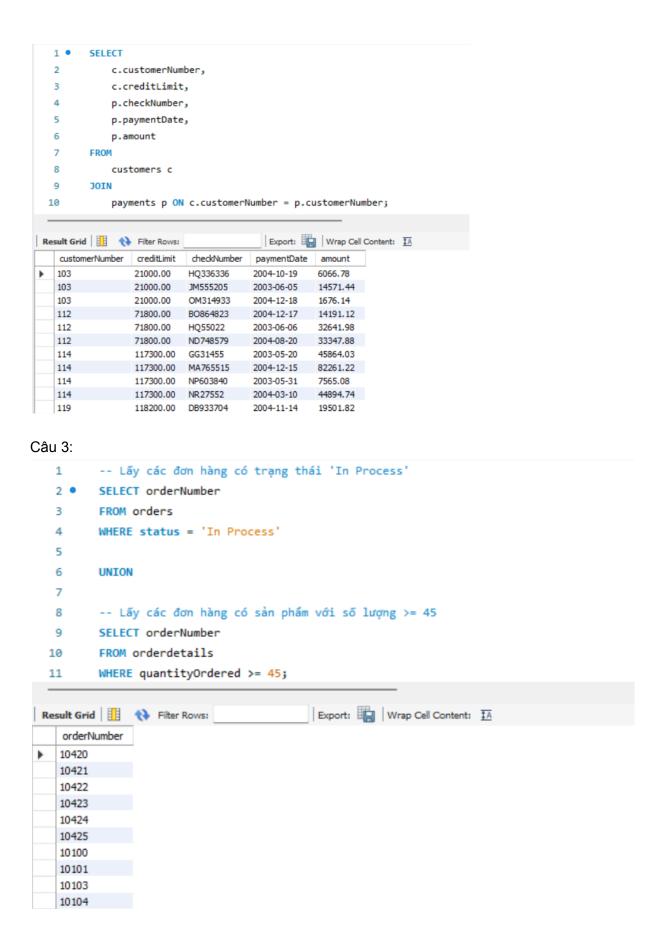
THỰC HÀNH 4

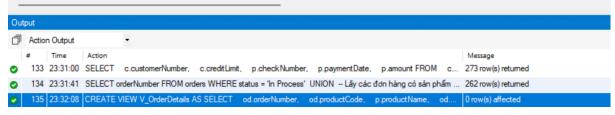
```
Câu 1:
          SELECT
               c.customerNumber,
               c.salesRepEmployeeNumber,
               e.officeCode
   5
          FROM
   6
               customers c
   7
          LEFT JOIN
    8
               employees e ON c.salesRepEmployeeNumber = e.employeeNumber;
 Export: Wrap Cell Content: IA
    customerNumber
                    salesRepEmployeeNumber
                                          officeCode
                                         NULL
                   HULL
    125
                   NULL
                                         NULL
    169
                   NULL
                                         NULL
    206
                   NULL
                                         NULL
    223
                   NULL
                                         NULL
    237
                   NULL
                                         NULL
    247
                   NULL
                                         NULL
    273
                   NULL
                                         NULL
    293
                   NULL
                                         NULL
    303
                   NULL
                                         NULL
    307
                   NULL
                                         NULL
    335
                   NULL
                                         NULL
    348
                                         NULL
                   NULL
    356
```

Câu 2:



Câu 4:

```
1 •
      CREATE VIEW V OrderDetails AS
2
       SELECT
 3
           od.orderNumber.
 4
           od.productCode,
           p.productName,
 5
6
           od.quantityOrdered
 7
8
           orderdetails od
9
       JOIN
10
           products p ON od.productCode = p.productCode;
```



Câu 5:

```
1 • INSERT INTO offices (officeCode, city, phone, addressLine1, country, postalCode, territory)
VALUES ('8', 'Ha Noi', '+84 123 123 123', '19 Le Thanh Nghi', 'Viet Nam', 'VN2022', 'VN');
```

```
Output

# Time Action

128 23:20:44 SELECT c.customerName, c.country AS customerCountry, o.country AS officeCountry FROM custo... 3 row(s) returned

129 23:21:27 SELECT productName, productCode FROM products WHERE productCode NOT IN ( SELECT DISTINCT... 1 row(s) returned

130 23:21:51 SELECT productName, productCode FROM products WHERE productCode NOT IN ( SELECT DISTINCT... 1 row(s) returned

131 23:22:37 SELECT p. productLine, SUM(od.quantityOrdered) AS totalQuantitySold FROM products p.JOIN orde... 1 row(s) returned

132 23:29:13 SELECT c.customerNumber, c.salesRepEmployeeNumber, e.officeCode FROM customers c LEFT J... 122 row(s) returned

133 23:31:00 SELECT c.customerNumber, c.creditLimit, p.checkNumber, p.paymentDate, p.amount FROM c... 273 row(s) returned

134 23:31:41 SELECT orderNumber FROM orders WHERE status = 'In Process' UNION - Läy các don hàng có sản phẩm ... 262 row(s) returned

135 23:32:08 CREATE VIEW V_OrderDetails AS SELECT od.orderNumber, od.productCode, p.productName, od... 0 row(s) affected

136 23:33:40 INSERT INTO offices (officeCode, city, phone, addressLine1, country, postalCode, territory) VALUES (8', 'Ha ... 1 row(s) affected

137 23:33:52 INSERT INTO offices (officeCode, city, phone, addressLine1, country, postalCode, territory) VALUES (8', 'Ha ... Error Code: 1062, Duplicate entry '8' for key 'offices.PRIMARY'
```

