

```
mysql> create table chalan_details(
-> chalan_no varchar(6) primary key,
-> product_no varchar(6),
-> qty_dispatch decimal(4,2),
-> constraint chk_chalan check(product_no like 'P0%'),
-> constraint fk_key foreign key(product_no) references product_master(product_no));
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> select * from chalan_header;
+-----+-----+-----+-----+
| chalan_no | order_no | chalan_date | bill_yn |
+-----+-----+-----+-----+
| CH3965    | 019004   | 1995-10-12   | Y       |
| CH6865    | 019002   | 1995-11-12   | Y       |
| CH9001    | 019001   | 1995-12-12   | Y       |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> /*add a new column in client_master*/
mysql> alter table client_master
-> add column phone_no varchar(10);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> select * from client_master;
+-----+-----+-----+-----+-----+-----+-----+
| client_no | client_name | city | state | pincode | bal_due | phone_no |
+-----+-----+-----+-----+-----+-----+-----+
| 0001      | Ivan        | Bombay | Maharastra | 400054 | 15000.00 | NULL     |
| 0002      | Vandana     | Madras | Tamil Nadu | 780001 | 0.00     | NULL     |
| 0003      | Pramada     | Bombay | Maharastra | 400057 | 5000.00  | NULL     |
| 0004      | Basu        | Bombay | Maharastra | 400056 | 0.00     | NULL     |
| 0005      | Ravi        | Delhi  | NULL      | 100001 | 2000.00  | NULL     |
| 0006      | Rukhmini   | Bombay | Maharastra | 400050 | 0.00     | NULL     |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

```
mysql> /*find out the product sold to ivan*/
mysql> select c.client_name,p.description from product_master p, client_master c
-> where p.product_no = (select chd.product_no from chalan_details chd
-> where chd.chalan_no = (select cho.chalan_no from chalan_header cho
-> where cho.order_no = (select s.order_no from sales_order s
-> where s.client_no = c.client_no and c.client_name='Ivan')));
```

```
+-----+-----+
| client_name | description |
+-----+-----+
| Ivan        | 1.44floppies |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> /*find the product & quantities that has been delivered (C)*/
mysql> select p.description,chd.qty_dispatch from product_master p,chalan_details chd
-> where chd.product_no=p.product_no and chd.chalan_no in
-> (select cho.chalan_no from chalan_header cho where cho.order_no in
-> (select s.order_no from sales_order s where s.order_status='C'));
```

```
+-----+-----+
| description | qty_dispatch |
+-----+-----+
| keyboards   | 3.00        |
| 1.44floppies | 5.00        |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> /*find the product no & description of moving product (IP)*/
mysql> select p.product_no,p.description
-> from product_master p, chalan_details chd
-> where chd.product_no=p.product_no and chd.chalan_no in
-> (select cho.chalan_no from chalan_header cho where cho.order_no in
-> (select s.order_no from sales_order s where s.order_status='IP'));
```

```
+-----+-----+
| product_no | description |
+-----+-----+
| P00001     | 1.44floppies |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> INSERT INTO chalan_details values
-> ('CH9001', 'P00001', 4),
-> ('CH9002', 'P07865', 1),
-> ('CH9003', 'P07885', 1),
-> ('CH6865', 'P07868', 3),
-> ('CH6866', 'P03453', 4),
-> ('CH6867', 'P00001', 10),
-> ('CH3965', 'P00001', 5),
-> ('CH3966', 'P07975', 2);
Query OK, 8 rows affected (0.02 sec)
Records: 8 Duplicates: 0 Warnings: 0
```

```
mysql> select * from chalan_details;
+-----+-----+-----+
| chalan_no | product_no | qty_dispatch |
+-----+-----+-----+
| CH3965    | P00001     | 5.00         |
| CH3966    | P07975     | 2.00         |
| CH6865    | P07868     | 3.00         |
| CH6866    | P03453     | 4.00         |
| CH6867    | P00001     | 10.00        |
| CH9001    | P00001     | 4.00         |
| CH9002    | P07865     | 1.00         |
| CH9003    | P07885     | 1.00         |
+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> show tables;
```

```
+-----+
| Tables_in_DBE |
+-----+
| client_master |
| sales_master  |
| sales_order   |
+-----+
3 rows in set (0.01 sec)
```

