Programming 4

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4.1

Vocabulary

* Dual: dummy table used to view results from functions and calculations
* Format: the arrangement of data for storage or display
* INITCAP: converts alpha character values to uppercase for the first letter of each word, all other letters lowercase
* Character functions: Functions that accept character data as input and an return both character and numeric values
* TRIM: removes all specified characters from either the beginning or the ending of a string
* Expression: 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

1. SELECT CONCAT (‘Oracle’, ‘Internet’)||’Academy’ AS “The Best Class”

FROM DUAL;

1. SELECT SUBSTR (‘Oracle Internet Academy’, 13,3) AS “The Net”

FROM DUAL;

1. 23

SELECT LENGTH (‘Oracle Internet Academy’) AS “Length”

FROM DUAL;

1. 8

SELECT INSTR (‘Oracle Internet Academy’, ‘|’ AS “Position”

FROM DUAL;

1. SELECT LPAD(‘Oracle’, 10, ‘\*’)||LPAD(‘Internet’,12,’\*’)||RPAD(LPAD(‘Academy’,11,’\*’),15,’\*’) AS “OIA”

FROM DUAL;

1. SELECT RPAD('Oracle',9,'$')||RPAD('Internet',11,'$')||'Academy' AS "OIA"

FROM DUAL;

1. SELECT REPLACE('Oracle Internet Academy', 'Internet','2013-2014') AS "The Best Class"

FROM DUAL;

1. SELECT order\_date, LPAD(ORDER\_TOTAL,10,'$')AS "TOTAL"

FROM f\_orders;

1. SELECT UPPER(first\_name) ||' '|| UPPER(last\_name) ||' '|| UPPER(address)||' ' ||UPPER(city) ||', '||UPPER(state)||' '||zip AS "ADDRESS"

FROM f\_customers

WHERE id = 456;

1. SELECT SUBSTR(first\_name, 1,1) || last\_name AS "Name", salary, department\_id

FROM employees

WHERE department\_id = 20;

SELECT SUBSTR(first\_name, 1,1) || last\_name AS "Name", salary, department\_id

FROM employees

WHERE department\_id = :dept\_id;

1. SELECT department\_id, department\_name, location\_id

FROM departments

WHERE department\_name = :dept\_name;

1. SELECT \*

FROM employees

WHERE SUBSTR(hire\_date, 4, 3) = :entered\_month;

4.2

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: Returns the remainder of a division
* ROUND: Rounds the column, expression, or value to a set number of decimal places

1. SELECT last\_name, ROUND(salary/1.55,2) AS "Salary Calculation"

FROM employees

WHERE employee\_id BETWEEN 100 AND 102;

1. SELECT last\_name, TRUNC(salary \* .05333,2) AS "Raise Amount"

FROM employees

WHERE department\_id = 80;

1. Odd

SELECT MOD(38873,2)

FROM DUAL;

1. SELECT round(845.553,1)

FROM DUAL;

30695.348 - round to two decimal places

SELECT round(30695.348,2)

FROM DUAL;

30695.348 - round to -2 decimal places

SELECT ROUND(30695.348,-2)

FROM DUAL;

2.3454 - truncate the 454 from the decimal place

SELECT TRUNC(2.3454,1)

FROM DUAL;

1. SELECT last\_name, salary

FROM employees

WHERE MOD(salary,3) = 0;

1. SELECT MOD(34,8) AS Example

FROM DUAL;

1. .004 \* 1 = .004; .004 \*1000 = $4.00; .004\*100,000 = $ 400.00; .004 \* 1,000,000 = $4000.00

4.3

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

1. SELECT ROUND(MONTHS\_BETWEEN (SYSDATE,event\_date)) AS MONTHS

FROM d\_events where id=105;

1. SELECT ROUND(MONTHS\_BETWEEN ('02-Sep-2044', '10-Jun-2024')\*30.5) AS DAYS

FROM dual;

1. SELECT ROUND(MONTHS\_BETWEEN ('31-Dec-2024','01-Jan-2024')\*30.5) AS DAYS

FROM dual;

1. SELECT ROUND(SYSDATE,'MONTH') AS Month,ROUND(SYSDATE,'YEAR') AS YEAR,TRUNC(SYSDATE,'MONTH')AS Month, TRUNC(SYSDATE,'YEAR') AS Year

FROM DUAL;

1. SELECT LAST\_DAY('01-Jun-2005') AS "LAST DAY"

FROM DUAL;

1. SELECT last\_name, ROUND(MONTHS\_BETWEEN(SYSDATE, birthdate)/12)

AS YEARS

FROM f\_staffs

WHERE id = 9;

1. SELECT ADD\_MONTHS(SYSDATE,6) AS Appointment

FROM DUAL;

1. SELECT LAST\_DAY(SYSDATE) AS Deadline

FROM DUAL;

1. SELECT ROUND(MONTHS\_BETWEEN('01-Jan-2025', '01-Jul-2024'))

FROM DUAL;

1. SELECT ROUND(NEXT\_DAY('01-Jul-1988','Friday'))AS "First Friday"

FROM DUAL;

1. MONTHS\_BETWEEN
2. Any of ADD\_MONTHS, NEXT\_DAY, LAST\_DAY, ROUND, and TRUNC
3. Track employee start dates