

TOPS Technology

Field	Type	Null	Key	Default
Empno	int(4)	NO	PRI	0
Ename	varchar(10)	YES		(NULL)
Job	varchar(9)	YES		(NULL)
Mgr	int(4)	YES		(NULL)
Hiredate	date	YES		(NULL)
Sal	decimal(7,2)	YES		(NULL)
Comm	decimal(7,2)	YES		(NULL)
Deptno	int(2)	YES	MUL	(NULL)

DEPT TABLE:

Field	Type	Null	Key	Default
Deptno	int(2)	NO	PRI	0
Dname	varchar(14)	YES		(NULL)
Loc	varchar(13)	YES		(NULL)

STUDENT TABLE:

Field	Type	Null	Key	Default
Rno	int(2)	NO	PRI	0
Sname	varchar(14)	YES		(NULL)
City	varchar(20)	YES		(NULL)
State	Varchar(20)	YES		(NULL)

EMP LOG TABLE:

Field	Type	Null	Key	Default
Emp_id	int(5)	NO		(NULL)

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Log_date	Date	YES		(NULL)
New_salary	Int(10)	YES		(NULL)
Action	Varchar(20)	YES		(NULL)

DEPT TABLE DATA:

Deptno	dname	loc
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

EMP TABLE DATA:

Empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	(NULL)	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	(NULL)	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	(NULL)	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	(NULL)	10
7788	SCOTT	ANALYST	7566	1987-06-11	3000.00	(NULL)	20
7839	KING	PRESIDENT	(NULL)	1981-11-17	5000.00	(NULL)	10
7844	TURNER	SALESMAN	7698	1981-08-09	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1987-07-13	1100.00	(NULL)	20

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7900	JAMES	CLERK	7698	1981-03-12	950.00	(NULL)	30
7902	FORD	ANALYST	7566	1981-03-12	3000.00	(NULL)	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	(NULL)	10

Answer:

```
CREATE DATABASE RDBMS_Java;
```

```
USE rdbms_java;
```

```
CREATE TABLE Emp_table
```

```
(
```

```
Empno INT(4) PRIMARY KEY,
```

```
Ename VARCHAR(10) NOT NULL,
```

```
Job VARCHAR(9) NOT NULL,
```

```
Mgr INT(4) NOT NULL,
```

```
Hiredate DATE NOT NULL,
```

```
Sal DECIMAL(7,2) NOT NULL,
```

```
Comm DECIMAL(7,2) NOT NULL,
```

```
Deptno INT(2) NOT NULL
```

```
);
```

```
CREATE TABLE Dept_Table
```

```
(
```

```
Deptno INT(2) PRIMARY KEY,
```

```
Dname VARCHAR(14) NOT NULL,
```

```
Loc VARCHAR(13) NOT NULL
```

```
);
```

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```
CREATE TABLE Student_Table
```

```
(  
    Rno INT(2) PRIMARY KEY,  
    Sname VARCHAR(14) NOT NULL,  
    City VARCHAR(20) NOT NULL,  
    State VARCHAR(20) NOT NULL  
);
```

```
CREATE TABLE Emp_Log_Table
```

```
(  
    Emp_id INT(5),  
    Log_date DATE NOT NULL,  
    New_Salary INT(10) NOT NULL,  
    ACTION VARCHAR(20) NOT NULL  
);
```

```
INSERT INTO Dept_table VALUES(10,"Accounting","New York");
```

```
INSERT INTO Dept_table VALUES(20,"Research","Dallas");
```

```
INSERT INTO Dept_table VALUES(30,"Sales","Chicago");
```

```
INSERT INTO Dept_table VALUES(40,"Operations","Boston");
```

```
INSERT INTO Emp_table VALUES(7369,"Smith","Clerk",7902,'1980-12-17',800.00,NULL,20);
```

```
INSERT INTO Emp_table VALUES(7499,"Allen","Salesman",7698,'1981-02-20',1600.00,300.00,30);
```