Câu 6:

```
SET phone = '+84 123 456 456'
        WHERE officeCode = '8';
 Output ::
 Action Output
   # Time
                Action
 23:21:27 SELECT productName, productCode FROM products WHERE productCode NOT IN ( SELECT DISTINCT ... 1 row(s) returned
 130 23:21:51 SELECT productName, productCode FROM products WHERE productCode NOT IN ( SELECT DISTINCT ... 1 row(s) returned
 131 23:22:37 SELECT p.productLine, SUM(od.quantityOrdered) AS totalQuantitySold FROM products p.JOIN orde... 1 row(s) returned
 23:29:13 SELECT c.customerNumber, c.salesRepEmployeeNumber, e.officeCode FROM customers c LEFT J... 122 row(s) returned
 o 133 23:31:00 SELECT c.customerNumber, c.creditLimit, p.checkNumber, p.paymentDate, p.amount FROM c... 273 row(s) returned
 23:31:41 SELECT orderNumber FROM orders WHERE status = 'In Process' UNION - Läy các đơn hàng có sản phẩm ... 262 row(s) returned
 ○ 135 23:32:08 CREATE VIEW V_OrderDetails AS SELECT od.orderNumber, od.productCode, p.productName, od.... 0 row(s) affected
 23:33:40 INSERT INTO offices (officeCode, city, phone, addressLine1, country, postalCode, territory) VALUES ('8', 'Ha ... 1 row(s) affected
 137 23:33:52 INSERT INTO offices (officeCode, city, phone, addressLine1, country, postalCode, territory) VALUES ('8', 'Ha ... Error Code: 1062. Duplicate entry '8' for key 'offices.PRIMARY'
1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
Câu 7:
```

1 • DELETE FROM offices

1 • UPDATE offices

WHERE officeCode = '8';

Output				
╗	Action Output		*	
	#	Time	Action	Message
0	130	23:21:51	${\sf SELECT\ productName, productCode\ FROM\ productS\ WHERE\ productCode\ NOT\ IN\ (} {\sf SELECT\ DISTINCT\}$	1 row(s) returned
0	131	23:22:37	${\sf SELECT-p.productLine, SUM(od.quantityOrdered) AS total QuantitySold FROM-products p {\sf JOIN-order.}}$	1 row(s) returned
0	132	23:29:13	${\sf SELECT-c.customerNumber,-c.salesRepEmployeeNumber,-e.officeCode\ FROM-customers\ c\ LEFT\ J}$	122 row(s) returned
0	133	23:31:00	$SELECT c.customerNumber, c.creditLimit, p.checkNumber, p.paymentDate, p.amount \ FROM c$	273 row(s) returned
0	134	23:31:41	SELECT orderNumber FROM orders WHERE status = 'In Process' UNION Lấy các đơn hàng có sản phẩm	. 262 row(s) returned
0	135	23:32:08	${\sf CREATE\ VIEW\ V_OrderDetails\ AS\ SELECT od.orderNumber, od.productCode, p.productName, od}$	0 row(s) affected
0	136	23:33:40	$INSERT\ INTO\ officeS\ (officeCode,\ city,\ phone,\ addressLine1,\ country,\ postalCode,\ territory)\ VALUES\ ('8',\ 'Ha\\ Property of the property of t$	1 row(s) affected
8	137	23:33:52	$INSERT\ INTO\ officeS\ (officeCode,\ city,\ phone,\ addressLine1,\ country,\ postalCode,\ tenitory)\ VALUES\ ('8',\ 'Ha\\ Property of the property of th$	Error Code: 1062. Duplicate entry '8' for key 'offices.PRIMARY'
0	138	23:34:12	UPDATE offices SET phone = '+84 123 456 456' WHERE officeCode = '8'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
0	139	23:34:40	DELETE FROM offices WHERE officeCode = '8'	1 row(s) affected

Câu 8:

```
1 • INSERT INTO orderdetails (orderNumber, productCode, quantityOrdered, priceEach, orderLineNumber)
2    VALUES (10425, 'S32_2509', 10, 15.34, 7);
3
4 • UPDATE orderdetails
5    SET quantityOrdered = 20
6    WHERE orderNumber = 10425 AND productCode = 'S32_2509';
7
8 • DELETE FROM orderdetails
9    WHERE orderNumber = 10425 AND productCode = 'S32_2509';
```

Câu 9:

Lỗi xảy ra vì quy tắc của toán tử UNION là: hai câu lệnh SELECT phải có cùng số lượng cột.

