1 Display details of jobs where the minimum salary is greater than 10000.

Select * from jobs where min_ salary>10000;

```
mysql> Select * from jobs where min_salary>10000;
+---------+---------------------------------+------------+------------+
| job_id  | job_title                       | min_salary | max_salary |
+---------+---------------------------------+------------+------------+
| AD_PRES | President                       |      20000 |      40000 |
| AD_VP   | Administration Vice President   |      15000 |      30000 |
+---------+---------------------------------+------------+------------+
2 rows in set (0.02 sec)
```

2 Display the first name and join date of the employees who joined between 2002 and 2005

select first_name,hire_date from employees where hire_date between '2002-01-01' and '2005-12-31';

```
ysql> select first_name,hire_date from employees where hire_date between '2002-01-01' and '2005-12-31';
mpty set (0.00 sec)

ysql> select hire_date from employees;
+------------+
| hire_date  |
+------------+
| 1987-06-27 |
| 1989-09-21 |
| 1993-01-13 |
| 1990-01-03 |
| 1991-05-21 |
```

3.Display first name and join date of the employees who is either IT Programmer or Sales Man

select first_name,hire_date from employees where job_id in('IT_PROG','SA_MAN');

```
mysql>
mysql> select first_name,hire_date from employees where job_id in('IT_PROG','SA_MAN');
+------------+------------+
| first_name | hire_date  |
+------------+------------+
| Alexander  | 1990-01-03 |
| Bruce      | 1991-05-21 |
| David      | 1997-06-25 |
| Valli      | 1998-02-05 |
| Diana      | 1999-02-07 |
| John       | 1996-10-01 |
| Karen      | 1997-01-05 |
| Alberto    | 1997-03-10 |
| Gerald     | 1999-10-15 |
| Eleni      | 2000-01-29 |
+------------+------------+
10 rows in set (0.11 sec)
```

);

4.Display first name, salary, commission pct, and hire date for employees with salary less than 10000.

Select first_name,salary,commission_pct ,hire_date from employees where salary<10000;

```
mysql> Select first_name,salary,commission_pct ,hire_date from employees where salary<10000;
+-------------+--------+----------------+------------+
| first_name  | salary | commission_pct | hire_date  |
+-------------+--------+----------------+------------+
| Alexander   |   9000 |           NULL | 1990-01-03 |
| Bruce       |   6000 |           NULL | 1991-05-21 |
| David       |   4800 |           NULL | 1997-06-25 |
| Valli       |   4800 |           NULL | 1998-02-05 |
| Diana       |   4200 |           NULL | 1999-02-07 |
| Daniel      |   9000 |           NULL | 1994-07-16 |
| John        |   8200 |           NULL | 1997-09-28 |
| Ismael      |   7700 |           NULL | 1997-08-30 |
| Jose Manuel |   7800 |           NULL | 1998-03-07 |
| Luis        |   6900 |           NULL | 1999-12-07 |
| Alexander   |   3100 |           NULL | 1995-05-18 |
| Shelli      |   2900 |           NULL | 1997-12-24 |
| Sigal       |   2800 |           NULL | 1997-07-24 |
| Guy         |   2600 |           NULL | 1998-11-15 |
| Karen       |   2500 |           NULL | 1999-08-10 |
| Matthew     |   8000 |           NULL | 1996-07-18 |
| Adam        |   8200 |           NULL | 1997-04-10 |
| Payam       |   7900 |           NULL | 1995-05-01 |
| Shanta      |   6500 |           NULL | 1997-10-10 |
| Kevin       |   5800 |           NULL | 1999-11-16 |
```

5.Display job Title, the difference between minimum and maximum salaries for jobs with max salary in the range 10000 to 20000.

Select job_title,(max_salary-min_salary) as difference from jobs where max_salary between 10000 and 20000;

```
mysql> Select job_title,(max_salary-min_salary) as difference from jobs where max_salary between 10000 and 20000;
+---------------------------------+------------+
| job_title                       | difference |
+---------------------------------+------------+
| Accounting Manager              |       7800 |
| Finance Manager                 |       7800 |
| Programmer                      |       6000 |
| Marketing Manager               |       6000 |
| Public Relations Representative |       6000 |
| Purchasing Manager              |       7000 |
| Sales Manager                   |      10000 |
| Sales Representative            |       6000 |
+---------------------------------+------------+
```

6)Display employees where the first name or last name starts with S.

