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CS 447

Lab 7

**1.**

select AVG(speed) from PC;

**2.**

select AVG(speed) from Laptop where price > 1000;

**3.**

select AVG(price) from PC NATURAL JOIN Product where manufacturer = 'A';

**4.**

select AVG(PC.price) from PC NATURAL JOIN Product where manufacturer = 'd' UNION (select AVG(Laptop.price) from Laptop NATURAL JOIN Product where manufacturer = 'd');

**5.**

select speed, AVG(price) from PC;

**6.**

select manufacturer, AVG(screen) from Laptop NATURAL JOIN Product where type = 'laptop' GROUP BY manufacturer;

**7.**

select distinct manufacturer from Product where type = 'pc' GROUP BY manufacturer HAVING COUNT(model) >= 3;

**8.**

select AVG(price) from PC where speed > 2.0 GROUP BY speed;

**9.**

select MAX(price) from PC NATURAL JOIN Product GROUP BY manufacturer;

**10.**

INSERT INTO PC(model, speed, ram, hd, price) VALUES(1100, 3.2, 1024, 180, 2499);

Query OK, 1 row affected (0.02 sec)

mysql> select \* from PC;

+-------+-------+------+-----+-------+

| model | speed | ram | hd | price |

+-------+-------+------+-----+-------+

| 1001 | 2.66 | 1024 | 250 | 2114 |

| 1002 | 2.1 | 512 | 250 | 995 |

| 1003 | 1.42 | 512 | 80 | 478 |

| 1004 | 2.8 | 1024 | 250 | 649 |

| 1005 | 3.2 | 512 | 250 | 630 |

| 1006 | 3.2 | 1024 | 320 | 1049 |

| 1007 | 2.2 | 1024 | 200 | 510 |

| 1008 | 2.2 | 2048 | 250 | 770 |

| 1009 | 2 | 1024 | 250 | 650 |

| 1010 | 2.8 | 2048 | 300 | 770 |

| 1011 | 1.86 | 2048 | 160 | 959 |

| 1012 | 2.8 | 1024 | 160 | 649 |

| 1013 | 3.06 | 512 | 80 | 529 |

| 1100 | 3.2 | 1024 | 180 | 2499 |

+-------+-------+------+-----+-------+

14 rows in set (0.00 sec)

INSERT INTO Product(manufacturer, model, type) VALUES('C', 1100, 'pc');

Query OK, 1 row affected (0.02 sec)

mysql> select \* from Product;

+--------------+-------+---------+

| manufacturer | model | type |

+--------------+-------+---------+

| A | 1001 | pc |

| A | 1002 | pc |

| A | 1003 | pc |

| A | 2004 | laptop |

| A | 2005 | laptop |

| A | 2006 | laptop |

| B | 1004 | pc |

| B | 1005 | pc |

| B | 1006 | pc |

| B | 2007 | laptop |

| C | 1007 | pc |

| d | 1008 | pc |

| d | 1009 | pc |

| d | 1010 | pc |

| d | 3004 | printer |

| d | 3005 | printer |

| E | 1011 | pc |

| E | 1012 | pc |

| E | 1013 | pc |

| E | 2001 | laptop |

| E | 2002 | laptop |

| E | 2003 | laptop |

| E | 3001 | printer |

| E | 3002 | printer |

| E | 3003 | printer |

| F | 2008 | laptop |

| F | 2009 | laptop |

| G | 2010 | laptop |

| G | 3006 | printer |

| H | 3007 | printer |

| C | 1100 | pc |

+--------------+-------+---------+

31 rows in set (0.00 sec)

**11.**

INSERT INTO Laptop Select model + 1100, speed, ram, hd, 17, price + 500 FROM PC;

Query OK, 14 rows affected (0.04 sec)

