1.Create a database;

mysql>create database employee;

Query OK, 1 row affected (0.01 sec)

2.Create table Employee with the following filed – empno int primary key,ename varchar(30),JOB varchar(10),managerid int,hiredate date,salary int,commision int,deptno int

mysql> CREATE TABLE Employee (

-> empno INT PRIMARY KEY,

-> ename VARCHAR(30),

-> JOB VARCHAR(10),

-> managerid INT,

-> hiredate DATE,

-> salary INT,

-> commision INT,

-> deptno INT

-> );

Query OK, 0 rows affected (0.04 sec)

3.describe schema.

mysql>DESCRIBE Employee;

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

| Field | Type | Null | Key | Default | Extra |

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

| empno | int | NO | PRI | NULL | |

| ename | varchar(30) | YES | | NULL | |

| JOB | varchar(10) | YES | | NULL | |

| managerid | int | YES | | NULL | |

| hiredate | date | YES | | NULL | |

| salary | int | YES | | NULL | |

| commision | int | YES | | NULL | |

| deptno | int | YES | | NULL | |

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

8 rows in set (0.00 sec)

4.create a table department with the following field -deptno int primary key,deptname varchar(15),location varchar(10)

mysql>CREATE TABLE Department (

-> deptno INT PRIMARY KEY,

-> deptname VARCHAR(15),

-> location VARCHAR(10)

-> );

Query OK, 0 rows affected (0.02 sec)

5.describe schema

mysql>DESCRIBE Department;

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

| Field | Type | Null | Key | Default | Extra |

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

| deptno | int | NO | PRI | NULL | |

| deptname | varchar(15) | YES | | NULL | |

| location | varchar(10) | YES | | NULL | |

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

3 rows in set (0.00 sec)

6. create a table salarygrade with the following field - (grade int primary key,lowsalary int,highsalary int);

mysql>CREATE TABLE SalaryGrade (

-> grade INT PRIMARY KEY,

-> lowsalary INT,

-> highsalary INT

-> );

Query OK, 0 rows affected (0.02 sec)

7.describe schema

mysql>DESCRIBE SalaryGrade;

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

| Field | Type | Null | Key | Default | Extra |

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

| grade | int | NO | PRI | NULL | |

| lowsalary | int | YES | | NULL | |

| highsalary | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

1.Insert atleast 5 values to each table(must include the following values)

a.job-clerk,salesman,manager etc

b.department name-accounting,research,sales etc

c.employee name – allen,smith,ward etc.

d.dept number -10,20

e.Location-US

mysql> INSERT INTO Department VALUES

-> (10, 'Accounting', 'US'),

-> (20, 'Research', 'US'),

-> (30, 'Sales', 'US'),

-> (40, 'Marketing', 'US'),

-> (50, 'IT', 'US');

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql> INSERT INTO Employee VALUES

-> (1001, 'Allen', 'Salesman', 1005, '1981-06-01', 1600, 300, 30),

-> (1002, 'Smith', 'Clerk', 1006, '1987-12-09', 800, NULL, 20),

-> (1003, 'Ward', 'Salesman', 1005, '1981-02-22', 1250, 500, 30),

-> (1004, 'Jones', 'Manager', 1007, '1981-04-02', 2975, NULL, 20),

-> (1005, 'Martin', 'Salesman', 1006, '1981-09-28', 1250, 1400, 30);

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

mysql>

mysql> INSERT INTO SalaryGrade VALUES

-> (1, 700, 1200),

-> (2, 1201, 1400),

-> (3, 1401, 2000),

-> (4, 2001, 3000),

-> (5, 3001, 9999);

Query OK, 5 rows affected (0.00 sec)

Records: 5 Duplicates: 0 Warnings: 0

2.Select all information from table employee.

mysql> SELECT \* FROM Employee;

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1001 | Allen | Salesman | 1005 | 1981-06-01 | 1600 | 300 | 30 |

| 1002 | Smith | Clerk | 1006 | 1987-12-09 | 800 | NULL | 20 |

| 1003 | Ward | Salesman | 1005 | 1981-02-22 | 1250 | 500 | 30 |

| 1004 | Jones | Manager | 1007 | 1981-04-02 | 2975 | NULL | 20 |

| 1005 | Martin | Salesman | 1006 | 1981-09-28 | 1250 | 1400 | 30 |

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

5 rows in set (0.00 sec)