```
INSERT INTO Emp_table VALUES(7521,"Ward","Salesman",7698,'1981-02-22',1250.00,500.00,30);
```

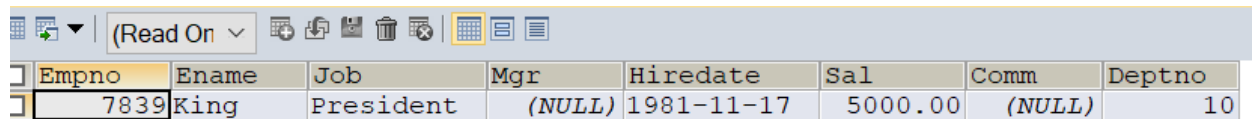
```
INSERT INTO Emp_table VALUES(7566,"Jones","manager",7839,'1981-04-02',2975.00,NULL,20);
```

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```
INSERT INTO Emp_table VALUES(7654,"Martin","Salesman",7698,'1981-09-28',1250.00,1400.00,30);
INSERT INTO Emp_table VALUES(7698,"Blake","Manager",7839,'1981-05-01',2850.00,NULL,30);
INSERT INTO Emp_table VALUES(7782,"Clark","Manager",7839,'1981-06-09',2450.00,NULL,10);
INSERT INTO Emp_table VALUES(7788,"Scott","Analyst",7566,'1987-06-11',3000.00,NULL,20);
INSERT INTO Emp_table VALUES(7839,"King","President",NULL,'1981-11-17',5000.00,NULL,10);
INSERT INTO Emp_table VALUES(7844,"Turner","Salesman",7698,'1981-08-09',1500.00,0.00,30);
INSERT INTO Emp_table VALUES(7876,"Adams","Clerk",7788,'1987-07-13',1100.00,NULL,20);
INSERT INTO Emp_table VALUES(7900,"James","Clerk",7698,'1981-03-12',950.00,NULL,30);
INSERT INTO Emp_table VALUES(7902,"Ford","Analyst",7566,'1981-03-12',3000.00,NULL,20);
INSERT INTO Emp_table VALUES(7934,"Miller","Clerk",7782,'1982-01-23',1300.00,NULL,10);
```

1. Select unique job from EMP table.

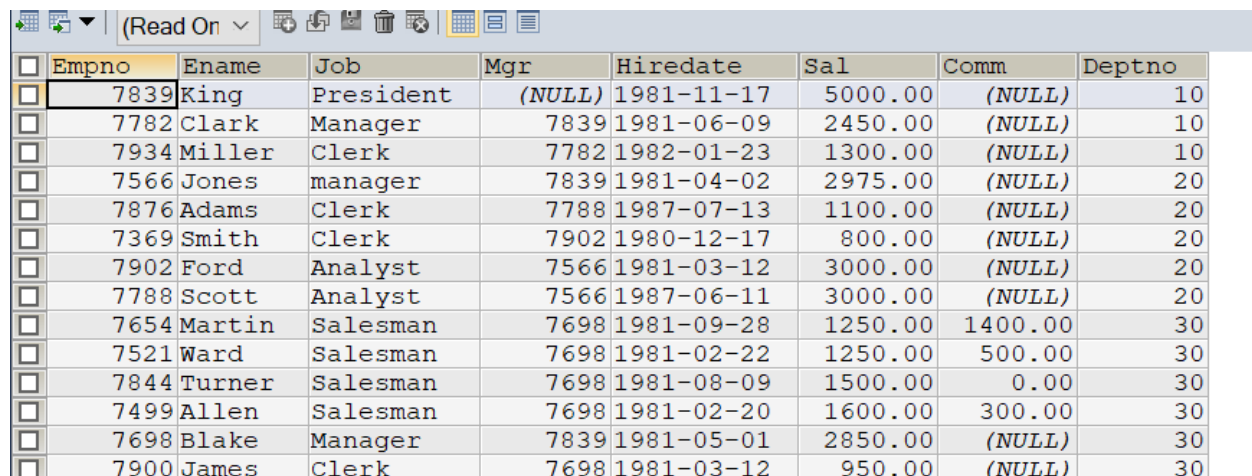
Answer: SELECT * FROM emp_table WHERE Job="President";



Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10

2. List the details of the emps in asc order of the Deptnos and desc of Jobs?

Answer: SELECT * FROM emp_table ORDER BY deptno ASC, job DESC;

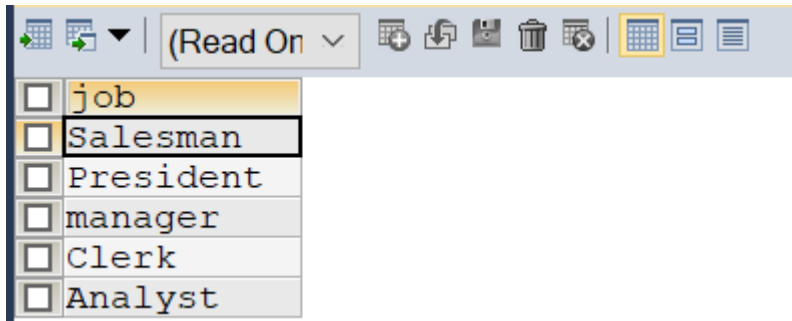


Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10
7782	Clark	Manager	7839	1981-06-09	2450.00	(NULL)	10
7934	Miller	Clerk	7782	1982-01-23	1300.00	(NULL)	10
7566	Jones	manager	7839	1981-04-02	2975.00	(NULL)	20
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20
7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
7654	Martin	Salesman	7698	1981-09-28	1250.00	1400.00	30
7521	Ward	Salesman	7698	1981-02-22	1250.00	500.00	30
7844	Turner	Salesman	7698	1981-08-09	1500.00	0.00	30
7499	Allen	Salesman	7698	1981-02-20	1600.00	300.00	30
7698	Blake	Manager	7839	1981-05-01	2850.00	(NULL)	30
7900	James	Clerk	7698	1981-03-12	950.00	(NULL)	30

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3. Display all the unique job groups in the descending order?

Answer: `SELECT DISTINCT job FROM emp_table ORDER BY job DESC;`

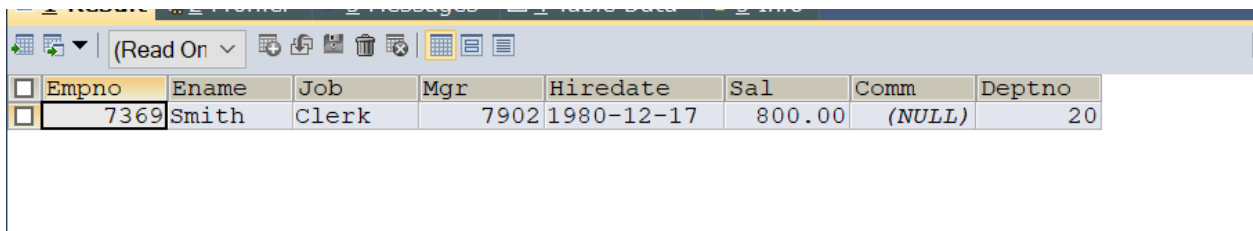


The screenshot shows a database query result with a toolbar at the top. The toolbar includes icons for grid, zoom, and a dropdown menu set to '(Read On)'. Below the toolbar is a list of job titles, each with a checkbox to its left. The jobs are listed in descending order: job, Salesman, President, manager, Clerk, and Analyst.