Select * from employees where first_name like 's%' or last_name like 's%';

```
ysql> Select * from employees where first_name like 's%' or last_name like 's%';
+-------------+------------+-----------+----------+------------------+------------+------------+--------+----------------+------------+---------------+
| employee_id | first_name | last_name | email    | phone_int        | hire_date  | job_id     | salary | commission_pct | manager_id | department_id |
+-------------+------------+-----------+----------+------------------+------------+------------+--------+----------------+------------+---------------+
|         100 | Steven     | King      | SKING    | 515.123.4567     | 1987-06-27 | AD_PRES    |  24000 |           NULL |       NULL |            90 |
|         111 | Ismael     | Sciarra   | ISCIARRA | 515.124.4369     | 1997-08-30 | FI_ACCOUNT |   7700 |           NULL |        108 |           100 |
|         116 | Shelli     | Baida     | SBAIDA   | 515.127.4563     | 1997-12-24 | PU_CLERK   |   2900 |           NULL |        114 |            30 |
|         117 | Sigal      | Tobias    | STOBIAS  | 515.127.4564     | 1997-07-24 | PU_CLERK   |   2800 |           NULL |        114 |            30 |
|         123 | Shanta     | Vollman   | SVOLLMAN | 650.123.4234     | 1997-10-10 | ST_MAN     |   6500 |           NULL |        100 |            50 |
|         128 | Steven     | Markle    | SMARKLE  | 650.124.1434     | 2000-03-08 | ST_CLERK   |   2200 |           NULL |        120 |            50 |
|         138 | Stephen    | Stiles    | SSTILES  | 650.121.2034     | 1997-10-26 | ST_CLERK   |   3200 |           NULL |        123 |            50 |
|         139 | John       | Seo       | JSEO     | 650.121.2019     | 1998-02-12 | ST_CLERK   |   2700 |           NULL |        123 |            50 |
|         157 | Patrick    | Sully     | PSULLY   | 011.44.1345.929268 | 1996-03-04 | SA_REP     |   9500 |           0.35 |        146 |            80 |
|         159 | Lindsey    | Smith     | LSMITH   | 011.44.1345.729268 | 1997-03-10 | SA_REP     |   8000 |            0.3 |        146 |            80 |
|         161 | Sarath     | Sewall    | SSEWALL  | 011.44.1345.529268 | 1998-11-03 | SA_REP     |   7000 |           0.25 |        146 |            80 |
|         166 | Sundar     | Ande      | SANDE    | 011.44.1346.629268 | 2000-03-24 | SA_REP     |   6400 |            0.1 |        147 |            80 |
|         171 | William    | Smith     | WSMITH   | 011.44.1343.629268 | 1999-02-23 | SA_REP     |   7400 |           0.15 |        148 |            80 |
|         173 | Sundita    | Kumar     | SKUMAR   | 011.44.1343.329268 | 2000-04-21 | SA_REP     |   6100 |            0.1 |        148 |            80 |
|         182 | Martha     | Sullivan  | MSULLIVA | 650.507.9878     | 1999-06-21 | SH_CLERK   |   2500 |           NULL |        120 |            50 |
|         184 | Nandita    | Sarchand  | NSARCHAN | 650.509.1876     | 1996-01-27 | SH_CLERK   |   4200 |           NULL |        121 |            50 |
|         192 | Sarah      | Bell      | SBELL    | 650.501.1876     | 1996-02-04 | SH_CLERK   |   4000 |           NULL |        123 |            50 |
|         194 | Samuel     | McCain    | SMCCAIN  | 650.501.3876     | 1998-06-01 | SH_CLERK   |   3200 |           NULL |        123 |            50 |
|         203 | Susan      | Mavris    | SMAVRIS  | 515.123.7777     | 1994-06-07 | HR_REP     |   6500 |           NULL |        101 |            40 |
|         205 | Shelley    | Higgins   | SHIGGINS | 515.123.8080     | 1994-06-07 | AC_MGR     |  12000 |           NULL |        101 |           110 |
+-------------+------------+-----------+----------+------------------+------------+------------+--------+----------------+------------+---------------+
0 rows in set (0.00 sec)
```

7)Display details of jobs in the descending order of the title.