3. Select all information from table department.

mysql> SELECT \* FROM Department;

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

| deptno | deptname | location |

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

| 10 | Accounting | US |

| 20 | Research | US |

| 30 | Sales | US |

| 40 | Marketing | US |

| 50 | IT | US |

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

5 rows in set (0.00 sec)

4.Select all information from table salarygrade.

mysql> SELECT \* FROM SalaryGrade;

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

| grade | lowsalary | highsalary |

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

| 1 | 700 | 1200 |

| 2 | 1201 | 1400 |

| 3 | 1401 | 2000 |

| 4 | 2001 | 3000 |

| 5 | 3001 | 9999 |

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

5 rows in set (0.00 sec)

4.Select empno,ename form table employee.

mysql> SELECT empno, ename FROM Employee;

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

| empno | ename |

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

| 1001 | Allen |

| 1002 | Smith |

| 1003 | Ward |

| 1004 | Jones |

| 1005 | Martin |

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

5 rows in set (0.00 sec)

5.List all employees having a salary range between 1000 and 2000

mysql> SELECT \* FROM Employee WHERE salary BETWEEN 1000 AND 2000;

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1001 | Allen | Salesman | 1005 | 1981-06-01 | 1600 | 300 | 30 |

| 1003 | Ward | Salesman | 1005 | 1981-02-22 | 1250 | 500 | 30 |

| 1005 | Martin | Salesman | 1006 | 1981-09-28 | 1250 | 1400 | 30 |

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

3 rows in set (0.00 sec)

6.List dname and department number in department name order.

mysql> SELECT deptname, deptno FROM Department ORDER BY deptname;

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

| deptname | deptno |

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

| Accounting | 10 |

| IT | 50 |

| Marketing | 40 |

| Research | 20 |

| Sales | 30 |

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

5 rows in set (0.00 sec)

7.List the employee details in department 10 and 20

mysql> SELECT \* FROM Employee WHERE deptno IN (10, 20);

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1002 | Smith | Clerk | 1006 | 1987-12-09 | 800 | NULL | 20 |

| 1004 | Jones | Manager | 1007 | 1981-04-02 | 2975 | NULL | 20 |

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

2 rows in set (0.00 sec)

8.List names and jobs of all clerks in dept 20

mysql> SELECT ename, job FROM Employee WHERE job='Clerk' AND deptno=20;

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

| ename | job |

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

| Smith | Clerk |

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

1 row in set (0.00 sec)

9.Display all employee names which have TH or LL in name

mysql> SELECT ename FROM Employee WHERE ename LIKE '%TH%' OR ename LIKE '%LL%';

+-------+

| ename |

+-------+

| Allen |

| Smith |

+-------+

2 rows in set (0.00 sec)

10.List name,job,and salary of all employees who have a manager.

SELECT ename, job, salary FROM Employee WHERE managerid IS NOT NULL;

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

| ename | job | salary |

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

| Allen | Salesman | 1600 |

| Smith | Clerk | 800 |

| Ward | Salesman | 1250 |

| Jones | Manager | 2975 |

| Martin | Salesman | 1250 |

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

5 rows in set (0.00 sec)

11.Dispaly name and annual remuneration for all employees.

mysql> SELECT ename, (salary \* 12 + IFNULL(commision,0)) AS annual\_remuneration FROM Employee;

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

| ename | annual\_remuneration |

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

| Allen | 19500 |

| Smith | 9600 |

| Ward | 15500 |

| Jones | 35700 |

| Martin | 16400 |

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

5 rows in set (0.00 sec)

12.Display all employees hired during 1987.

mysql> SELECT \* FROM Employee WHERE YEAR(hiredate) = 1987;

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1002 | Smith | Clerk | 1006 | 1987-12-09 | 800 | NULL | 20 |

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

1 row in set (0.00 sec)

13.Display name,job,annual sal,commission of all sales peoples whose monthly salary greater than commission.The output should be order by salary highest first.

mysql> SELECT ename, job, (salary\*12) AS annual\_sal, commision

-> FROM Employee

-> WHERE job='Salesman' AND salary > IFNULL(commision, 0)

-> ORDER BY salary DESC;

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

| ename | job | annual\_sal | commision |

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

| Allen | Salesman | 19200 | 300 |

| Ward | Salesman | 15000 | 500 |

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

2 rows in set (0.00 sec)

14.List the employee name and salary increased by 12.5%.Express has a whole number

mysql> SELECT ename, ROUND(salary \* 1.125) AS increased\_salary FROM Employee;