<input type="checkbox"/>	job
<input type="checkbox"/>	Salesman
<input type="checkbox"/>	President
<input type="checkbox"/>	manager
<input type="checkbox"/>	Clerk
<input type="checkbox"/>	Analyst

4. List the emps who joined before 1981

Answer: `SELECT * FROM Emp_table WHERE hiredate < '1981-01-01';`

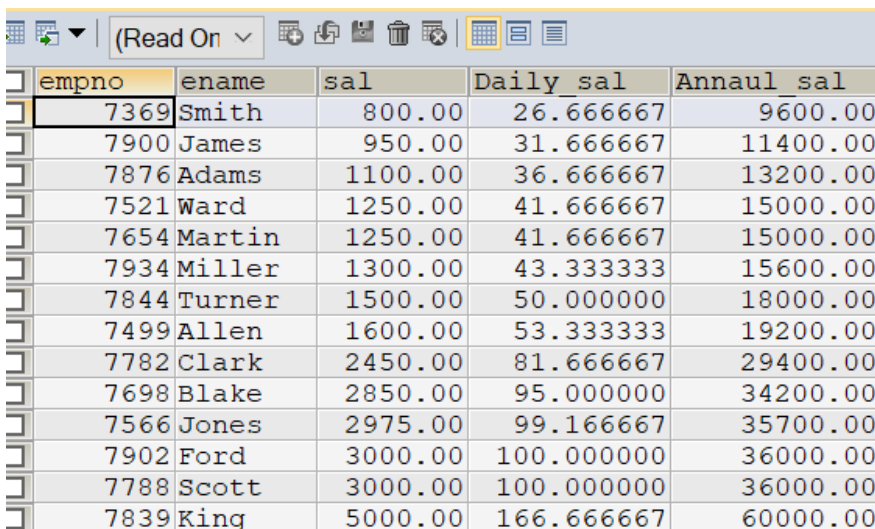


The screenshot shows a database query result with a toolbar at the top. The toolbar includes icons for grid, zoom, and a dropdown menu set to '(Read On)'. Below the toolbar is a table with columns: Empno, Ename, Job, Mgr, Hiredate, Sal, Comm, and Deptno. The table contains one row of data: Empno 7369, Ename Smith, Job Clerk, Mgr 7902, Hiredate 1980-12-17, Sal 800.00, Comm (NULL), and Deptno 20.

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20

5. List the Empno, Ename, Sal, Daily sal of all emps in the asc order of Annalsal

Answer: `SELECT empno,ename,sal,(sal/30) AS Daily_sal,(sal*12) AS Annaul_sal FROM emp_table ORDER BY annaul_sal ASC;`



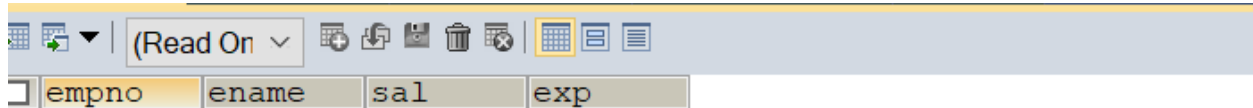
The screenshot shows a database query result with a toolbar at the top. The toolbar includes icons for grid, zoom, and a dropdown menu set to '(Read On)'. Below the toolbar is a table with columns: empno, ename, sal, Daily_sal, and Annaul_sal. The table contains 15 rows of data, sorted by Annaul_sal in ascending order.

empno	ename	sal	Daily_sal	Annaul_sal
7369	Smith	800.00	26.666667	9600.00
7900	James	950.00	31.666667	11400.00
7876	Adams	1100.00	36.666667	13200.00
7521	Ward	1250.00	41.666667	15000.00
7654	Martin	1250.00	41.666667	15000.00
7934	Miller	1300.00	43.333333	15600.00
7844	Turner	1500.00	50.000000	18000.00
7499	Allen	1600.00	53.333333	19200.00
7782	Clark	2450.00	81.666667	29400.00
7698	Blake	2850.00	95.000000	34200.00
7566	Jones	2975.00	99.166667	35700.00
7902	Ford	3000.00	100.000000	36000.00
7788	Scott	3000.00	100.000000	36000.00
7839	King	5000.00	166.666667	60000.00

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6. List the Empno, Ename, Sal, Exp of all emps working for Mgr 7369.

