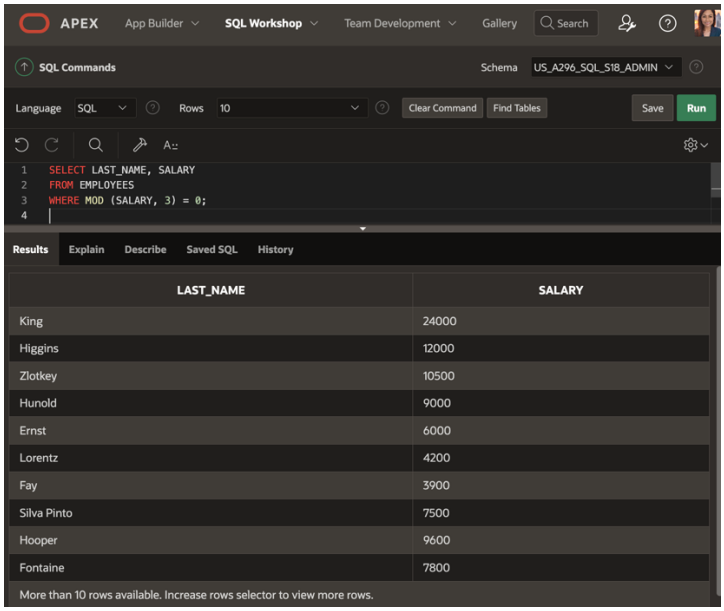


3) Use a MOD number function to determine whether 38873 is an even number or an odd number.
Unable to complete this question. I keep getting an error message. It might be that the SQL queries I entered are wrong.

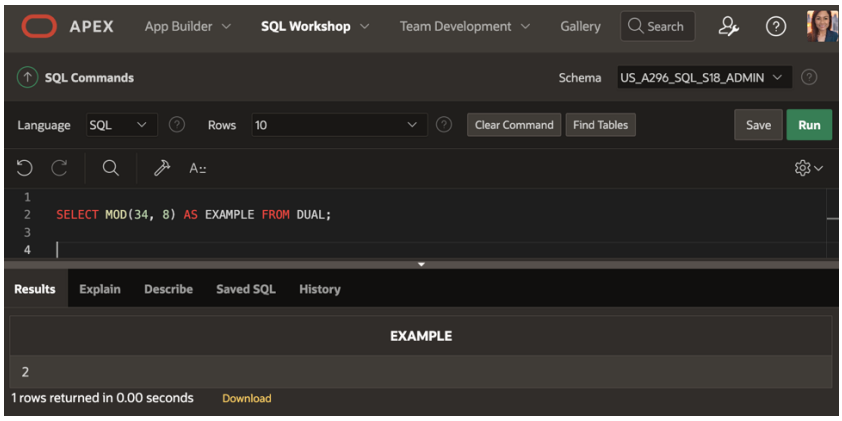
4) Use the DUAL table to process the following numbers:
845.553 - round to one decimal place
30695.348 - round to two decimal places
30695.348 - round to -2 decimal places
2.3454 - truncate the 454 from the decimal place



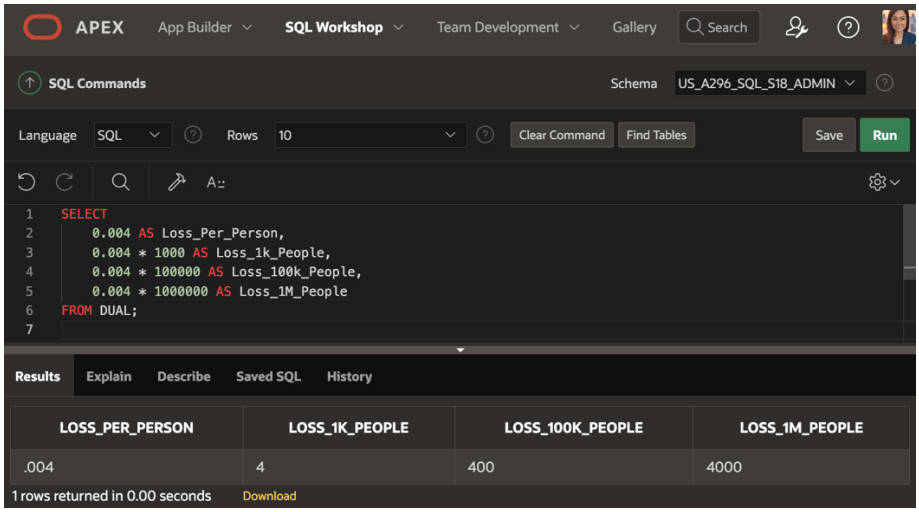
5) Divide each employee's salary by 3. Display only those employees' last names and salaries who earn a salary that is a multiple of 3.