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

| ename | increased\_salary |

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

| Allen | 1800 |

| Smith | 900 |

| Ward | 1406 |

| Jones | 3347 |

| Martin | 1406 |

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

5 rows in set (0.00 sec)

15.Produce the following output

EMPLOYEE AND JOB

SMITH CLERK

ALLEN SALESMAN

mysql> SELECT CONCAT(ename, ' ', job) AS "EMPLOYEE AND JOB" FROM Employee WHERE ename IN ('SMITH', 'ALLEN') order by ename desc;

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

| EMPLOYEE AND JOB |

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

| Smith Clerk |

| Allen Salesman |

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

2 rows in set (0.00 sec)

16.Produce the following output

EMPLOYEE AND JOB

SMITH(Clerk)

ALLEN(Salesman)

mysql> SELECT CONCAT(ename, '(', job, ')') AS "EMPLOYEE AND JOB" FROM Employee WHERE ename IN ('SMITH', 'ALLEN') order by ename desc;

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

| EMPLOYEE AND JOB |

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

| Smith(Clerk) |

| Allen(Salesman) |

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

2 rows in set (0.00 sec)

17. Find the minimum, maximum, and average salaries of all employees.

mysql> SELECT MIN(salary), MAX(salary), AVG(salary) FROM Employee;

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

| MIN(salary) | MAX(salary) | AVG(salary) |

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

| 800 | 2975 | 1575.0000 |

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

18. List the minimum and maximum salary for each job.

mysql> SELECT job, MIN(salary), MAX(salary) FROM Employee GROUP BY job;

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

| job | MIN(salary) | MAX(salary) |

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

| Salesman | 1250 | 1600 |

| Clerk | 800 | 800 |

| Manager | 2975 | 2975 |

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

3 rows in set (0.00 sec)

19. Find how many managers are there without listing them.

mysql> SELECT COUNT(\*) FROM Employee WHERE job = 'Manager';

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

| COUNT(\*) |

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

| 1 |

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

1 row in set (0.00 sec)

20.Find the average salary and average total remuneration for each job.

mysql> SELECT job, AVG(salary) AS avg\_salary,

-> AVG(salary + IFNULL(commision, 0)) AS avg\_total

-> FROM Employee

-> GROUP BY job;

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

| job | avg\_salary | avg\_total |

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

| Salesman | 1366.6667 | 2100.0000 |

| Clerk | 800.0000 | 800.0000 |

| Manager | 2975.0000 | 2975.0000 |

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

3 rows in set (0.00 sec)

21. Find the difference between highest and lowest salaries.

mysql> SELECT MAX(salary) - MIN(salary) AS salary\_difference FROM Employee;

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

| salary\_difference |

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

| 2175 |

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

1 row in set (0.00 sec)

22. Find all departments having more than 2 employees.

mysql> SELECT deptno,JOB, COUNT(\*) as emp\_count

-> FROM Employee

-> GROUP BY deptno

-> HAVING COUNT(\*) > 2;

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

| deptno | JOB | emp\_count |

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

| 30 | Salesman | 3 |

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

1 row in set (0.00 sec)

23. Check whether all employee numbers are unique.

mysql> SELECT empno, COUNT(\*)

-> FROM Employee

-> GROUP BY empno

-> HAVING COUNT(\*) > 1;

Empty set (0.00 sec)

1. Display all employee names and their department names in department name order.

mysql> SELECT e.ename, d.deptname

-> FROM Employee e

-> JOIN Department d ON e.deptno = d.deptno

-> ORDER BY d.deptname;

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

| ename | deptname |

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

| Smith | Research |

| Jones | Research |

| Allen | Sales |

| Ward | Sales |

| Martin | Sales |

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

5 rows in set (0.00 sec)

2. Display the name, location, and department name of all employees whose salary is more than 1500.

mysql> SELECT e.ename, d.location, d.deptname

-> FROM Employee e

-> JOIN Department d ON e.deptno = d.deptno

-> WHERE e.salary > 1500;

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

| ename | location | deptname |

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

| Allen | US | Sales |

| Jones | US | Research |

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

2 rows in set (0.00 sec)

3.Produce a list showing employee’s salary grade.

mysql> SELECT e.ename, e.salary, s.grade

-> FROM Employee e

-> JOIN SalaryGrade s ON e.salary BETWEEN s.lowsalary AND s.highsalary;

