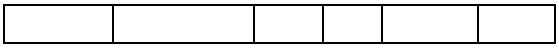
Use perishableprod table

```
mysql> desc perishableprod;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| pid      | int          | NO   | PRI | NULL    |       |
| mfgdate  | datetime(6)  | YES  |     | NULL    |       |
| name     | varchar(255) | YES  |     | NULL    |       |
| expirydt | datetime(6)  | YES  |     | NULL    |       |
```



Always display date in dd-mm-yyyy format

1. Find all products which are expiring in august.
   Select pid,pname,date_format(mfgdate,’’%d-%m-%Y’), date_format(expirydt,’’%d-%m-%Y’)
   From perishableprod
   Where month(expirydt)=8;
2. Find all products which are expiring in august 2021.

```
Select pid,name,date_format(mfgdate,'%d-%m-%Y'), date_format(expirydt,'%d-%m-%Y')
  -> from perishableprod
  -> where month(expirydt)=8 and year(expirydt)=2021;
```

3. Find all products which are manufactured in 2021

```
Select pid,name, date_format(mfgdate,'%d-%m-%Y'), date_format(expirydt,'%d-%m-%Y')
   from perishableprod
Where year(mfgdate)=2021;
```

4. Find all products which will expire after 4 months

```
Select pid,name, date_format(mfgdate,'%d-%m-%Y'), date_format(expirydt,'%d-%m-%Y')
   from perishableprod
where month(expirydt)= month(date_add(curdate(),interval 4 month))
      and year(expirydt)= year(date_add(curdate(),interval 4 month))
```

5. Find expiry date of product , if it is after 4 months after mfgdt

```
Select pid,name, date_format(mfgdate,'%d-%m-%Y'),
date_format(date_add(mfgdate,interval 4 month) ,'%d-%m-%Y')expirydate
from perishableprod
where expirydt is null;
```

6. Find all products with name starts with p and ends with e.

```
Select *
From perishableprod
Where name REGEXP '^p.*e$'
```

7. Find all products with name starts with either p or m and ends with x or n

```
Select *
From perishableprod
Where name REGEXP '^[pm].*[xn]$';
```

8. Find all products with name starts with p , d at either 2nd or 3rd position and ends with either f or t

```
Select * from perishableprod
Where name REGEXP '^p.?d.*[ft]$';
```

9. Find all products ends with either id or d

```
Select *
From perishableprod
Where name REGEXP '(id|d)$'
```

Or

```
Select *
From perishableprod
Where name REGEXP 'i?d$'
```

10. Find all products ends with either id or i

```
Select *

From perishableprod

Where name REGEXP 'id?$'
```

11. Find all products ends with ed or tf

```
Select *
From perishableprod
Where name REGEXP '(ed|tf)$
```

12. Find all products starts with m and ends with g, or it may start with y and ends with f

```
Select * from perishableprod
Where name REGEXP '^m.*g$|^y?.*f$;
```

Number related functions

Round
Truncate
Ceil
floor

round	Round the the number upto given decimal places	Round(12.3456,2) = 12.35 Round(12.3446,2) = 12.34
truncate	truncate the number upto given decimal places	truncate(12.3456,2) = 12.34 truncate(12.3446,2) = 12.34
floor	It will remove the fraction portion	floor(12.34)=12 floor(12.56)=12 floor(-12.77)=-13 floor(-12.45)=-13
ceil	It will remove the fraction portion and gives you the next number	Ceil(12.34)=13 Ceil(12.56)=13 Ceil(-12.77)=-12 Ceil(-12.45)=-12
abs	It will convert -ve number into +ve number	Abs(-11)=11 Abs(11)=11

String related functions

upper	Converts the string in uppercase	Upper('abcd')='ABCD'
lower	Converts the string in lowercase	lower('ABCD')='abcd'
Substr(string,start,length)	It will retrieve the portion of the string from the given position	Substr('Hello',1,3)=hel
Concat(str1,str2,str3,…….) In oracle you can pass only 2 string	It will concatenate all the strings and return one string	Concat('aaa','bbb','ccc')=aaabbb ccc
Lpad(string,length,string to add on left)	It will add string on the left side so that the length of the resultant string will be 10	Lpad('hello',10,"*")=*****hello
Rpad	It will add string on the left side so that the length of the resultant string will be 10	Lpad('hello',10,"*")= hello*****