6) Divide 34 by 8. Show only the remainder of the division. Name the output as EXAMPLE.



7) How would you like your paycheck – rounded or truncated? What if your paycheck was calculated to be $565.784 for the week, but you noticed that it was issued for $565.78. The loss of .004 cent would probably make very little difference to you. However, what if this was done to one thousand people, one hundred thousand people, or one million people! Would it make a difference then? How much of a difference?



SQL Database Programming: Section 4-3: Date Functions

Vocabulary

SYSDATE: A function that returns the current date and time of the database server.

ADD_MONTHS: Add calendar months to date

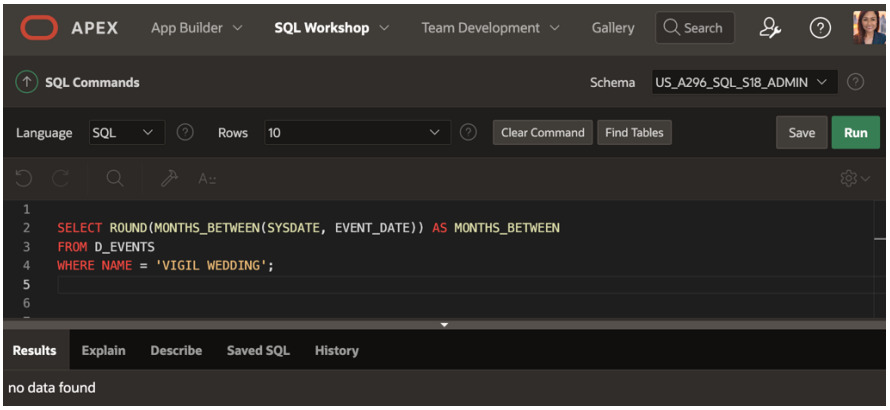
LAST_DAY: Last day of the month

NEXT_DAY: Next day of the date specified

MONTHS_BETWEEN: Number of months between due dates

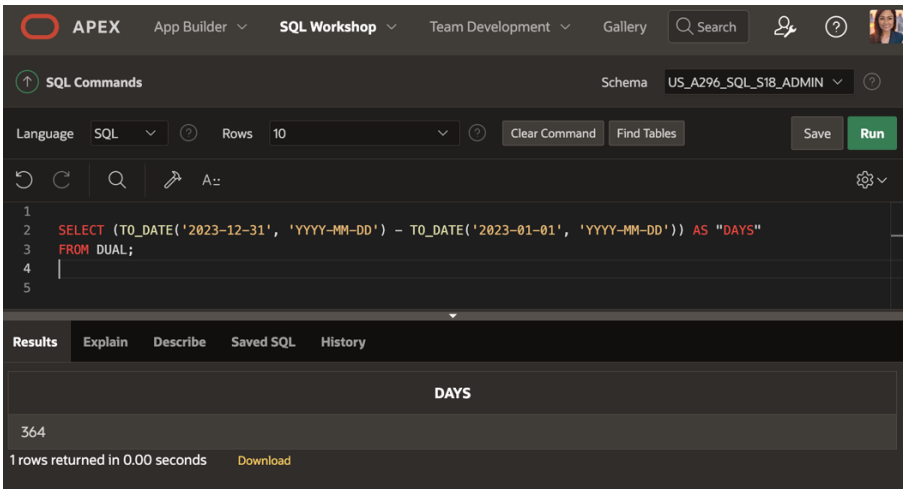
Try It / Solve It

1. For DJs on Demand, display the number of months between the event_date of the Vigil wedding and today's date. Round to the nearest month.