Select * from jobs order by job_title desc;

```
mysql> Select * from jobs order by job_title desc;
+------------+----------------------------------+------------+------------+
| job_id     | job_title                        | min_salary | max_salary |
+------------+----------------------------------+------------+------------+
| ST_MAN     | Stock Manager                    |       5500 |       8500 |
| ST_CLERK   | Stock Clerk                      |       2000 |       5000 |
| SH_CLERK   | Shipping Clerk                   |       2500 |       5500 |
| SA_REP     | Sales Representative             |       6000 |      12000 |
| SA_MAN     | Sales Manager                    |      10000 |      20000 |
| PU_MAN     | Purchasing Manager               |       8000 |      15000 |
| PU_CLERK   | Purchasing Clerk                 |       2500 |       5500 |
| PR_REP     | Public Relations Representative  |       4500 |      10500 |
| AC_ACCOUNT | Public Accountant                |       4200 |       9000 |
| IT_PROG    | Programmer                       |       4000 |      10000 |
| AD_PRES    | President                        |      20000 |      40000 |
| MK_REP     | Marketing Representative         |       4000 |       9000 |
| MK_MAN     | Marketing Manager                |       9000 |      15000 |
| HR_REP     | Human Resources Representative   |       4000 |       9000 |
| FI_MGR     | Finance Manager                  |       8200 |      16000 |
| AD_VP      | Administration Vice President    |      15000 |      30000 |
| AD_ASST    | Administration Assistant         |       3000 |       6000 |
| AC_MGR     | Accounting Manager               |       8200 |      16000 |
| FI_ACCOUNT | Accountant                       |       4200 |       9000 |
+------------+----------------------------------+------------+------------+
19 rows in set (0.00 sec)
```

8) Display employees who joined in the month of May.

Select * from employees where month(hire_date)=’05’;

```
mysql> Select * from employees where month(hire_date)='05';
+-------------+------------+-----------+----------+------------------+------------+---------+--------+----------------+------------+---------------+
| employee_id | first_name | last_name | email    | phone_int        | hire_date  | job_id  | salary | commission_pct | manager_id | department_id |
+-------------+------------+-----------+----------+------------------+------------+---------+--------+----------------+------------+---------------+
|         104 | Bruce      | Ernst     | BERNST   | 590.423.4568     | 1991-05-21 | IT_PROG |   6000 |           NULL |        103 |            60 |
|         115 | Alexander  | Khoo      | AKHOO    | 515.127.4562     | 1995-05-18 | PU_CLERK|   3100 |           NULL |        114 |            30 |
|         122 | Payam      | Kaufling  | PKAUFLIN | 650.123.3234     | 1995-05-01 | ST_MAN  |   7900 |           NULL |        100 |            50 |
|         174 | Ellen      | Abel      | EABEL    | 011.44.1644.429267 | 1996-05-11 | SA_REP  |  11000 |            0.3 |        149 |            80 |
|         178 | Kimberely  | Grant     | KGRANT   | 011.44.1644.429263 | 1999-05-24 | SA_REP  |   7000 |           0.15 |        149 |          NULL |
|         197 | Kevin      | Feeney    | KFEENEY  | 650.507.9822     | 1998-05-23 | SH_CLERK|   3000 |           NULL |        124 |            50 |
+-------------+------------+-----------+----------+------------------+------------+---------+--------+----------------+------------+---------------+
6 rows in set (0.00 sec)
```

9)Display details of the employees where commission percentage is null and salary in the range 5000 to 10000 and department is 30.

Select * from employees where commission_pct is null and salary between 5000 and 10000 and department_id=30;

```
mysql> Select * from employees where commission_pct is null and salary between 5000 and 10000 and department_id=30;
Empty set (0.00 sec)
```

Joins

1)Display job title, employee ID, number of days between ending date and starting date for all jobs in department 30 from job history.

