UTS : BASISDATA LANJUT

STUDI KASUS PENJUALAN PERUSAHAAN

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JAWABAN

1. Hitung Rata-Rata Gaji Per Departement

```sql
--!Hitung Rata-Rata Gaji Departemen Sales!--
SELECT
    d.NamaDepartemen AS DepartmentName,
    AVG(e.Salary) AS AverageSalary
FROM
    Employees e
JOIN
    Departments d ON e.DepartmentID = d.DepartmentID
GROUP BY
    d.NamaDepartemen;
```

81 %

Results | Messages

	DepartmentName	AverageSalary
1	Finance	65000.000000
2	HR	47500.000000
3	IT	70000.000000
4	Marketing	62000.000000

2. Hitung Total Penjualan Kumulatif Karyawan

```sql
--!Hitung Total Penjualan Kumulatif Karyawan!--
SELECT
    e.EmployeeID,
    e.FirstName,
    e.LastName,
    s.SaleDate,
    s.Amount,
    SUM(s.Amount) OVER (PARTITION BY e.EmployeeID ORDER BY s.SaleDate) AS TotalPenjualanKumulatif
FROM Employees e
JOIN Sales s ON e.EmployeeID = s.EmployeeID
ORDER BY e.EmployeeID, s.SaleDate;
```

81 %

Results | Messages

	EmployeeID	FirstName	LastName	SaleDate	Amount	TotalPenjualanKumulatif
1	1	<Annisa>	<Nisa>	2024-01-01	500.00	500.00
2	1	<Annisa>	<Nisa>	2024-01-02	600.00	1100.00
3	2	Jane	Smith	2024-01-03	700.00	700.00
4	3	Sam	Brown	2024-01-04	800.00	800.00
5	3	Sam	Brown	2024-01-05	900.00	1700.00
6	4	Linda	Jones	2024-01-06	300.00	300.00
7	5	Mike	Davis	2024-01-07	400.00	400.00
8	6	Emily	Clark	2024-01-08	200.00	200.00
9	7	Jacob	Williams	2024-01-09	1000.00	1000.00
10	8	<Nova Elija>	<Elija>	2024-01-10	1200.00	1200.00

3. Peringkat Karyawan Berdasarkan Total Penjualan

```sql
--!Peringkat Karyawan Berdasarkan Total Penjualan!--
SELECT EmployeeID, SUM(Amount) AS TotalSales,
RANK() OVER (ORDER BY SUM(Amount) DESC) AS SalesRank
FROM Sales
GROUP BY EmployeeID;
```

81 %

Results | Messages

	EmployeeID	TotalSales	SalesRank
1	3	1700.00	1
2	8	1200.00	2
3	1	1100.00	3
4	7	1000.00	4
5	2	700.00	5
6	5	400.00	6
7	4	300.00	7
8	6	200.00	8

4. Perbandingan Penjualan Hari Ini dengan Penjualan Hari Kemarin

```sql
--!Menampilkan Produk dengan Penjualan di Bawah Rata-rata!--
SELECT
    SaleID,
    SaleDate,
    Amount,
    EmployeeID,
    ProductID,
    LAG(Amount, 1, 0) OVER (ORDER BY SaleDate) AS PreviousDayAmount,
    (Amount - LAG(Amount, 1, 0) OVER (ORDER BY SaleDate)) AS DifferenceWithPreviousDay
FROM
    Sales
ORDER BY
    SaleDate;
```

31 %

Results | Messages

	SaleID	SaleDate	Amount	EmployeeID	ProductID	PreviousDayAmount	DifferenceWithPreviousDay
1	1	2024-01-01	500.00	1	1	0.00	500.00
2	2	2024-01-02	600.00	1	2	500.00	100.00
3	3	2024-01-03	700.00	2	2	600.00	100.00
4	4	2024-01-04	800.00	3	3	700.00	100.00
5	5	2024-01-05	900.00	3	1	800.00	100.00
6	6	2024-01-06	300.00	4	3	900.00	-600.00
7	7	2024-01-07	400.00	5	1	300.00	100.00
8	8	2024-01-08	200.00	6	2	400.00	-200.00
9	9	2024-01-09	1000.00	7	3	200.00	800.00
10	10	2024-01-10	1200.00	8	2	1000.00	200.00

5. Menampilkan Produk dengan Penjualan di Bawah Rata-rata

```sql
--!Menampilkan Produk dengan Penjualan di Bawah Rata-rata!--
WITH ProductSales AS (
    SELECT ProductID, SUM(Amount) AS TotalSales
    FROM Sales
    GROUP BY ProductID
),
AverageSales AS (
    SELECT AVG(TotalSales) AS AvgSales
    FROM ProductSales
)
SELECT ProductID, TotalSales
FROM ProductSales, AverageSales
WHERE TotalSales < AvgSales;
```

81 %

Results | Messages

	ProductID	TotalSales
1	1	1800.00
2	3	2100.00

6. Hitung Persentase Gaji Karyawan Terhadap Rata-rata Gaji di Departemen

```
--!Hitung Persentase Gaji Karyawan Terhadap Rata-rata Gaji di Departemen!--
WITH DepartmentAvgSalary AS (
    SELECT DepartmentID, AVG(Salary) AS AvgSalary
    FROM Employees
    GROUP BY DepartmentID
)
SELECT e.EmployeeID, e.FirstName, e.LastName, e.DepartmentID, e.Salary,
       d.AvgSalary,
       (e.Salary / d.AvgSalary) * 100 AS SalaryPercentage
FROM Employees e
JOIN DepartmentAvgSalary d ON e.DepartmentID = d.DepartmentID;
```

