**Common Table Expressions(CTEs) ( WITH AS)**

In MySQL, WITH and AS are used to define **Common Table Expressions (CTEs)**. A CTE is a temporary result set (like a subquery) that you can refer to within the main query. CTEs make complex queries easier to write and understand by breaking them into smaller, readable parts.

Syntax;

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| **WITH** new\_temp\_table\_name **AS**  **(**  **SELECT . . .** -- Your subquery or CTE query goes here  **)**  **SELECT** **\*** **FROM** new\_temp\_table\_name;  ----------------------------------------------------------------------   **WITH**: This keyword introduces the CTE.   **AS**: Defines the CTE with a name and the associated query. |

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| **WITH** AverageSalary **AS**  (  **SELECT** **AVG**(salary) **AS** avg\_salary  **FROM** employees  )  **SELECT** \*  **FROM** employees  **WHERE** salary **>** ( **SELECT** avg\_salary **FROM** AverageSalary); |

* 1nd Highest Salary

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| -- 1ST WAY  **SELECT** \*  **FROM** EMPLOYEES  **WHERE** SALARY =  (  **SELECT** **MAX**(SALARY)  **FROM** EMPLOYEES  ); | -- Table expression way  **WITH** MAXI **AS**  (  **SELECT** **MAX**(SALARY) **AS** SELL1  **FROM** EMPLOYEES  )  **SELECT** \* **FROM** EMPLOYEES  **WHERE** SALARY = (  **SELECT** SELL1 **FROM** MAXI  ); |

* 2nd Highest Salary

|  |  |
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| -- 1ST WAY  **SELECT** **\***  **FROM** EMPLOYEES  **WHERE** SALARY = (  **SELECT** **MAX** (SALARY)  **FROM** EMPLOYEES  **WHERE** **SALARY** < (  **SELECT** **MAX**(SALARY)  **FROM** EMPLOYEES  )  ); | -- Table expression way  **WITH** MAXI1 **AS**  (  **SELECT** **MAX** (SALARY) MAXI1\_SHELL  **FROM** EMPLOYEES  ),  MAXI2 **AS**  (  **SELECT** **MAX** (SALARY) MAXI2\_SHELL  **FROM** EMPLOYEES  **WHERE** SALARY < (  **SELECT** MAXI1\_SHELL  **FROM** MAXI1)  )  **SELECT** \*  **FROM** EMPLOYEES  **WHERE** SALARY = (  **SELECT** MAXI2\_SHELL  **FROM** MAXI2  ); |