Records: 14 Duplicates: 0 Warnings: 0

mysql> select \* from Laptop;

| model | speed | ram | hd | screen | price |

+-------+-------+------+-----+--------+-------+

| 2001 | 2 | 2048 | 240 | 20.1 | 3673 |

| 2002 | 1.73 | 1024 | 80 | 17 | 949 |

| 2003 | 1.8 | 512 | 60 | 15.4 | 549 |

| 2004 | 2 | 512 | 60 | 13.3 | 1150 |

| 2005 | 2.16 | 1024 | 120 | 17 | 2500 |

| 2006 | 2 | 2048 | 80 | 15.4 | 1700 |

| 2007 | 1.83 | 1024 | 120 | 13.3 | 1429 |

| 2008 | 1.6 | 1024 | 100 | 15.4 | 900 |

| 2009 | 1.6 | 512 | 80 | 14.1 | 680 |

| 2010 | 2 | 2048 | 160 | 15.4 | 2300 |

| 2101 | 2.66 | 1024 | 250 | 17 | 2614 |

| 2102 | 2.1 | 512 | 250 | 17 | 1495 |

| 2103 | 1.42 | 512 | 80 | 17 | 978 |

| 2104 | 2.8 | 1024 | 250 | 17 | 1149 |

| 2105 | 3.2 | 512 | 250 | 17 | 1130 |

| 2106 | 3.2 | 1024 | 320 | 17 | 1549 |

| 2107 | 2.2 | 1024 | 200 | 17 | 1010 |

| 2108 | 2.2 | 2048 | 250 | 17 | 1270 |

| 2109 | 2 | 1024 | 250 | 17 | 1150 |

| 2110 | 2.8 | 2048 | 300 | 17 | 1270 |

| 2111 | 1.86 | 2048 | 160 | 17 | 1459 |

| 2112 | 2.8 | 1024 | 160 | 17 | 1149 |

| 2113 | 3.06 | 512 | 80 | 17 | 1029 |

| 2200 | 3.2 | 1024 | 180 | 17 | 2999 |

+-------+-------+------+-----+--------+-------+

24 rows in set (0.00 sec)

INSERT INTO Product Select manufacturer, model + 1100, 'laptop' FROM Product where type = 'pc';

Query OK, 14 rows affected (0.04 sec)

Records: 14 Duplicates: 0 Warnings: 0

mysql> select \* from Product;

| manufacturer | model | type |

+--------------+-------+---------+

| A | 1001 | pc |

| A | 1002 | pc |

| A | 1003 | pc |

| A | 2004 | laptop |

| A | 2005 | laptop |

| A | 2006 | laptop |

| B | 1004 | pc |

| B | 1005 | pc |

| B | 1006 | pc |

| B | 2007 | laptop |

| C | 1007 | pc |

| d | 1008 | pc |

| d | 1009 | pc |

| d | 1010 | pc |

| d | 3004 | printer |

| d | 3005 | printer |

| E | 1011 | pc |

| E | 1012 | pc |

| E | 1013 | pc |

| E | 2001 | laptop |

| E | 2002 | laptop |

| E | 2003 | laptop |

| E | 3001 | printer |

| E | 3002 | printer |

| E | 3003 | printer |

| F | 2008 | laptop |

| F | 2009 | laptop |

| G | 2010 | laptop |

| G | 3006 | printer |

| H | 3007 | printer |

| C | 1100 | pc |

| A | 2101 | laptop |

| A | 2102 | laptop |

| A | 2103 | laptop |

| B | 2104 | laptop |

| B | 2105 | laptop |

| B | 2106 | laptop |

| C | 2107 | laptop |

| d | 2108 | laptop |

| d | 2109 | laptop |

| d | 2110 | laptop |

| E | 2111 | laptop |

| E | 2112 | laptop |

| E | 2113 | laptop |

| C | 2200 | laptop |

+--------------+-------+---------+

45 rows in set (0.00 sec)

**12.**

Delete from PC where hd < 100;

Query OK, 2 rows affected (0.02 sec)

mysql> select \* from PC;

