

HW8

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1. MySQL서버에 정적 IP를 이용하여 SSH로 접속.

The screenshot shows a Mac terminal window titled "새로운 원격 연결" (New Remote Connection). On the left, a sidebar lists services: 보안 셸(ssh), 보안 파일 전송(sftp), 파일 전송(ftp), and 원격 로그인(telnet). The 'ssh' service is selected, and the server list shows "192.168.56.101" with the label "--- 발견된 서버 ---" (Discovered server) and "mystic's MacBook Air". Below the sidebar, the "사용자:" (User) field is set to "dohyunkim", the "SSH(자동)" (SSH (auto)) dropdown is selected, and the connection string "ssh dohyunkim@192.168.56.101" is shown. A blue "연결" (Connect) button is at the bottom right.

The terminal output on the right shows the SSH session:

```
dohyunkim@192.168.56.101's password:
Last login: Tue Oct 31 15:09:16 2023 from gateway
[[dohyunkim@mysql ~]$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.7.43 MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

[mysql> use madang
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
```

2. 질의 4-1 ~ 4-5

The screenshot shows a MySQL terminal window with the following queries and results:

```
mysql> SELECT ABS(-78), ABS(+78) FROM Dual;
+-----+
| ABS(-78) | ABS(+78) |
+-----+
|       78 |       78 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT ROUND(4.875, 1) FROM Dual;
+-----+
| ROUND(4.875, 1) |
+-----+
|             4.9 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT custid '고객번호', ROUND(SUM(saleprice)/COUNT(*), -2) '평균금액'
-> FROM Orders GROUP BY custid;
+-----+
| 고객번호 | 평균금액 |
+-----+
|       1 |    13000 |
|       2 |     7500 |
|       3 |    10300 |
|       4 |    16500 |
+-----+
4 rows in set (0.00 sec)

mysql> SELECT bookid, REPLACE(bookname, '야구', '농구') bookname, publisher, price
-> FROM Book;
+-----+
| bookid | bookname          | publisher | price |
+-----+
|       1 | 축구의 역사       | 굿스포츠  |  7000 |
|       2 | 축구하는 여자     | 나무수    | 13000 |
|       3 | 축구의 이해       | 대한미디어 | 22000 |
|       4 | 골프 바이블       | 대한미디어 | 35000 |
|       5 | 피겨 교본         | 굿스포츠  |  8000 |
|       6 | 역도 단계별 기술  | 굿스포츠  |  6000 |
|       7 | 농구의 추억       | 이상미디어 | 20000 |
|       8 | 농구를 부탁해     | 이상미디어 | 13000 |
|       9 | 올림픽 이야기     | 삼성당    |  7500 |
|      10 | Olympic Champions | Pearson   | 13000 |
+-----+
10 rows in set (0.00 sec)

mysql> SELECT bookname '제목', CHAR_LENGTH(bookname) '문자수', LENGTH(bookname) '바이트수'
-> FROM Book WHERE publisher = '굿스포츠';
+-----+
| 제목 | 문자수 | 바이트수 |
+-----+
| 축구의 역사 | 6 | 16 |
| 피겨 교본 | 5 | 13 |
| 역도 단계별 기술 | 8 | 22 |
+-----+
3 rows in set (0.00 sec)
```

질의 4-6 ~ 4-12

```
mysql> SELECT SUBSTR(name, 1, 1) '성', COUNT(*) '인원'
-> FROM Customer GROUP BY SUBSTR(name, 1, 1);
```

성	인원
김	1
박	2
장	1
추	1

4 rows in set (0.00 sec)

```
mysql> SELECT orderid '주문번호', orderdate '주문일', ADDDATE(orderdate, INTERVAL 10 DAY) '확정'
-> FROM Orders;
```

주문번호	주문일	확정
1	2014-07-01	2014-07-11
2	2014-07-03	2014-07-13
3	2014-07-03	2014-07-13
4	2014-07-04	2014-07-14
5	2014-07-05	2014-07-15
6	2014-07-07	2014-07-17
7	2014-07-07	2014-07-17
8	2014-07-08	2014-07-18
9	2014-07-09	2014-07-19
10	2014-07-10	2014-07-20

10 rows in set (0.00 sec)

```
mysql> SELECT orderid '주문번호', STR_TO_DATE(orderdate, '%Y-%m-%d') '주문일', custid '고객번호', bookid '도서번호' FROM Orders WHERE orderdate = DATE_FORMAT('20140707', '%Y%m%d');
```

주문번호	주문일	고객번호	도서번호
6	2014-07-07	1	2
7	2014-07-07	4	8

2 rows in set (0.00 sec)

```
mysql> SELECT SYSDATE(), DATE_FORMAT(SYSDATE(), '%Y/%m/%d %M %h:%s') 'SYSDATE_1';
```