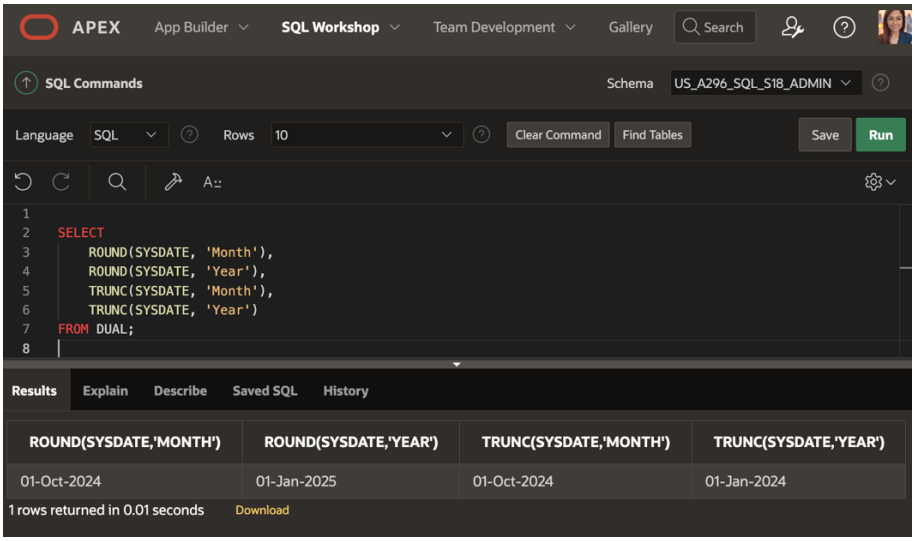


2. Display the days between the start of last summer's school vacation break and the day school started this year. Assume 30.5 days per month. Name the output "Days."
   Unable to complete this question. I keep getting an error message. It might be that the SQL queries I entered are wrong.

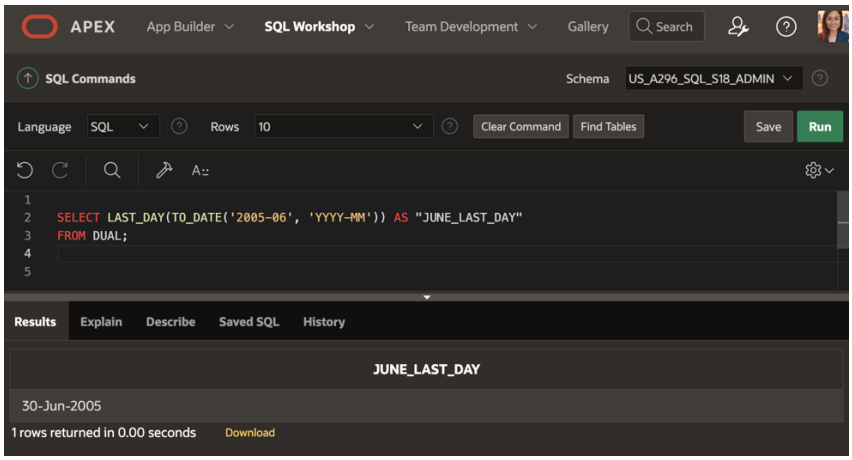
3. Display the days between January 1 and December 31.



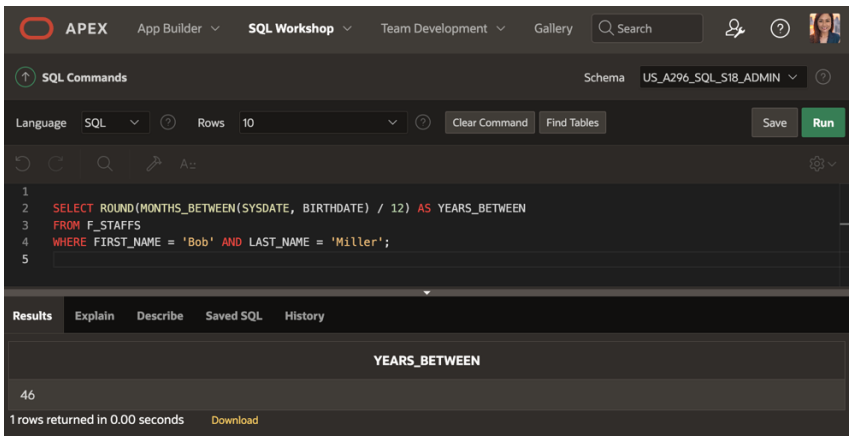
4. Using one statement, round today's date to the nearest month and nearest year and truncate it to the nearest month and nearest year. Use an alias for each column.