+-------+-------+------+-----+-------+

| model | speed | ram | hd | price |

+-------+-------+------+-----+-------+

| 1001 | 2.66 | 1024 | 250 | 2114 |

| 1002 | 2.1 | 512 | 250 | 995 |

| 1004 | 2.8 | 1024 | 250 | 649 |

| 1005 | 3.2 | 512 | 250 | 630 |

| 1006 | 3.2 | 1024 | 320 | 1049 |

| 1007 | 2.2 | 1024 | 200 | 510 |

| 1008 | 2.2 | 2048 | 250 | 770 |

| 1009 | 2 | 1024 | 250 | 650 |

| 1010 | 2.8 | 2048 | 300 | 770 |

| 1011 | 1.86 | 2048 | 160 | 959 |

| 1012 | 2.8 | 1024 | 160 | 649 |

| 1100 | 3.2 | 1024 | 180 | 2499 |

+-------+-------+------+-----+-------+

12 rows in set (0.00 sec)

**13.**

Delete from Product where type = 'laptop' and Product.model IN(select Product.model from Product where type NOT IN('printer'));ERROR 1093 (HY000): You can't specify target table 'Product' for update in FROM clause (CANNOT GET IT TO WORK)

Delete from Laptop where model IN(select model from Product where type = 'laptop' and manufacturer NOT IN(select manufacturer from Product where type = 'printer'));

Query OK, 14 rows affected (0.07 sec)

**14.**

UPDATE Product SET manufacturer = 'A' where manufacturer = 'B';

Query OK, 7 rows affected (0.01 sec)

Rows matched: 7 Changed: 7 Warnings: 0

mysql> select \* from Product;

+--------------+-------+---------+

| manufacturer | model | type |

+--------------+-------+---------+

| A | 1001 | pc |

| A | 1002 | pc |

| A | 1003 | pc |

| A | 2004 | laptop |

| A | 2005 | laptop |

| A | 2006 | laptop |

| A | 1004 | pc |

| A | 1005 | pc |

| A | 1006 | pc |

| A | 2007 | laptop |

| C | 1007 | pc |

| d | 1008 | pc |

| d | 1009 | pc |

| d | 1010 | pc |

| d | 3004 | printer |

| d | 3005 | printer |

| E | 1011 | pc |

| E | 1012 | pc |

| E | 1013 | pc |

| E | 2001 | laptop |

| E | 2002 | laptop |

| E | 2003 | laptop |

| E | 3001 | printer |

| E | 3002 | printer |

| E | 3003 | printer |

| F | 2008 | laptop |

| F | 2009 | laptop |

| G | 2010 | laptop |

| G | 3006 | printer |

| H | 3007 | printer |

| C | 1100 | pc |

| A | 2101 | laptop |

| A | 2102 | laptop |

| A | 2103 | laptop |

| A | 2104 | laptop |

| A | 2105 | laptop |

| A | 2106 | laptop |

| C | 2107 | laptop |

| d | 2108 | laptop |

| d | 2109 | laptop |

| d | 2110 | laptop |

| E | 2111 | laptop |

| E | 2112 | laptop |

| E | 2113 | laptop |

| C | 2200 | laptop |

**15.**

UPDATE PC SET ram = ram + ram, hd = hd + 60;

Query OK, 12 rows affected (0.02 sec)

Rows matched: 12 Changed: 12 Warnings: 0

mysql> select \* from PC;

+-------+-------+------+-----+-------+

| model | speed | ram | hd | price |

+-------+-------+------+-----+-------+

| 1001 | 2.66 | 2048 | 310 | 2114 |

| 1002 | 2.1 | 1024 | 310 | 995 |

| 1004 | 2.8 | 2048 | 310 | 649 |

| 1005 | 3.2 | 1024 | 310 | 630 |

| 1006 | 3.2 | 2048 | 380 | 1049 |

| 1007 | 2.2 | 2048 | 260 | 510 |

| 1008 | 2.2 | 4096 | 310 | 770 |

| 1009 | 2 | 2048 | 310 | 650 |

| 1010 | 2.8 | 4096 | 360 | 770 |

| 1011 | 1.86 | 4096 | 220 | 959 |

| 1012 | 2.8 | 2048 | 220 | 649 |

| 1100 | 3.2 | 2048 | 240 | 2499 |

+-------+-------+------+-----+-------+

12 rows in set (0.00 sec)