```
mysql> create table chalan_header
-> (chalan_no varchar(6) primary key,
-> order_no varchar(6),
-> chalan_date date not null,
-> bill_yn char(1) default 'N',
-> constraint fk_foreign key (order_no) references sales_order(order_no));
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> desc chalan_header;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| chalan_no | varchar(6) | NO | PRI | NULL | |
| order_no | varchar(6) | YES | MUL | NULL | |
| chalan_date | date | NO | | NULL | |
| bill_yn | char(1) | YES | | N | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> /*add a new column in client_master*/
mysql> alter table client_master
-> add column phone_no varchar(10);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```



```
mysql> select p.product_no,s.order_no
-> from product_master p, sales_order s,
-> chalan_header cho, chalan_details chd
-> where chd.qty_dispatch<5 and chd.product_no=p.product_no
-> and p.description='1.44floppies' and
-> chd.chalan_no=cho.chalan_no
-> and cho.order_no = s.order_no;
```

```
+-----+-----+
| product_no | order_no |
+-----+-----+
| P00001     | 019001   |
+-----+-----+
```

```
mysql> select c.client_name from client_master c
-> where c.client_no in
-> (select s.client_no from sales_order s
-> where s.order_no in
-> (select ch.order_no from chalan_header ch
-> where ch.chalan_no in
-> (select cho.chalan_no from chalan_details cho
-> where cho.product_no =
-> (select p.product_no from product_master p
-> where p.description='cd drive'))));
Empty set (0.00 sec)
```

```
mysql> select date_format(order_date, '%d-%b-%y')
-> as order_date
-> from sales_order;
```

```
+-----+
| order_date |
+-----+
| 11-Oct-24  |
| 05-Oct-24  |
| 12-Jan-96  |
| 25-Jan-96  |
| 03-Feb-96  |
| 05-Feb-96  |
| 20-May-96  |
| 07-Oct-24  |
| 08-Oct-24  |
| 06-Oct-24  |
| 09-Oct-24  |
| 10-Oct-24  |
+-----+
12 rows in set (0.00 sec)
```

```
mysql> select p.description, chd.qty_dispatch
-> from product_master p, sales_order s,
-> chalan_header cho, chalan_details chd,
-> client_master c
-> where c.client_name in ('Ivan','Vandana')
-> and c.client_no = s.client_no
-> and s.order_no = cho.order_no
-> and cho.chalan_no=chd.chalan_no
-> and chd.product_no = p.product_no;
```

```
+-----+-----+
| description | qty_dispatch |
+-----+-----+
| 1.44floppies | 4.00 |
| keyboards    | 3.00 |
+-----+-----+
```

```
mysql> select p.description, chd.qty_dispatch from
-> product_master p, sales_order s,
-> chalan_header cho, chalan_details chd
-> where s.client_no in ('0001','0002')
-> and s.order_no = cho.order_no
-> and cho.chalan_no=chd.chalan_no
-> and chd.product_no = p.product_no;
```

```
+-----+-----+
| description | qty_dispatch |
+-----+-----+
| 1.44floppies | 4.00 |
| keyboards    | 3.00 |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> select s.client_no from
-> sales_order s natural join
-> chalan_header natural join
-> chalan_details natural join
-> product_master p
-> where p.description='cd drive';
Empty set (0.00 sec)
```

```
mysql> select product_no, description from product_master
-> where profit_percent between 20 and 30;
Empty set (0.00 sec)
```

```
mysql> select * from chalan_header;
```

```
+-----+-----+-----+-----+
| chalan_no | order_no | chalan_date | bill_yn |
+-----+-----+-----+-----+
| CH3965    | 019004   | 1995-10-12  | Y       |
| CH6865    | 019002   | 1995-11-12  | Y       |
| CH9001    | 019001   | 1995-12-12  | Y       |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select p.description,chd.qty_dispatch as qty_sold
-> from product_master p natural join chalan_details chd;
```

```
+-----+-----+
| description | qty_sold |
+-----+-----+
| 1.44floppies | 5.00 |
| 1.44drive    | 2.00 |
| keyboards    | 3.00 |
| Monitors     | 4.00 |
| 1.44floppies | 10.00 |
| 1.44floppies | 4.00 |
| 1.22floppies | 1.00 |
| cd drive     | 1.00 |
+-----+-----+
8 rows in set (0.01 sec)
```



```
mysql> select p.product_no,p.description
-> from product_master p
-> where p.product_no in
-> (select chd.product_no
-> from chalan_details chd
-> where chd.chalan_no in
-> (select cho.chalan_no
-> from chalan_header cho
-> where cho.order_no in
-> (select s.order_no
-> from sales_order s
-> where s.order_status='C')));
```

```
+-----+-----+
| product_no | description |
+-----+-----+
| P07868     | keyboards   |
| P00001     | 1.44floppies |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> select description,sell_price as value
-> from product_master;
```

```
+-----+-----+
| description | value |
+-----+-----+
| 1.44floppies | 1150 |
| Monitors     | 12000 |
| Mouse        | 1005 |
| 1.22floppies | 525 |
| keyboards    | 3115 |
| cd drive     | 5250 |
| 1.44drive    | 1050 |
| 540 HDD      | 8400 |
| 1.22drive    | 1050 |
+-----+-----+
9 rows in set (0.01 sec)
```

```
mysql> select avg(chd.qty_dispatch)
-> from chalan_details chd natural join
-> chalan_header cho natural join
-> sales_order s natural join
-> sales_master sm
-> where sm.sale_amount<=15000;
```

```
+-----+
| avg(chd.qty_dispatch) |
+-----+
| 4.000000 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> select s.order_no,s.client_no,s.salesman_no
-> from sales_order s
-> where s.client_no in
-> (select client_no from sales_order
-> group by client_no
-> having count(salesman_no)>1);
Empty set (0.02 sec)
```

```
mysql> create index ch_index on chalan_header
```

```
-> (chalan_no,order_no);
```

```