Select job_title,employee_id,end_date-start_date days from job_history ,jobs where department_id=30 and jobs.job_id=job_history.job_id;

or

Select job_title,employee_id,end_date-start_date days from job_history natural join jobs where department_id=30;

```
mysql> Select job_title,employee_id,end_date-start_date days from job_history ,jobs where department_id=30 and jobs.job_id=job_history.job_id;
Empty set (0.00 sec)
```

2) Display department name and manager first name.

SELECT DEPARTMENT_NAME, FIRST_NAME FROM DEPARTMENTS D ,EMPLOYEES E WHERE E.EMPLOYEE_ID=D.MANAGER_ID;

```
mysql> SELECT DEPARTMENT_NAME, FIRST_NAME FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER_ID=E.EMPLOYEE_ID);
+------------------+------------+
| DEPARTMENT_NAME  | FIRST_NAME |
+------------------+------------+
| Administration   | Jennifer   |
| Marketing        | Michael    |
| Purchasing       | Den        |
| Human Resources  | Susan      |
| Shipping         | Adam       |
| IT               | Alexander  |
| Public Relations | Hermann    |
| Sales            | John       |
| Executive        | Steven     |
| Finance          | Nancy      |
| Accounting       | Shelley    |
+------------------+------------+
11 rows in set (0.00 sec)
```

3. Display department name, manager name, and city.

SELECT DEPARTMENT_NAME, FIRST_NAME, CITY FROM DEPARTMENTS D JOIN EMPLOYEES E ON (D.MANAGER_ID=E.EMPLOYEE_ID) JOIN LOCATIONS L USING (LOCATION_ID);

Select department_name,first_name,city from departments d,employees e,locations l where d.manager_id=e.employee_id and d.location_id=l.location_id ;

```
mysql> Select department_name,first_name,city from departments d,employees e,locations l where d.manager_id=e.employee_id and d.location_id=l.location_id;
+------------------+------------+---------------------+
| department_name  | first_name | city                |
+------------------+------------+---------------------+
| Administration   | Jennifer   | Seattle             |
| Marketing        | Michael    | Toronto             |
| Purchasing       | Den        | Seattle             |
| Human Resources  | Susan      | London              |
| Shipping         | Adam       | South San Francisco |
| IT               | Alexander  | Southlake           |
| Public Relations | Hermann    | Munich              |
| Sales            | John       | Oxford              |
| Executive        | Steven     | Seattle             |
| Finance          | Nancy      | Seattle             |
| Accounting       | Shelley    | Seattle             |
+------------------+------------+---------------------+
```

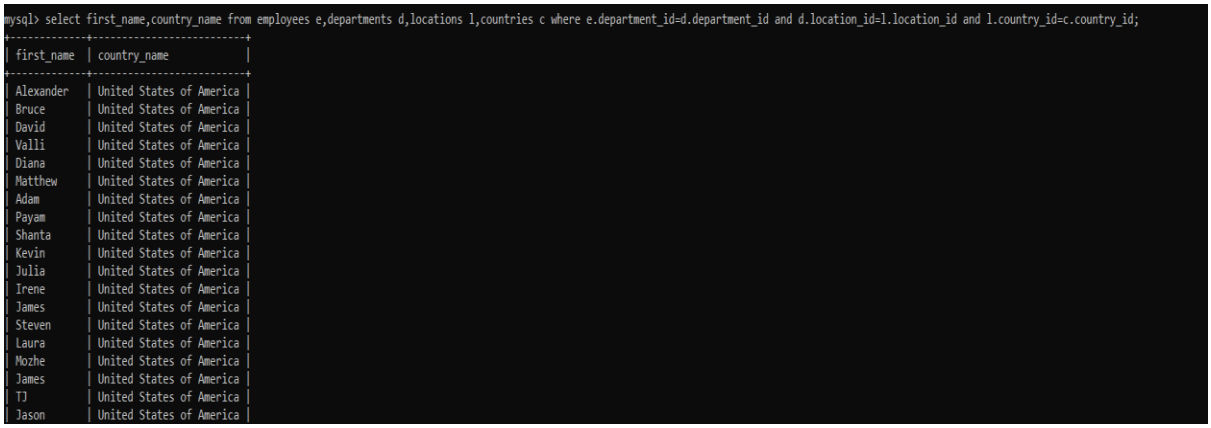
4) Display country name, city, and department name.