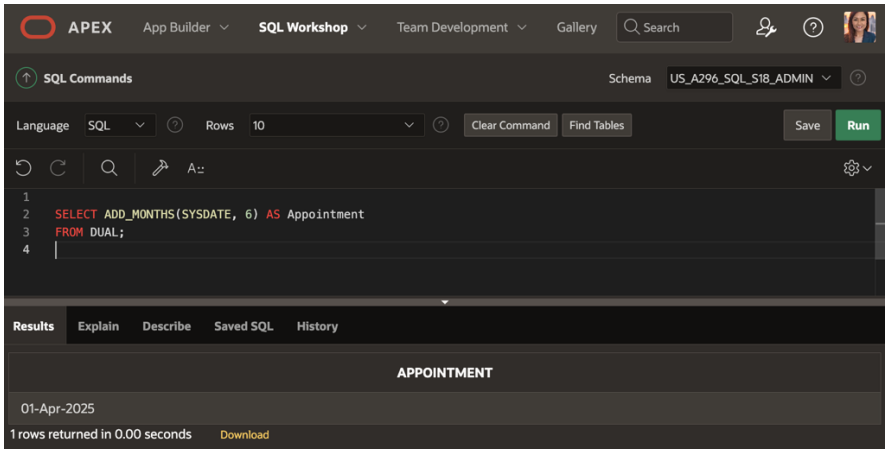
5. What is the last day of the month for June 2005? Use an alias for the output.



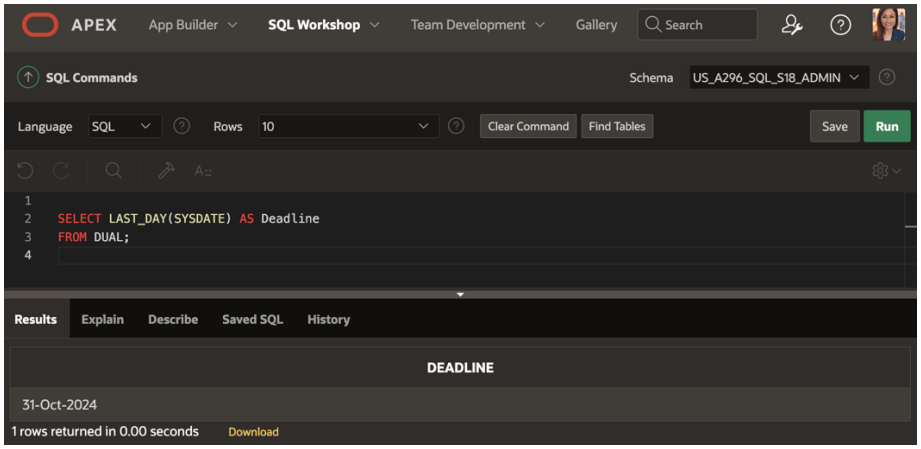
6. Display the number of years between the Global Fast Foods employee Bob Miller's birthday and today. Round to the nearest year.



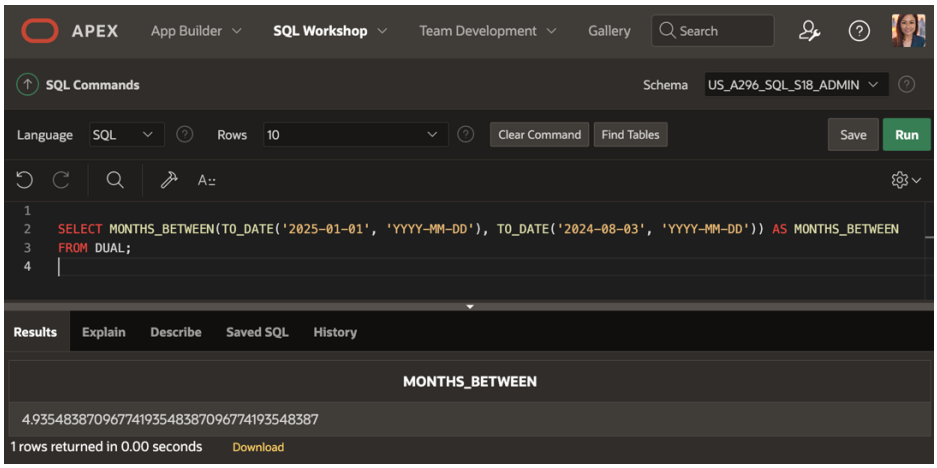
7. Your next appointment with the dentist is six months from today. On what day will you go to the dentist? Name the output, "Appointment."



