Advanced Database
Data Type

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1 Practicum

1. ```sql
   SELECT
        GETDATE() AS currentdatetime,
        FORMAT(GETDATE(), 'HH:mm:ss') AS currentdate,
        YEAR(GETDATE()) AS currentyear,
        MONTH(GETDATE()) AS currentmonth,
        DAY(GETDATE()) AS currentday,
        DATEPART(WEEK, GETDATE()) AS currentweeknumber,
        DATENAME(MONTH, GETDATE()) AS currentmonthname;
   ```

2. Tidak, karena tidak diperbolehkan adanya duplikat dalam penamaan alias

3. ```sql
   SELECT CAST('1945-08-17' AS DATE) AS somedate;
   SELECT CONVERT(DATE, '1945-08-17', 23) AS somedate;
   SELECT DATEFROMPARTS(1945, 8, 17) AS somedate;
   ```

4. ```sql
   SELECT
        DATEADD(MONTH, 3, GETDATE()) AS threemonths,
        DATEDIFF(DAY, GETDATE(), DATEADD(MONTH, 3, GETDATE())) AS diffdays,
        DATEDIFF(WEEK, '1945-08-17', '2018-10-01') AS diffweeks,
        DATEADD(DAY, 1 - DAY(GETDATE()), GETDATE()) AS firstday;
   ```

5. ```sql
   SELECT isitdate,
        CASE
            WHEN ISDATE(isitdate) = 1 THEN CONVERT(date, isitdate)
            ELSE NULL
        END AS converteddate
   FROM Sales.Somedates;
   ```

6. `SYSDATETIME` mengembalikan nilai bertipe `DATETIME2(7)`
   sedangkan `CURRENT_TIMESTAMP` mengembalikan hasil bertipe `DATETIME`

7. ```sql
   SELECT DISTINCT custid
   FROM Sales.Orders
   WHERE YEAR(orderdate) = 2008 AND MONTH(orderdate) = 2;
   ```

8. ```sql
   SELECT
        GETDATE() AS currentdate,
        DATEADD(month, DATEDIFF(month, 0, GETDATE()), 0) AS firstofmonth,
        DATEADD(day, -1, DATEADD(month, DATEDIFF(month, 0, GETDATE()) + 1, 0)) AS endofmonth;
   ```

```sql
9. SELECT
       orderid,
       custid,
       orderdate
   FROM
       Sales.Orders
   WHERE
       orderdate >= DATEADD(day, -5, DATEADD(month, DATEDIFF(month, 0, GETDATE()), 0))
       AND orderdate < DATEADD(month, DATEDIFF(month, 0, GETDATE()) + 1, 0);

10. SELECT
        orderid,
        custid,
        orderdate
    FROM
        Sales.Orders
    WHERE
        DAY(orderdate) > DAY(EOMONTH(orderdate, 0)) - 5

11. SELECT DISTINCT
        od.productid
    FROM
        Sales.Orders o
    JOIN
        Sales.OrderDetails od ON o.orderid = od.orderid
    WHERE
        YEAR(orderdate) = 2007
        AND DATEPART(month, orderdate) <= 10
    ORDER BY od.productid;

12. SELECT
        CONCAT(contactname, ' (city: ', city, ')') AS contactwithcity
    FROM
        Sales.Customers;
```

```sql
13. SELECT
        CONCAT(
            contactname,
            ' (city: ',
            city,
            ', region: ',
            normalisedregion,
            ')'
        ) AS contactwithcity
    FROM
        (
            SELECT
                normalisedregion = CASE
                    WHEN region IS NULL THEN ''
                    ELSE region
                END,
                city,
                contactname
            FROM
                Sales.Customers
        ) AS c;

14. SELECT
        contactname,
        contacttitle
    FROM
        Sales.Customers
    WHERE
        ASCII(LEFT(contactname, 1)) >= 65
        AND ASCII(LEFT(contactname, 1)) <= 71
    ORDER BY
        contactname;

15. SELECT
        contactname,
        LEFT(contactname, CHARINDEX(', ', contactname) - 1) AS lastname
    FROM
        Sales.Customers;

16. SELECT
        REPLACE(contactname, ', ', ' ') as newcontactname,
        RIGHT(contactname, CHARINDEX(' ', REVERSE(contactname))) as firstname
    FROM
        Sales.Customers;
```

```sql
17. SELECT
        custid,
        CONCAT('C', FORMAT(custid, '00000')) as newcustid
    FROM
        Sales.Customers;

18. SELECT
        contactname,
        LEN(contactname) - LEN(
            REPLACE(contactname COLLATE SQL_Latin1_General_Cp1_CI_AI, 'a', '')
        ) as numberofa
    FROM
        Sales.Customers
    ORDER BY
        numberofa DESC;
```