SELECT COUNTRY_NAME, CITY, DEPARTMENT_NAME FROM COUNTRIES C,LOCATIONS L,DEPARTMENTS D WHERE D.LOCTION_ID=L.LOCTION_ID AND L.COUNTRY_ID=C.COUNTRY_ID;

```
mysql> SELECT COUNTRY_NAME, CITY, DEPARTMENT_NAME
    -> FROM COUNTRIES JOIN LOCATIONS USING (COUNTRY_ID)
    -> JOIN DEPARTMENTS USING (LOCATION_ID);
+--------------------------+---------------------+----------------------+
| COUNTRY_NAME             | CITY                | DEPARTMENT_NAME      |
+--------------------------+---------------------+----------------------+
| United States of America | Seattle             | Administration       |
| Canada                   | Toronto             | Marketing            |
| United States of America | Seattle             | Purchasing           |
| United Kingdom           | London              | Human Resources      |
| United States of America | South San Francisco | Shipping             |
| United States of America | Southlake           | IT                   |
| Germany                  | Munich              | Public Relations     |
| United Kingdom           | Oxford              | Sales                |
| United States of America | Seattle             | Executive            |
| United States of America | Seattle             | Finance              |
| United States of America | Seattle             | Accounting           |
| United States of America | Seattle             | Treasury             |
| United States of America | Seattle             | Corporate Tax        |
| United States of America | Seattle             | Control And Credit   |
| United States of America | Seattle             | Shareholder Services |
| United States of America | Seattle             | Benefits             |
| United States of America | Seattle             | Manufacturing        |
| United States of America | Seattle             | Construction         |
| United States of America | Seattle             | Contracting          |
| United States of America | Seattle             | Operations           |
| United States of America | Seattle             | IT Support           |
| United States of America | Seattle             | NOC                  |
| United States of America | Seattle             | IT Helpdesk          |
| United States of America | Seattle             | Government Sales     |
```

5)Display employee name and country in which he is working.

select first_name,country_name from employees e,departments d,locations l,countries c where e.department_id=d.department_id and d.location_id=l.location_id and l.country_id=c.country_id;



```
mysql> select first_name,country_name from employees e,departments d,locations l,countries c where e.department_id=d.department_id and d.location_id=l.location_id and l.country_id=c.country_id;
+------------+------------------------+
| first_name | country_name           |
+------------+------------------------+
| Alexander  | United States of America |
| Bruce      | United States of America |
| David      | United States of America |
| Valli      | United States of America |
| Diana      | United States of America |
| Matthew    | United States of America |
| Adam       | United States of America |
| Payam      | United States of America |
| Shanta     | United States of America |
| Kevin      | United States of America |
| Julia      | United States of America |
| Irene      | United States of America |
| James      | United States of America |
| Steven     | United States of America |
| Laura      | United States of America |
| Mozhe      | United States of America |
| James      | United States of America |
| TJ         | United States of America |
| Jason      | United States of America |
```

function

1.Display employees who joined in the month of May

Select * from employees where hire_date like '____-05-__';

```
mysql> Select * from employees where hire_date like '____-05-__';
+-------------+------------+-----------+---------+-------------------+------------+----------+--------+----------------+------------+---------------+
| employee_id | first_name | last_name | email   | phone_int         | hire_date  | job_id   | salary | commission_pct | manager_id | department_id |
+-------------+------------+-----------+---------+-------------------+------------+----------+--------+----------------+------------+---------------+
|         104 | Bruce      | Ernst     | BERNST  | 590.423.4568      | 1991-05-21 | IT_PROG  |   6000 |           NULL |        103 |            60 |
|         115 | Alexander  | Khoo      | AKHOO   | 515.127.4562      | 1995-05-18 | PU_CLERK |   3100 |           NULL |        114 |            30 |
|         122 | Payam      | Kaufling  | PKAUFLIN| 650.123.3234      | 1995-05-01 | ST_MAN   |   7900 |           NULL |        100 |            50 |
|         174 | Ellen      | Abel      | EABEL   | 011.44.1644.429267| 1996-05-11 | SA_REP   |  11000 |            0.3 |        149 |            80 |
|         178 | Kimberely  | Grant     | KGRANT  | 011.44.1644.429263| 1999-05-24 | SA_REP   |   7000 |           0.15 |        149 |          NULL |
|         197 | Kevin      | Feeney    | KFEENEY | 650.507.9822      | 1998-05-23 | SH_CLERK |   3000 |           NULL |        124 |            50 |
+-------------+------------+-----------+---------+-------------------+------------+----------+--------+----------------+------------+---------------+
6 rows in set (0.10 sec)
```