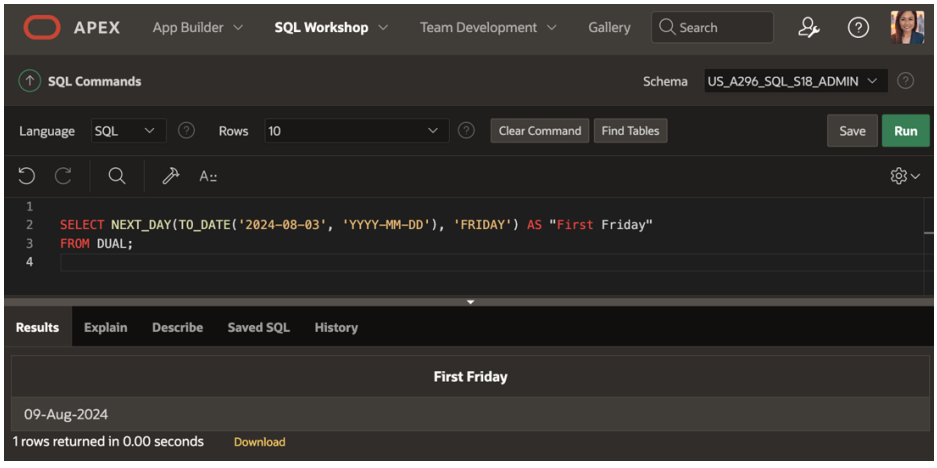
8. The teacher said you have until the last day of this month to turn in your research paper. What day will this be? Name the output, “Deadline.”



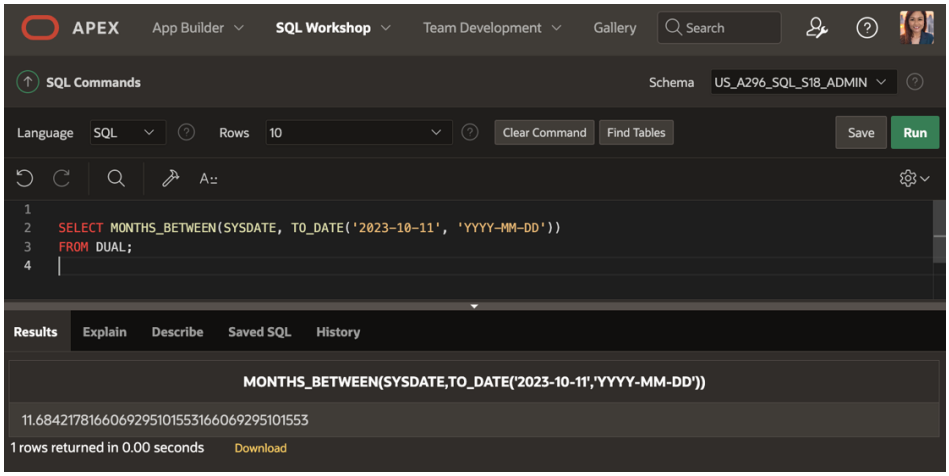
9. How many months between your birthday this year and January 1 next year?



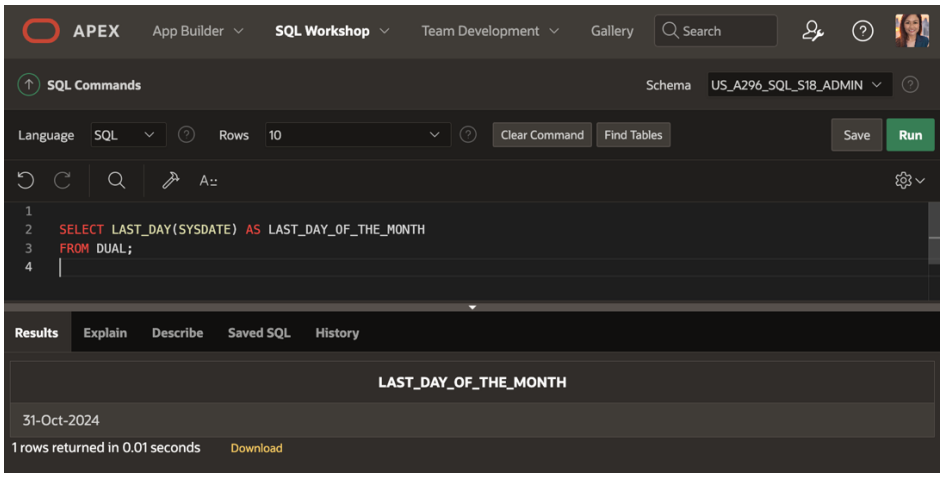
10. What’s the date of the next Friday after your birthday this year? Name the output, “First Friday.”



11. Name a date function that will return a number.



12. Name a date function that will return a date.



13. Give one example of why it is important for businesses to be able to manipulate date data?

It is important for businesses to manipulate date data to assist in making informed decisions based on observed trends that have been organized through date manipulation. For instance, businesses can develop effective strategies for targeting market sales based on current trends, such as those in the fashion industry.