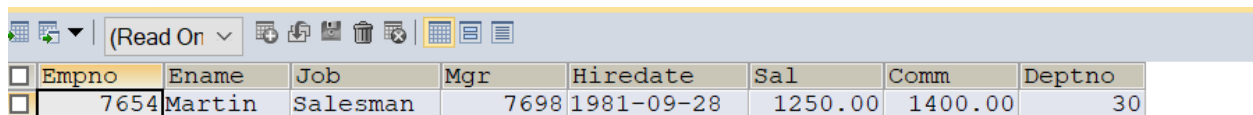
Answer: SELECT empno,ename,sal,ROUND((CURRENT_DATE - hiredate)/365) AS EXP FROM emp_table WHERE mgr=7369;



empno	ename	sal	exp
-------	-------	-----	-----

7. Display all the details of the emps who's Comm. Is more than their Sal?

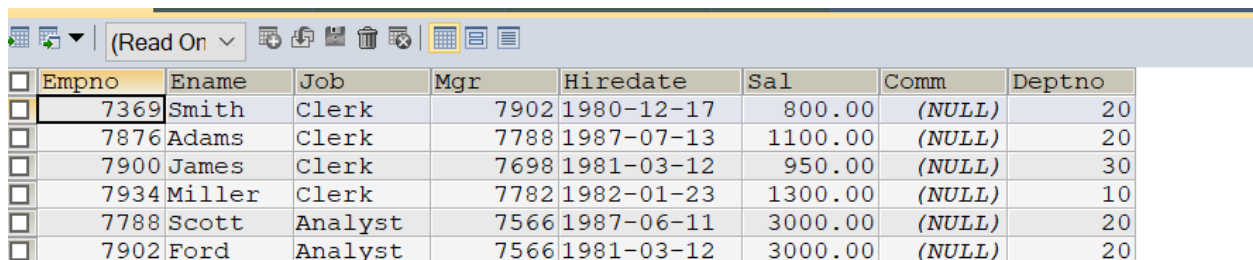
Answer: SELECT * FROM emp_table WHERE comm > sal;



Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7654	Martin	Salesman	7698	1981-09-28	1250.00	1400.00	30

8. List the emps who are either 'CLERK' or 'ANALYST' in the Desc order

Answer: SELECT * FROM emp_table WHERE job="Clerk" OR job="Analyst" ORDER BY job DESC;



Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20
7900	James	Clerk	7698	1981-03-12	950.00	(NULL)	30
7934	Miller	Clerk	7782	1982-01-23	1300.00	(NULL)	10
7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20

9. List the emps Who Annual sal ranging from 22000 and 45000.

Answer: SELECT * FROM emp_table WHERE (sal*12) BETWEEN 22000 AND 45000;

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<input type="checkbox"/> Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
<input type="checkbox"/> 7566	Jones	manager	7839	1981-04-02	2975.00	(NULL)	20
<input type="checkbox"/> 7698	Blake	Manager	7839	1981-05-01	2850.00	(NULL)	30
<input type="checkbox"/> 7782	Clark	Manager	7839	1981-06-09	2450.00	(NULL)	10
<input type="checkbox"/> 7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
<input type="checkbox"/> 7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20

10. List the Enames those are starting with 'S' and with five characters.

Answer: SELECT ename FROM emp_table WHERE ename LIKE 's____%';

<input type="checkbox"/> ename
<input type="checkbox"/> Smith
<input type="checkbox"/> Scott

11. List the emps whose Empno not starting with digit 78

Answer: SELECT * FROM emp_table WHERE empno NOT LIKE '78%';

<input type="checkbox"/> Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
<input type="checkbox"/> 7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
<input type="checkbox"/> 7499	Allen	Salesman	7698	1981-02-20	1600.00	300.00	30
<input type="checkbox"/> 7521	Ward	Salesman	7698	1981-02-22	1250.00	500.00	30
<input type="checkbox"/> 7566	Jones	manager	7839	1981-04-02	2975.00	(NULL)	20
<input type="checkbox"/> 7654	Martin	Salesman	7698	1981-09-28	1250.00	1400.00	30
<input type="checkbox"/> 7698	Blake	Manager	7839	1981-05-01	2850.00	(NULL)	30
<input type="checkbox"/> 7782	Clark	Manager	7839	1981-06-09	2450.00	(NULL)	10
<input type="checkbox"/> 7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
<input type="checkbox"/> 7900	James	Clerk	7698	1981-03-12	950.00	(NULL)	30
<input type="checkbox"/> 7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20
<input type="checkbox"/> 7934	Miller	Clerk	7782	1982-01-23	1300.00	(NULL)	10