2.Display first name, salary, and round the salary to thousands.

Select first_name,salary,round(salary,-3) from employees;

```
mysql> Select first_name,salary,round(salary,-3) from employees;
+-------------+--------+------------------+
| first_name  | salary | round(salary,-3) |
+-------------+--------+------------------+
| Steven      |  24000 |            24000 |
| Neena       |  17000 |            17000 |
| Lex         |  17000 |            17000 |
| Alexander   |   9000 |             9000 |
| Bruce       |   6000 |             6000 |
| David       |   4800 |             5000 |
| Valli       |   4800 |             5000 |
| Diana       |   4200 |             4000 |
| Nancy       |  12000 |            12000 |
| Daniel      |   9000 |             9000 |
| John        |   8200 |             8000 |
| Ismael      |   7700 |             8000 |
| Jose Manuel |   7800 |             8000 |
| Luis        |   6900 |             7000 |
```

3.Display first name and date of first salary of the employees.

Select first_name,hire_date,last_day(hire_date) from employees;

```
mysql> Select first_name,hire_date,last_day(hire_date) from employees;
+-------------+------------+--------------------+
| first_name  | hire_date  | last_day(hire_date) |
+-------------+------------+--------------------+
| Steven      | 1987-06-27 | 1987-06-30         |
| Neena       | 1989-09-21 | 1989-09-30         |
| Lex         | 1993-01-13 | 1993-01-31         |
| Alexander   | 1990-01-03 | 1990-01-31         |
| Bruce       | 1991-05-21 | 1991-05-31         |
| David       | 1997-06-25 | 1997-06-30         |
| Valli       | 1998-02-05 | 1998-02-28         |
| Diana       | 1999-02-07 | 1999-02-28         |
| Nancy       | 1994-08-17 | 1994-08-31         |
| Daniel      | 1994-07-16 | 1994-07-31         |
| John        | 1997-09-28 | 1997-09-30         |
| Ismael      | 1997-08-30 | 1997-08-31         |
| Jose Manuel | 1998-03-07 | 1998-03-31         |
| Luis        | 1999-12-07 | 1999-12-31         |
| Den         | 1994-12-07 | 1994-12-31         |
| Alexander   | 1995-05-18 | 1995-05-31         |
| Shelli      | 1997-12-24 | 1997-12-31         |
| Sigal       | 1997-07-24 | 1997-07-31         |
| Guy         | 1998-11-15 | 1998-11-30         |
| Karen       | 1999-08-10 | 1999-08-31         |
```

4.Display first name and experience of the employees.

Select first_name,datediff(sysdate(),hiredate)/365 from employees;

```
mysql> Select first_name,datediff(sysdate(),hire_date)/365 as experience from employees;
+-------------+------------+
| first_name  | experience |
+-------------+------------+
| Steven      |    33.5753 |
| Neena       |    31.3370 |
| Lex         |    28.0219 |
| Alexander   |    31.0521 |
| Bruce       |    29.6740 |
| David       |    23.5726 |
| Valli       |    22.9562 |
| Diana       |    21.9507 |
| Nancy       |    26.4301 |
| Daniel      |    26.5178 |
| John        |    23.3123 |
| Ismael      |    23.3918 |
| Jose Manuel |    22.8740 |
| Luis        |    21.1205 |
| Den         |    26.1233 |
| Alexander   |    25.6795 |
| Shelli      |    23.0740 |
| Sigal       |    23.4932 |
| Guy         |    22.1808 |
| Karen       |    21.4466 |
| Matthew     |    24.5096 |
| Adam        |    23.7808 |
| Payam       |    25.7260 |
| Shanta      |    23.2795 |
```

5.6Display the length of first name for employees where last name contain character ‘b’ after 3rd position.