Query OK, 0 rows affected (0.05 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> drop index ch_index on chalan_header;
```

```
Query OK, 0 rows affected (0.03 sec)
```

```
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> select name from client_view
-> where city='Bombay';
```

```
+-----+
| name |
+-----+
| Ivan |
| Pramada |
| Basu |
| Rukhmini |
+-----+
```

```
4 rows in set (0.00 sec)
```

```
mysql> select c.client_name,c.city,c.pincode
-> from client_master c
-> where c.client_no =
-> (select s.client_no
-> from sales_order s
-> where s.order_no='019008');
```

```
+-----+-----+-----+
| client_name | city | pincode |
+-----+-----+-----+
| Ramesh     | Bangalore | 560001 |
+-----+-----+-----+
1 row in set (0.01 sec)
```

```
mysql> select c.client_no from client_master c
-> where c.client_no in
-> (select s.client_no
-> from sales_order s
-> where s.order_date<'1996/05/01');
```

```
+-----+
| client_no |
+-----+
| 0001 |
| 0002 |
| 0003 |
| 0004 |
+-----+
```

```
4 rows in set, 1 warning (0.00 sec)
```

```
mysql> select p.product_no, c.client_name
-> from product_master p natural join
-> client_master c natural join
-> sales_order s natural join
-> chalan_header natural join
-> chalan_details
-> where c.client_name = 'Ivan';
```

```
+-----+-----+
| product_no | client_name |
+-----+-----+
| P00001     | Ivan |
+-----+-----+
```

```
1 row in set (0.01 sec)
```



```
mysql> create table sales_order_details
-> (sales_order_no varchar(6),
-> product_no varchar(6),
-> qty_ordered int(8), qty_dispatched int(8),
-> product_rate decimal(10,2),
-> constraint fk1 foreign key(product_no) references product_master(product_no),
-> constraint fk2 foreign key(sales_order_no) references sales_order(order_no));
Query OK, 0 rows affected, 2 warnings (0.07 sec)
```

```
mysql> desc sales_order_details;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sales_order_no | varchar(6) | YES | MUL | NULL | |
| product_no | varchar(6) | YES | MUL | NULL | |
| qty_ordered | int | YES | | NULL | |
| qty_dispatched | int | YES | | NULL | |
| product_rate | decimal(10,2) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> INSERT INTO sales_order_details VALUES
-> ('019001', 'P00001', 4, 4, 525),
-> ('019002', 'P07865', 2, 1, 8400),
-> ('019003', 'P07885', 2, 1, 5250),
-> ('019004', 'P00001', 10, 0, 525),
-> ('019005', 'P07868', 3, 3, 3150),
-> ('016865', 'P07885', 10, 10, 5250),
-> ('046866', 'P00001', 4, 4, 1050),
-> ('046867', 'P07865', 1, 0, 8400),
-> ('046868', 'P07975', 1, 0, 1050),
-> ('010008', 'P00001', 10, 5, 525);
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from sales_order_details;
+-----+-----+-----+-----+-----+
| sales_order_no | product_no | qty_ordered | qty_dispatched | product_rate |
+-----+-----+-----+-----+-----+
| 019001 | P00001 | 4 | 4 | 525.00 |
| 019002 | P07865 | 2 | 1 | 8400.00 |
| 019003 | P07885 | 2 | 1 | 5250.00 |
| 019004 | P00001 | 10 | 0 | 525.00 |
| 019005 | P07868 | 3 | 3 | 3150.00 |
| 016865 | P07885 | 10 | 10 | 5250.00 |
| 046866 | P00001 | 4 | 4 | 1050.00 |
| 046867 | P07865 | 1 | 0 | 8400.00 |
| 046868 | P07975 | 1 | 0 | 1050.00 |
| 010008 | P00001 | 10 | 5 | 525.00 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> /*find productno and description of non moving product*/
mysql> select p.product_no, p.description from product_master p,
-> chalan_details chd, chalan_header cho, sales_order s
-> where s.order_status<>'IP' and
-> s.order_no=cho.order_no and
-> cho.chalan_no= chd.chalan_no
-> and chd.product_no=p.product_no;
```

```
+-----+-----+
| product_no | description |
+-----+-----+
| P07868 | keyboards |
| P00001 | 1.44floppies |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> /*customer details of order 019001*/
mysql> select c.client_name, c.client_no, c.city, c.state, c.pincode
-> from client_master c
-> where c.client_no in
-> (select s.client_no from sales_order s
-> where s.order_no='019001');
+-----+-----+-----+-----+-----+
| client_name | client_no | city | state | pincode |
+-----+-----+-----+-----+-----+
| Ivan | 0001 | Bombay | Maharastra | 400054 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select c.client_name
-> from client_master c
-> where c.client_no in
-> (select s.client_no
-> from sales_order s
-> where s.salesman_no in
-> (select sm.salesman_no
-> from sales_master sm
-> where sm.sale_amount=10000));
Empty set (0.00 sec)
```

```
mysql> select c.client_name
-> from client_master c
-> where c.city = 'Bombay';
+-----+
| client_name |
+-----+
| Ivan |
| Pramada |
| Basu |
| Rukhmini |
+-----+
4 rows in set (0.00 sec)
```

```
mysql> select sm.sales_name
-> from sales_master sm
-> where sm.city='Bombay'
-> and sm.salesman_no in
-> (select s.salesman_no
-> from sales_order s
-> where s.client_no in
-> (select c.client_no
-> from client_master c
-> where c.city = 'Bombay'))
-> group by salesman_no
-> having count(client_no) >= 1);
+-----+
| sales_name |
+-----+
| Ajiran |
| Manish |
| Vijay |
+-----+
3 rows in set (0.00 sec)
```

```
mysql> select sm.sales_name
-> from sales_master sm
-> where sm.city = 'Bombay';
+-----+
| sales_name |
+-----+
| Ajiran |
| Manish |
| Vijay |
| Ashish |
+-----+
4 rows in set (0.00 sec)
```



```
mysql> create view client_view
-> as select client_no,client_name as name,city,pincode
-> from client_master;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> select * from client_view;
```