SYSDATE()	SYSDATE_1
2023-10-31 15:52:31	2023/10/31 October 03:31

1 row in set (0.00 sec)

```
mysql> SELECT name '이름', IFNULL(phone, '연락처없음') '전화번호'
-> FROM Customer;
```

이름	전화번호
박지성	000-5000-0001
김연아	000-6000-0001
장미란	000-7000-0001
추신수	000-8000-0001
박세리	연락처없음

5 rows in set (0.00 sec)

```
mysql> SET @seq:=0;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT (@seq:=@seq+1) '순번', custid, name, phone
-> FROM Customer WHERE @seq < 2;
```

순번	custid	name	phone
1	1	박지성	000-5000-0001
2	2	김연아	000-6000-0001

2 rows in set (0.00 sec)

```
mysql> SELECT ( SELECT name
-> FROM Customer cs WHERE cs.custid = od.custid) 'name', SUM(saleprice) 'total'
-> FROM Orders od GROUP BY od.custid;
```

name	total
박지성	39000
김연아	15000
장미란	31000
추신수	33000

4 rows in set (0.00 sec)

```
mysql> ALTER TABLE Orders ADD COLUMN bookname VARCHAR(255);
Query OK, 0 rows affected (0.09 sec)
Records: 0 Duplicates: 0 Warnings: 0

[mysql> UPDATE Orders SET bookname = (SELECT bookname
[   -> FROM Book WHERE Book.bookid=Orders.bookid);
Query OK, 10 rows affected (0.01 sec)
Rows matched: 10 Changed: 10 Warnings: 0

[mysql> SELECT cs.name, SUM(od.saleprice) 'total'
[   -> FROM (SELECT custid, name FROM Customer WHERE custid <= 2) cs, Orders od
[   -> WHERE cs.custid = od.custid GROUP BY cs.name;
+-----+-----+
| name   | total |
+-----+-----+
| 김연아 | 15000 |
| 박지성 | 39000 |
+-----+-----+
2 rows in set (0.00 sec)

[mysql> SELECT orderid, saleprice FROM Orders
[   -> WHERE saleprice <= (SELECT AVG(saleprice) FROM Orders);
+-----+-----+
| orderid | saleprice |
+-----+-----+
| 1       | 6000      |
| 3       | 8000      |
| 4       | 6000      |
| 9       | 7000      |
+-----+-----+
4 rows in set (0.00 sec)

[mysql> SELECT orderid, custid, saleprice FROM Orders od WHERE saleprice > (SELECT AVG(saleprice)
[   -> FROM Orders so WHERE od.custid = so.custid);
+-----+-----+-----+
| orderid | custid | saleprice |
+-----+-----+-----+
| 2       | 1      | 21000     |
| 3       | 2      | 8000      |
| 5       | 4      | 20000     |
| 8       | 3      | 12000     |
| 10      | 3      | 13000     |
+-----+-----+-----+
5 rows in set (0.00 sec)

[mysql> SELECT SUM(saleprice) 'total' FROM Orders
[   -> WHERE custid IN (SELECT custid FROM Customer WHERE address LIKE '%대한민국%');
+-----+
| total |
+-----+
| 46000 |
+-----+
1 row in set (0.00 sec)

[mysql> SELECT orderid, saleprice FROM Orders WHERE saleprice > ALL
[   -> (SELECT saleprice FROM Orders WHERE custid='3');
+-----+-----+
| orderid | saleprice |
+-----+-----+
| 2       | 21000     |
| 5       | 20000     |
+-----+-----+
2 rows in set (0.00 sec)

[mysql> SELECT SUM(saleprice) 'total' FROM Orders od WHERE EXISTS (SELECT *
[   -> FROM Customer cs WHERE address LIKE '%대한민국%' AND cs.custid=od.custid);
+-----+
| total |
+-----+
| 46000 |
+-----+
1 row in set (0.00 sec)

[mysql> CREATE VIEW vw_Customer AS SELECT * FROM Customer WHERE address LIKE '%대한민국%';
Query OK, 0 rows affected (0.01 sec)

[mysql> CREATE VIEW vw_Orders (orderid, custid, name, bookid, bookname, saleprice, orderdate)
[   -> AS SELECT od.orderid, od.custid, cs.name, od.bookid, bk.bookname, od.saleprice, od.orderdate
[   -> FROM Orders od, Customer cs, Book bk WHERE od.custid = cs.custid AND od.bookid = bk.bookid;
Query OK, 0 rows affected (0.00 sec)

[mysql> CREATE OR REPLACE VIEW vw_Customer (custid, name, address) AS SELECT custid, name, address
[   -> FROM Customer WHERE address LIKE '%영국%';
Query OK, 0 rows affected (0.01 sec)

[mysql> DROP VIEW vw_Customer;
Query OK, 0 rows affected (0.00 sec)
```