Select length(first_name) from employees where last_name like ‘___b%’;

```
mysql> Select length(first_name) from employees where last_name like '___b%';
+--------------------+
| length(first_name) |
+--------------------+
|                  6 |
|                  7 |
+--------------------+
2 rows in set (0.00 sec)
```

6.Display first name in upper case and email address in lower case for employees where the first name and email address are same irrespective of the case.

Select upper(first_name),lower(email) from employees where upper(first_name)=upper(email);

```
mysql> Select upper(first_name),lower(email) from employees where upper(first_name)=upper(email);
Empty set (0.15 sec)
```

7.Display employees who joined in the current year.

select first_name from employees where YEAR(hire_date)=YEAR(curdate());

```
mysql> select first_name from employees where YEAR(hire_date)=YEAR(curdate());
Empty set (0.00 sec)
```

8.Display the number of days between system date and 1st January 1995.

select datediff(sysdate(),'1995-01-01');

```
mysql> select datediff(sysdate(),'1995-01-01');
+----------------------------------+
| datediff(sysdate(),'1995-01-01') |
+----------------------------------+
|                             9510 |
+----------------------------------+
1 row in set (0.00 sec)

mysql>
```

9.Display how many employees joined in each month of the current year.

select Month(hire_date),count(*) from employees where year(hire_date)=year(sysdate()) group by month(hire_date);

```
mysql> select Month(hire_date),count(*) from employees where year(hire_date)=year(sysdate()) group by month(hire_date);
Empty set (0.00 sec)
```

MYSQL AGGREGATE FUNCTION

1.Display employee ID and the date on which he ended his previous job.

SELECT EMPLOYEE_ID, MAX(END_DATE) FROM JOB_HISTORY GROUP BY EMPLOYEE_ID;

```
mysql> SELECT EMPLOYEE_ID, MAX(END_DATE) FROM JOB_HISTORY GROUP BY EMPLOYEE_ID;
+-------------+---------------+
| EMPLOYEE_ID | MAX(END_DATE) |
+-------------+---------------+
|         101 | 1997-03-15    |
|         102 | 1998-07-24    |
|         114 | 1999-12-31    |
|         122 | 1999-12-31    |
|         176 | 1999-12-31    |
|         200 | 1998-12-31    |
|         201 | 1999-12-19    |
+-------------+---------------+
7 rows in set (0.04 sec)
```

2.Display number of employees joined after 15th of the month.

SELECT COUNT(*) FROM EMPLOYEES WHERE DAY(HIRE_DATE)>15;

```
mysql> SELECT COUNT(*) FROM EMPLOYEES WHERE DAY(HIRE_DATE)>15;
+----------+
| COUNT(*) |
+----------+
|       57 |
+----------+
1 row in set (0.00 sec)
```

select with Group by

3.Display the country ID and number of cities we have in the country.

select country_id,count('city') from locations group by country_id;

```
mysql> select country_id,count('city') from locations group by country_id;
+------------+---------------+
| country_id | count('city') |
+------------+---------------+
| AU         |             1 |
| BR         |             1 |
| CA         |             2 |
| CH         |             2 |
| CN         |             1 |
| DE         |             1 |
| IN         |             1 |
| IT         |             2 |
| JP         |             2 |
| MX         |             1 |
| NL         |             1 |
| SG         |             1 |
| UK         |             3 |
| US         |             4 |
+------------+---------------+
14 rows in set (0.00 sec)
```

4.Display average salary of employees in each department who have commission percentage.

SELECT avg(salary),department_id from employees where commission_pct is not null group by department_id ;

```
mysql> SELECT avg(salary),department_id from employees  where commission_pct is not null group by department_id
    -> ;
+-------------------+---------------+
| avg(salary)       | department_id |
+-------------------+---------------+
|              7000 |          NULL |
| 8955.882352941177 |            80 |
+-------------------+---------------+
2 rows in set (0.00 sec)
```

5. Display job ID, number of employees, sum of salary, and difference between highest salary and lowest salary of the employees of the job.

