

KUIS 1 : BASISDATA LANJUT

STUDI KASUS TOKO BUKU

Nama: ...

Kelas:

NIM: ...

JAWABAN

1

```
SELECT e.DepartmentID, AVG(e.Salary) AS AvgDepartmentSalary
FROM Employees e GROUP BY e.DepartmentID;
```

	DepartmentID	AvgDepartmentSalary
1	1	70000.000000
2	2	47500.000000
3	3	65000.000000
4	4	62000.000000

2

```
SELECT
    e.EmployeeID,
    e.FirstName,
    e.LastName,
    s.SaleDate,
    s.Amount,
    SUM(s.Amount) OVER (PARTITION BY s.EmployeeID ORDER BY s.SaleDate) AS CumulativeSales
FROM
    Sales s
JOIN
    Employees e ON s.EmployeeID = e.EmployeeID
ORDER BY
    e.EmployeeID, s.SaleDate;
```

	EmployeeID	FirstName	LastName	SaleDate	Amount	CumulativeSales
1	1	<Nama Unik>	<Unik 2>	2024-01-01	500.00	500.00
2	1	<Nama Unik>	<Unik 2>	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	<Nama mhs>	<Belakang mhs>	2024-01-10	1200.00	1200.00

3

SELECT

e.EmployeeID,

e.FirstName,

e.LastName,

SUM(s.Amount) AS TotalSales,

RANK() OVER (ORDER BY SUM(s.Amount) DESC) AS SalesRank

FROM

Sales s

JOIN

Employees e ON s.EmployeeID = e.EmployeeID

GROUP BY

e.EmployeeID, e.FirstName, e.LastName

ORDER BY

SalesRank;

	EmployeeID	FirstName	LastName	TotalSales	SalesRank
1	3	Sam	Brown	1700.00	1
2	8	<Nama mhs>	<Belakang mhs>	1200.00	2
3	1	<Nama Unik>	<Unik 2>	1100.00	3
4	7	Jacob	Williams	1000.00	4
5	2	Jane	Smith	700.00	5
6	5	Mike	Davis	400.00	6
7	4	Linda	Jones	300.00	7
8	6	Emily	Clark	200.00	8

4

```
SELECT
    s.ProductID,
    p.ProductName,
    s.SaleDate,
    SUM(s.Amount) AS SalesToday,
    LAG(SUM(s.Amount)) OVER (PARTITION BY s.ProductID ORDER BY s.SaleDate) AS SalesYesterday,
    SUM(s.Amount) - LAG(SUM(s.Amount)) OVER (PARTITION BY s.ProductID ORDER BY s.SaleDate) AS SalesDifference
FROM
    Sales s
JOIN
    Product p ON s.ProductID = p.ProductID
GROUP BY
    s.ProductID, p.ProductName, s.SaleDate
ORDER BY
    s.ProductID, s.SaleDate;
```

	ProductID	ProductName	SaleDate	SalesToday	SalesYesterday	SalesDifference
1	1	Laptop	2024-01-01	500.00	NULL	NULL
2	1	Laptop	2024-01-05	900.00	500.00	400.00
3	1	Laptop	2024-01-07	400.00	900.00	-500.00
4	2	Smartphone	2024-01-02	600.00	NULL	NULL
5	2	Smartphone	2024-01-03	700.00	600.00	100.00
6	2	Smartphone	2024-01-08	200.00	700.00	-500.00
7	2	Smartphone	2024-01-10	1200.00	200.00	1000.00
8	3	Tablet	2024-01-04	800.00	NULL	NULL
9	3	Tablet	2024-01-06	300.00	800.00	-500.00
10	3	Tablet	2024-01-09	1000.00	300.00	700.00

5

```
SELECT
    p.ProductID,
    p.ProductName,
    SUM(s.Amount) AS TotalSales
FROM
    Sales s
JOIN
    Product p ON s.ProductID = p.ProductID
GROUP BY
    p.ProductID, p.ProductName
HAVING
    SUM(s.Amount) < (
```

```

SELECT
    AVG(TotalSales)
FROM (
    SELECT
        SUM(s.Amount) AS TotalSales
    FROM
        Sales s
    GROUP BY
        s.ProductID
) AS ProductSalesAvg
)
ORDER BY
    TotalSales ASC;