81 %

Results | Messages

	EmployeeID	FirstName	LastName	DepartmentID	Salary	AvgSalary	SalaryPercentage
1	1	<Annisa>	<Nisa>	1	60000.00	70000.000000	85.71428571428571428571
2	2	Jane	Smith	1	70000.00	70000.000000	100.00000000000000000000
3	6	Emily	Clark	1	80000.00	70000.000000	114.28571428571428571429
4	3	Sam	Brown	2	45000.00	47500.000000	94.73684210526315789474
5	4	Linda	Jones	2	50000.00	47500.000000	105.26315789473684210526
6	5	Mike	Davis	3	75000.00	65000.000000	115.38461538461538461538
7	7	Jacob	Williams	3	55000.00	65000.000000	84.61538461538461538462
8	8	<Nova Elija>	<Elija>	4	62000.00	62000.000000	100.00000000000000000000

7. Jumlah Penjualan Berdasarkan Kuartal

```
--!Jumlah Penjualan Berdasarkan Kuartal!--
SELECT DATEPART(QUARTER, SaleDate) AS Quarter,
       YEAR(SaleDate) AS Year,
       SUM(Amount) AS TotalSales
FROM Sales
GROUP BY YEAR(SaleDate), DATEPART(QUARTER, SaleDate)
ORDER BY Year, Quarter;
```

81 %

Results | Messages

	Quarter	Year	TotalSales
1	1	2024	6600.00

8. Menampilkan Karyawan yang Gajinya Tertinggi di Setiap Departemen

```
--!Menampilkan Karyawan yang Gajinya Tertinggi di Setiap Departemen!--
WITH RankedSalaries AS (
    SELECT EmployeeID, FirstName, LastName, DepartmentID, Salary,
           ROW_NUMBER() OVER (PARTITION BY DepartmentID ORDER BY Salary DESC) AS SalaryRank
    FROM Employees
)
SELECT EmployeeID, FirstName, LastName, DepartmentID, Salary
FROM RankedSalaries
WHERE SalaryRank = 1;
```

81 %

Results | Messages

	EmployeeID	FirstName	LastName	DepartmentID	Salary
1	6	Emily	Clark	1	80000.00
2	4	Linda	Jones	2	50000.00
3	5	Mike	Davis	3	75000.00
4	8	<Nova Elija>	<Elija>	4	62000.00

9. Stok Produk yang Belum Terjual dalam Sehari

```
--!Stok Produk yang Belum Terjual dalam Sehari!--
SELECT p.ProductID, p.ProductName, p.Stock
FROM Product p
LEFT JOIN Sales s ON p.ProductID = s.ProductID AND s.SaleDate = '2024-10-18'
WHERE s.SaleID IS NULL;
```

81 %

Results | Messages

	ProductID	ProductName	Stock
1	1	Laptop	10
2	2	Smartphone	20
3	3	Tablet	15
4	4	Printer	5
5	5	Headphones	50
6	6	Monitor	8
7	7	Keyboard	30
8	8	Mouse	40
9	9	Webcam	25
10	10	External Hard Drive	12

10. Menghitung Perubahan Gaji Karyawan Bulan ke Bulan

```
--!Menghitung Perubahan Gaji Karyawan Bulan ke Bulan!--
SELECT
    EmployeeID,
    Salary,
    LAG(Salary) OVER (ORDER BY EmployeeID) AS SalaryBulanSebelumnya,
    Salary - LAG(Salary) OVER (ORDER BY EmployeeID) AS PerubahanGaji
FROM Employees
ORDER BY EmployeeID;
```

81 %

Results | Messages

	EmployeeID	Salary	SalaryBulanSebelumnya	PerubahanGaji
1	1	60000.00	NULL	NULL
2	2	70000.00	60000.00	10000.00
3	3	45000.00	70000.00	-25000.00
4	4	50000.00	45000.00	5000.00
5	5	75000.00	50000.00	25000.00
6	6	80000.00	75000.00	5000.00
7	7	55000.00	80000.00	-25000.00
8	8	62000.00	55000.00	7000.00

11. Daftar Produk dengan Jumlah Penjualan di Atas Target

```
--!Daftar Produk dengan Jumlah Penjualan di Atas Target!--
SELECT
    p.ProductID,
    p.ProductName,
    SUM(s.Amount) AS TotalSales
FROM Product AS p
JOIN Sales AS s ON p.ProductID = s.ProductID
GROUP BY p.ProductID, p.ProductName
HAVING SUM(s.Amount) > 10000;
```

80 %

Results | Messages

ProductID	ProductName	TotalSales

12. Hitung Rata-rata Penjualan Harian per Karyawan

```
--!Hitung Rata-rata Penjualan Harian per Karyawan!--
WITH DailySales AS (
    SELECT EmployeeID, SaleDate, SUM(Amount) AS TotalDailySales
    FROM Sales
    GROUP BY EmployeeID, SaleDate
)
SELECT EmployeeID, AVG(TotalDailySales) AS AvgDailySales
FROM DailySales
GROUP BY EmployeeID;
```

81 %

Results | Messages

	EmployeeID	AvgDailySales
1	1	550.000000
2	2	700.000000
3	3	850.000000
4	4	300.000000
5	5	400.000000
6	6	200.000000
7	7	1000.000000
8	8	1200.000000