Select job_id ,count(*),sum(salary) ,max(salary)-min(salary) as sal_diff from employees group by job_id;

```
mysql> Select job_id ,count(*),sum(salary) ,max(salary)-min(salary) as sal_diff from employees group by job_id;
+------------+----------+-------------+----------+
| job_id     | count(*) | sum(salary) | sal_diff |
+------------+----------+-------------+----------+
| AC_ACCOUNT |        1 |        8300 |        0 |
| AC_MGR     |        1 |       12000 |        0 |
| AD_ASST    |        1 |        4400 |        0 |
| AD_PRES    |        1 |       24000 |        0 |
| AD_VP      |        2 |       34000 |        0 |
| FI_ACCOUNT |        5 |       39600 |     2100 |
| FI_MGR     |        1 |       12000 |        0 |
| HR_REP     |        1 |        6500 |        0 |
| IT_PROG    |        5 |       28800 |     4800 |
| MK_MAN     |        1 |       13000 |        0 |
| MK_REP     |        1 |        6000 |        0 |
| PR_REP     |        1 |       10000 |        0 |
| PU_CLERK   |        5 |       13900 |      600 |
| PU_MAN     |        1 |       11000 |        0 |
| SA_MAN     |        5 |       61000 |     3500 |
| SA_REP     |       30 |      250500 |     5400 |
| SH_CLERK   |       20 |       64300 |     1700 |
| ST_CLERK   |       20 |       55700 |     1500 |
| ST_MAN     |        5 |       36400 |     2400 |
+------------+----------+-------------+----------+
19 rows in set (0.00 sec)
```

6. Display job ID for jobs with average salary more than 10000.

Select job_id from employees group by job_id having avg(salary)>10000;

```
mysql> Select job_id from employees group by job_id having avg(salary)>10000;
+---------+
| job_id  |
+---------+
| AC_MGR  |
| AD_PRES |
| AD_VP   |
| FI_MGR  |
| MK_MAN  |
| PU_MAN  |
| SA_MAN  |
+---------+
7 rows in set (0.00 sec)
```

7.Display years in which more than 10 employees joined.

select year(hire_date) from employees group by year(hire_date) having count('employee_id')>10;

```
mysql> select year(hire_date) from employees group by year(hire_date) having count('employee_id')>10;
+-----------------+
| year(hire_date) |
+-----------------+
|            1997 |
|            1998 |
|            1999 |
|            2000 |
+-----------------+
4 rows in set (0.00 sec)
```

8.Display departments in which more than five employees have commission percentage.

Select department_id from employees group by department_id having count('commission_pct')>5;

```
mysql> Select department_id from employees group by department_id having count('commission_pct')>5;
+---------------+
| department_id |
+---------------+
|            30 |
|            50 |
|            80 |
|           100 |
+---------------+
4 rows in set (0.00 sec)
```

9.Display department name and number of employees in the department.

Select department_name,count(‘employee_id’) from departments d,employee e where d.department_id=e.department_id group by department_name;

```
mysql> Select  department_name,count('employee_id') from departments d,employees e where d.department_id=e.department_id group by department_name;
+------------------+----------------------+
| department_name  | count('employee_id') |
+------------------+----------------------+
| Administration   |                    1 |
| Marketing        |                    2 |
| Purchasing       |                    6 |
| Human Resources  |                    1 |
| Shipping         |                   45 |
| IT               |                    5 |
| Public Relations |                    1 |
| Sales            |                   34 |
| Executive        |                    3 |
| Finance          |                    6 |
| Accounting       |                    2 |
+------------------+----------------------+
11 rows in set (0.00 sec)
```

10.Display employee ID for employees who did more than one job in the past.

SELECT employee_id FROM job_history GROUP BY employee_id HAVING COUNT(*) > 1;

```
mysql> SELECT employee_id FROM job_history GROUP BY employee_id HAVING COUNT(*) > 1;
+-------------+
| employee_id |
+-------------+
|         101 |
|         176 |
|         200 |
+-------------+
3 rows in set (0.00 sec)
```