12. List all the Clerks of Deptno 20.

Answer: SELECT * FROM emp_table WHERE job="Clerk" AND deptno=20;

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Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20

13. List the Emps who are senior to their own MGRS.

Answer:

14. List the Emps of Deptno 20 who's Jobs are same as Deptno10.

Answer: SELECT * FROM emp_table WHERE deptno=20 AND job IN(SELECT DISTINCT job FROM emp_table WHERE deptno=10);

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7566	Jones	manager	7839	1981-04-02	2975.00	(NULL)	20
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20

15. List the Emps who's Sal is same as FORD or SMITH in desc order of Sal.

Answer: SELECT * FROM emp_table WHERE sal=(SELECT sal FROM emp_table WHERE ename="Ford") OR sal=(SELECT sal FROM emp_table WHERE ename="Smith") ORDER BY sal DESC;

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20

16. List the emps whose jobs same as SMITH or ALLEN

Answer: SELECT * FROM emp_table WHERE job=(SELECT job FROM emp_table WHERE ename="Smith") OR job=(SELECT job FROM emp_table WHERE ename="Allen");

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Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7499	Allen	Salesman	7698	1981-02-20	1600.00	300.00	30
7521	Ward	Salesman	7698	1981-02-22	1250.00	500.00	30
7654	Martin	Salesman	7698	1981-09-28	1250.00	1400.00	30
7844	Turner	Salesman	7698	1981-08-09	1500.00	0.00	30
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20
7900	James	Clerk	7698	1981-03-12	950.00	(NULL)	30
7934	Miller	Clerk	7782	1982-01-23	1300.00	(NULL)	10

17. Any jobs of deptno 10 those that are not found in deptno 20.

Answer: SELECT * FROM emp_table WHERE deptno=10 AND job NOT IN(SELECT DISTINCT job FROM emp_table WHERE deptno=20);

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10

18. Find the highest sal of EMP table

Answer: SELECT MAX(sal) AS Highest_Salary FROM emp_table;

Highest Salary
5000.00

19. Find details of highest paid employee.

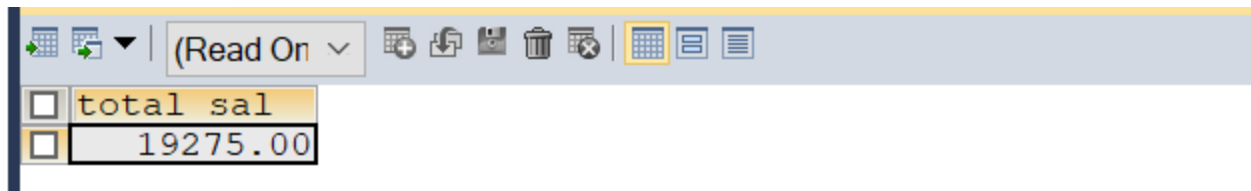
Answer: SELECT * FROM emp_table WHERE sal=5000.00;

Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10

20. Find the total sal given to the MGR

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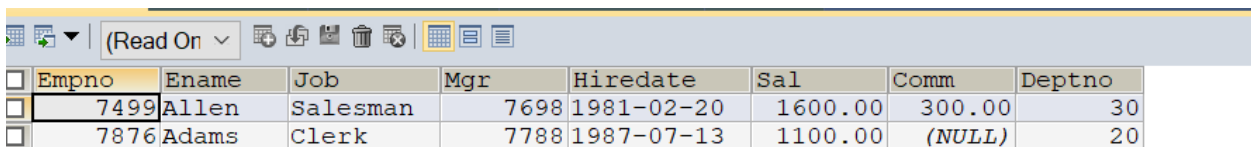
Answer: `SELECT SUM(sal) AS total_sal FROM emp_table WHERE empno IN (SELECT DISTINCT mgr FROM emp_table WHERE mgr IS NOT NULL);`