Câu SELECT thứ nhất: select orderNumber, customerNumber ... \rightarrow **có 2 cột**.

Câu SELECT thứ hai: select orderNumber $\ldots \to chỉ$ có 1 cột. Do số lượng cột không khớp nhau nên CSDL sẽ báo lỗi cú pháp.

Sửa:

```
SELECT orderNumber FROM orders
WHERE status = 'In Process'

UNION

SELECT orderNumber FROM orderdetails
WHERE quantityOrdered >= 45;
```



Câu 10:

Lỗi xảy ra do sai kiểu dữ liệu.

Cột orderNumber trong bảng orders có kiểu dữ liệu là INT (số nguyên).

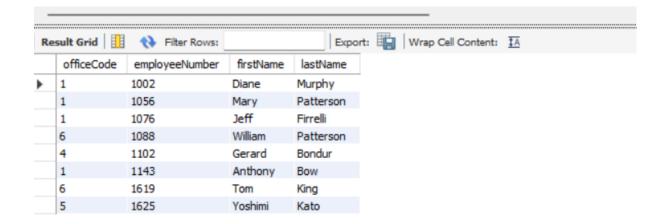
Tuy nhiên, truy vấn lại đang cố gắng chèn giá trị **VN10000**, là một chuỗi ký tự (string), vào cột này. CSDL không thể chuyển đổi một chuỗi có chứa chữ cái thành số nguyên, do đó sẽ báo lỗi.

Sửa:

```
1 • INSERT INTO orders (orderNumber, orderDate, requiredDate, status, customerNumber)
2 VALUES (50000, '2022-09-12', '2022-09-15', 'In Process', 121);
```

Câu 11:

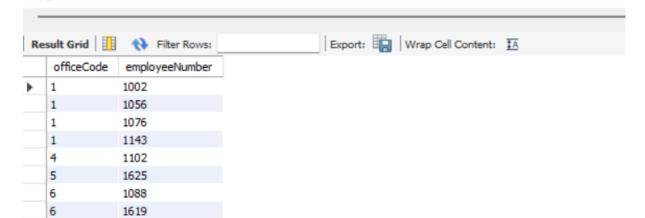
```
1 •
       SELECT
 2
           e.officeCode,
 3
           e.employeeNumber,
 4
           e.firstName,
 5
           e.lastName
 6
       FROM
 7
           employees e
       LEFT JOIN
8
9
           customers c ON e.employeeNumber = c.salesRepEmployeeNumber
10
       WHERE
11
            c.customerNumber IS NULL;
```



Câu 12:

Câu 13:

```
69 • select e.officeCode, e.employeeNumber
70  from employees e
71  left join customers c on e.employeeNumber = c.salesRepEmployeeNumber
72  where c.customerNumber is null;
73
```



```
Câu 14:
 75 •
          select e.officeCode, sum(p.amount) as totalRevenue
 76
          from employees e
 77
          join customers c on e.employeeNumber = c.salesRepEmployeeNumber
          join payments p on c.customerNumber = p.customerNumber
 78
          group by e.officeCode
 79
                                               Export: Wrap Cell Content: IA
Result Grid
               Filter Rows:
    officeCode
               totalRevenue
               1337439.58
   2
               835882.33
   3
               1072619.47
               2819168.90
   7
               1324325.90
   6
               1007292.98
   5
               457110.07
         SELECT productName, productCode
   2
         FROM products

→ WHERE productCode NOT IN (
   3
            SELECT DISTINCT od.productCode
   4
   5
            FROM orderdetails od
            JOIN orders o ON od.orderNumber = o.orderNumber
   6
            JOIN customers c ON o.customerNumber = c.customerNumber
            WHERE c.country = 'France'
   8
   9
         );
```



Câu 15:

```
officeCode TINYINT PRIMARY KEY,
2
3
        city VARCHAR(50),
        phone VARCHAR(50)
4
5
    );
6
7 • INSERT INTO offices_usa (officeCode, city, phone)
8
      officeCode,
city,
phone
9
10
11
   FROM
12
13
       offices
   WHERE
14
   country = 'USA';
```

```
Output

# Time Action

147 23:42:25 CREATE TABLE offices_usa ( officeCode TINYINT PRIMARY KEY, city VARCHAR(50), phone VARC... 0 row(s) affected

148 23:42:25 INSERT INTO offices_usa (officeCode, city, phone) SELECT officeCode, city, phone FROM offices ... 3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0
```