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

| ename | salary | grade |

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

| Smith | 800 | 1 |

| Ward | 1250 | 2 |

| Martin | 1250 | 2 |

| Allen | 1600 | 3 |

| Jones | 2975 | 4 |

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

5 rows in set (0.00 sec)

4. List employees in grade 3.

mysql> SELECT e.\*

-> FROM Employee e

-> JOIN SalaryGrade s ON e.salary BETWEEN s.lowsalary AND s.highsalary

-> WHERE s.grade = 3;

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1001 | Allen | Salesman | 1005 | 1981-06-01 | 1600 | 300 | 30 |

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

1 row in set (0.00 sec)

5. Show all employees in US.

mysql> SELECT e.\*

-> FROM Employee e

-> JOIN Department d ON e.deptno = d.deptno

-> WHERE d.location = 'US';

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1001 | Allen | Salesman | 1005 | 1981-06-01 | 1600 | 300 | 30 |

| 1002 | Smith | Clerk | 1006 | 1987-12-09 | 800 | NULL | 20 |

| 1003 | Ward | Salesman | 1005 | 1981-02-22 | 1250 | 500 | 30 |

| 1004 | Jones | Manager | 1007 | 1981-04-02 | 2975 | NULL | 20 |

| 1005 | Martin | Salesman | 1006 | 1981-09-28 | 1250 | 1400 | 30 |

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

5 rows in set (0.00 sec)

6.List employee name, job, salary, grade and department name for all except clerk. Sort on salary descending order..

mysql> SELECT e.ename, e.job, e.salary, s.grade, d.deptname

-> FROM Employee e

-> JOIN Department d ON e.deptno = d.deptno

-> JOIN SalaryGrade s ON e.salary BETWEEN s.lowsalary AND s.highsalary

-> WHERE e.job != 'Clerk'

-> ORDER BY e.salary DESC;

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

| ename | job | salary | grade | deptname |

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

| Jones | Manager | 2975 | 4 | Research |

| Allen | Salesman | 1600 | 3 | Sales |

| Ward | Salesman | 1250 | 2 | Sales |

| Martin | Salesman | 1250 | 2 | Sales |

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

4 rows in set (0.00 sec)

7. List the following details for all employees who earn 36000 a year or who are clerk.

mysql> SELECT ename, job, salary

-> FROM Employee

-> WHERE salary \* 12 = 36000 OR job = 'Clerk';

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

| ename | job | salary |

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

| Smith | Clerk | 800 |

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

1 row in set (0.00 sec)

1.To display employees who earn morethan the lowest salary in department 30.

mysql> SELECT \* FROM Employee

-> WHERE salary > (

-> SELECT MIN(salary) FROM Employee WHERE deptno = 30

-> );

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1001 | Allen | Salesman | 1005 | 1981-06-01 | 1600 | 300 | 30 |

| 1004 | Jones | Manager | 1007 | 1981-04-02 | 2975 | NULL | 20 |

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

2 rows in set (0.00 sec)

2.Find the employees who earn morethan every employees in department 30.

mysql> SELECT \* FROM Employee

-> WHERE salary > ALL (

-> SELECT salary FROM Employee WHERE deptno = 30

-> );

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

| empno | ename | JOB | managerid | hiredate | salary | commision | deptno |

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

| 1004 | Jones | Manager | 1007 | 1981-04-02 | 2975 | NULL | 20 |

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

1 row in set (0.00 sec)

3.To find the job with the highest average salary.

mysql> SELECT job

-> FROM Employee

-> GROUP BY job

-> ORDER BY AVG(salary) DESC

-> LIMIT 1;

+---------+

| job |

+---------+

| Manager |

+---------+

1 row in set (0.00 sec)

4.Find the departments not having any employees

mysql> SELECT \* FROM Department

-> WHERE deptno NOT IN (SELECT DISTINCT deptno FROM Employee);

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

| deptno | deptname | location |

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

| 10 | Accounting | US |

| 40 | Marketing | US |

| 50 | IT | US |

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

3 rows in set (0.00 sec)

5.Display the name and salary of the top three earners in the company

mysql> SELECT ename, salary

-> FROM Employee

-> ORDER BY salary DESC

-> LIMIT 3;

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

| ename | salary |

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

| Jones | 2975 |

| Allen | 1600 |

| Martin | 1250 |

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

3 rows in set (0.00 sec)