```

	ProductID	ProductName	TotalSales
1	1	Laptop	1800.00
2	3	Tablet	2100.00

6

```

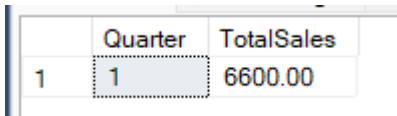
SELECT
    e.EmployeeID,
    e.FirstName,
    e.LastName,
    e.Salary,
    AVG(e.Salary) OVER (PARTITION BY e.DepartmentID) AS AvgSalaryPerDept,
    (e.Salary / AVG(e.Salary) OVER (PARTITION BY e.DepartmentID)) * 100 AS SalaryPercentage
FROM
    Employees e
ORDER BY
    e.DepartmentID, e.EmployeeID;

```

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

7

```
SELECT
    DATEPART(QUARTER, s.SaleDate) AS Quarter,
    SUM(s.Amount) AS TotalSales
FROM
    Sales s
WHERE
    YEAR(s.SaleDate) = YEAR(GETDATE()) -- Filter for the current year
GROUP BY
    DATEPART(QUARTER, s.SaleDate)
ORDER BY
    Quarter;
```



	Quarter	TotalSales
1	1	6600.00

8

```
WITH RankedEmployees AS (
    SELECT
        e.EmployeeID,
        e.FirstName,
        e.LastName,
        e.Salary,
        e.DepartmentID,
        RANK() OVER (PARTITION BY e.DepartmentID ORDER BY e.Salary DESC) AS RankNum
    FROM
        Employees e
)
SELECT
    EmployeeID,
    FirstName,
    LastName,
    Salary
FROM
    RankedEmployees
WHERE
    RankNum = 1
ORDER BY
```

DepartmentID;

	EmployeeID	FirstName	LastName	Salary
1	6	Emily	Clark	80000.00
2	4	Linda	Jones	50000.00
3	5	Mike	Davis	75000.00
4	8	<Nama mhs>	<Belakang mhs>	62000.00

9

WITH RankedEmployees AS (

SELECT

e.EmployeeID,

e.FirstName,

e.LastName,

e.Salary,

e.DepartmentID,

RANK() OVER (PARTITION BY e.DepartmentID ORDER BY e.Salary DESC) AS RankNum

FROM

Employees e

)

SELECT

EmployeeID,

FirstName,

LastName,

Salary

FROM

RankedEmployees

WHERE

RankNum = 1

ORDER BY

DepartmentID;

	EmployeeID	FirstName	LastName	Salary
1	6	Emily	Clark	80000.00
2	4	Linda	Jones	50000.00
3	5	Mike	Davis	75000.00
4	8	<Nama mhs>	<Belakang mhs>	62000.00

10

11

```
SELECT
    p.ProductID,
    p.ProductName,
    SUM(s.Amount) AS TotalSales
FROM
    Sales s
JOIN
    Product p ON s.ProductID = p.ProductID
GROUP BY
    p.ProductID, p.ProductName
HAVING
    SUM(s.Amount) > 10000
ORDER BY
    TotalSales DESC;
```

ProductID	ProductName	TotalSales

12

```
SELECT
    e.EmployeeID,
    e.FirstName,
    e.LastName,
    COUNT(DISTINCT CAST(s.SaleDate AS DATE)) AS TotalDays,
    SUM(s.Amount) AS TotalSales,
    CASE
        WHEN COUNT(DISTINCT CAST(s.SaleDate AS DATE)) = 0 THEN 0
        ELSE SUM(s.Amount) / COUNT(DISTINCT CAST(s.SaleDate AS DATE))
    END AS AverageDailySales
FROM
    Employees e
LEFT JOIN
    Sales s ON e.EmployeeID = s.EmployeeID
```

GROUP BY

e.EmployeeID, e.FirstName, e.LastName

ORDER BY

e.EmployeeID;

	EmployeeID	FirstName	LastName	TotalDays	TotalSales	AverageDailySales
1	1	<Nama Unik>	<Unik 2>	2	1100.00	550.000000
2	2	Jane	Smith	1	700.00	700.000000
3	3	Sam	Brown	2	1700.00	850.000000
4	4	Linda	Jones	1	300.00	300.000000
5	5	Mike	Davis	1	400.00	400.000000
6	6	Emily	Clark	1	200.00	200.000000
7	7	Jacob	Williams	1	1000.00	1000.000000
8	8	<Nama mhs>	<Belakang mhs>	1	1200.00	1200.000000