total sal
19275.00

21. List the emps whose names contains 'A'

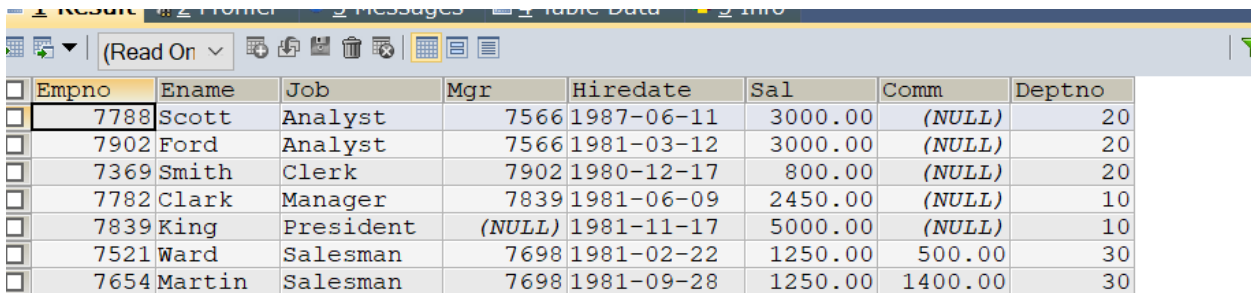
Answer: `SELECT * FROM emp_table WHERE ename LIKE 'A%';`



Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7499	Allen	Salesman	7698	1981-02-20	1600.00	300.00	30
7876	Adams	Clerk	7788	1987-07-13	1100.00	(NULL)	20

22. Find all the emps who earn the minimum Salary for each job wise in ascending order.

Answer: `SELECT * FROM Emp_table e WHERE sal=(SELECT MIN(sal) FROM emp_table WHERE job=e.job) ORDER BY job ASC;`



Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20
7369	Smith	Clerk	7902	1980-12-17	800.00	(NULL)	20
7782	Clark	Manager	7839	1981-06-09	2450.00	(NULL)	10
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10
7521	Ward	Salesman	7698	1981-02-22	1250.00	500.00	30
7654	Martin	Salesman	7698	1981-09-28	1250.00	1400.00	30

23. List the emps whose sal greater than Blake's sal.

Answer: `SELECT * FROM emp_table WHERE sal > (SELECT sal FROM emp_table WHERE ename="Blake");`

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Empno	Ename	Job	Mgr	Hiredate	Sal	Comm	Deptno
7566	Jones	manager	7839	1981-04-02	2975.00	(NULL)	20
7788	Scott	Analyst	7566	1987-06-11	3000.00	(NULL)	20
7839	King	President	(NULL)	1981-11-17	5000.00	(NULL)	10
7902	Ford	Analyst	7566	1981-03-12	3000.00	(NULL)	20

24. Create view v1 to select ename, job, dname, loc whose deptno are same

Answer: CREATE VIEW v1 AS SELECT e.ename,e.job,d.dname,d.loc FROM emp_table e JOIN dept_table d WHERE e.deptno=d.deptno;

ename	job	dname	loc
Clark	Manager	Accounting	New York
King	President	Accounting	New York
Miller	Clerk	Accounting	New York
Smith	Clerk	Research	Dallas
Jones	manager	Research	Dallas
Scott	Analyst	Research	Dallas
Adams	Clerk	Research	Dallas
Ford	Analyst	Research	Dallas
Allen	Salesman	Sales	Chicago
Ward	Salesman	Sales	Chicago
Martin	Salesman	Sales	Chicago
Blake	Manager	Sales	Chicago
Turner	Salesman	Sales	Chicago
James	Clerk	Sales	Chicago
★ (NULL)	(NULL)	(NULL)	(NULL)