Ltrim	To remove extra spaces from left side	Ltrim(“ hello “) = hello
Rtrim	To remove extra spaces from right side	rtrim(“ hello “) = hello
Trim	To remove extra spaces from both side	trim(“ hello “) = hello
Length	To find length of the string	Length(“hello”)=5
Format(X,D)	Formats the number X to a format like '#,###,###.##', rounded to D decimal places, and returns the result as a string. If D is 0, the result has no decimal point or fractional part.	
Reverse	Reverse the given string	Reverse(“hello)=olleh
Insert(string,pos,length,newstring)	From the given string it will remove length number of characters from pos position and will be replaced by new string	Insert(“Welcome everybody”,4,6,” xxxxxxxxx “) Wel xxxxxxxxx verybody
INSTR(str,substr)	INSTR() takes a string and a substring of it as arguments, and returns an integer which indicates the position of the first occurrence of the substring within the string	Instr(“hello”,”ll”) 3 Instr(“hello”,”xx”) 0

LEFT(string,length)	LEFT() returns a specified number of characters from the left of a given string. Both the number and the string are supplied in the arguments as str and len of the function.	Left(“Welcome”,3)=wel
right(string,length)	right() returns a specified number of characters from the right of a given string. Both the number and the string are supplied in the arguments as str and len of the function.	right(“Welcome”,3)=ome

Distinct keyword

To find unique values of a column we use distinct keyword

1. To find different jobs in emp table

Select distinct job

From emp;

2. To find different salaries in emp table

Select distinct sal

From emp;

Order by

- It is used to arrange the data in ascending or descending order
- Desc or asc should be written separately for each colmn

- Aggregate functions can be used in order by clause
- Order by allows 256 columns

```
Select *
From emp
Order by sal desc
Limit 1;
```

1. To find fifth highest salary valye
   ```
   Select distinct sal
   From emp
   Order by sal desc
   Limit 5 offset 4
   ```

Group by and having

- Group by clause helps to divide the table into groups based on some field or fields
- While using group by, in select statement you can add only columns which are used in group by clause

Multirow functions(Aggregate function):

avg	Find average value for a group	Avg(sal),avg(ifnull(comm,0)),avg(sal+ifnull(comm,0))
min	Find min value for a group	Min(sal) min(sal+ifnull(comm,0))
max	Find max value for a group	Max(sal) max(sal+ifnull(comm,0))
sum	Find sum value for a group	sum(sal) sum(sal+ifnull(comm,0))
count	Find count value for a group	Count(*) --- it will count all values including null Count(comm) ----- it will count all not null values

1. To find sum of sal and count number of employees in each department
   ```
   Select deptno,sum(sal),count(*)
   From emp
   Group by deptno
   ```
2. To find sum of sal and count number of employees in each department if the number of employees in the department are >=5
   ```
   Select deptno,sum(sal),count(*)
   From emp
   Where sal>2000;
   Group by deptno
   Having count(*)>=5;
   ```

3. Find how many salesmans are there in each department
   Select deptno, job,count(*)
   From emp
   Where job =’salesman’
   Group by deptno;

4. Find sum of sal for all analyst and manager for each department
   Select deptno,sum(sal)
   From emp
   Where job in (‘ANALYST’,’MANAGER’)
   Group by deptno
5. Find minimum salary of SALESMAN
   Select min(sal)
   From emp
   Where job=’SALESMAN’

6. Find maximum salary of CLERK

Select max(sal)

From emp

Where job=’CLERK’

7. Find min salary, maximum salary ,count, average of sal,sum of sal
   For each job, arrange it on number of employees in a group
   Select job,min(sal),max(sal),count(*),avg(sal),sum(sal)
   From emp
   Group by job
   Order by count(*)

8. Find sum of salary , average of salary, count for all employees who earned commission

   Select sum(sal),avg(sal),count(comm)

   From emp

   Where comm !=0;