client_no	name	city	pincode
0001	Ivan	Bombay	400054
0002	Vandana	Madras	780001
0003	Pramada	Bombay	400057
0004	Basu	Bombay	400056
0005	Ravi	Delhi	100001
0006	Rukhmini	Bombay	400050
0007	Kiran	Pune	411001
0008	Anil	Hyderabad	500001
0009	Ramesh	Bangalore	560001
0010	Suresh	Chennai	600001
0011	Maya	Kolkata	700001
0012	Vikas	Jaipur	302001

```
12 rows in set (0.01 sec)
```

```
mysql> select s.order_no,
-> s.order_date
-> from sales_order s;
```

order_no	order_date
010008	2024-10-11
016865	2024-10-05
019001	1996-01-12
019002	1996-01-25
019003	1996-02-03
019004	1996-02-05
019005	1996-05-20
019007	2024-10-07
019008	2024-10-08
046866	2024-10-06
046867	2024-10-09
046868	2024-10-10

```
12 rows in set (0.00 sec)
```

```
mysql> create index prod_order_index
-> on sales_order_details(sales_order_no,product_no)
-> ;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> select p.product_no,p.description,
-> p.quantity_on_hand,p.cost_price
-> from product_master p
-> where p.product_no in
-> (select chd.product_no
-> from chalan_details chd
-> natural join chalan_header
-> natural join sales_order s
-> where s.order_status='IP');
```

product_no	description	quantity_on_hand	cost_price
P00001	1.44floppies	100	500

1 row in set (0.00 sec)

```
mysql> drop view client_view;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> create index client_index on client_master(client_no);
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> create index sales_order_index on sales_order(order_no);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```