

Difference between ROW_NUMBER , RANK , DENSE_RANK window functions

```
SELECT
    ROW_NUMBER() OVER(
        ORDER BY
            numeric_column
    ) AS row_number_value -- row number of output
    RANK() OVER(
        ORDER BY
            numeric_column
    ) AS rank_vaue
    -- rank 'r' means after (r-1)rows , if rth row value is
    -- not equal to (r-1)th row value then it is assigned rank
    -- r otherwise rth row will have rank (r-1).
    DENSE_RANK() OVER (
        ORDER BY
            numeric_column
    ) AS dense_rank_value
    -- rank values may not be continuous numbers. dense_rank is just one-one
    -- mapping from natural number to unique rank values.
FROM
    schema_name.table_name
ORDER BY
    numeric_column;
```

Example

numeric_column = {2, 4, 4, 7, 7, 7, 10, 11}

ROW_NUMBERS will return { 1, 2, 3, 4, 5, 6, 7, 8} i.e. row numbers of each data value

RANK will return {1, 2, 2, 4, 4, 4, 7, 8}

DENSE_RANK will return { 1, 2, 2, 3, 3, 3, 4, 5}