# DBMS PRACTICAL

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```
create table DEPARTMENT
(
  Dno number(2) primary key,
  Dname varchar(50),
  location varchar(50) Default'New Delhi'
);
```

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---|---|---|---|---|---|---|---|---|---|
| DEPARTMENT | DNO | Number | - | 2 | 0 | 1 | - | - | - |
| | DNAME | Varchar2 | 50 | - | - | - | ✓ | - | - |
| | LOCATION | Varchar2 | 50 | - | - | - | ✓ | 'New Delhi' | - |

| DNO | DNAME | LOCATION |
|---|---|---|
| 10 | Accounting | New York |
| 20 | Research | Dallas |
| 30 | Sales | Chicago |
| 40 | Operation | Boston |
| 50 | Marketing | New Delhi |

```
create table EMPLOYEE
(
   Eno char(3) primary key,
   Ename varchar(50) NOT NULL,
   Job_type varchar(50) NOT NULL,
   Manager char(3),
   Hire_date date NOT NULL,
   Dno number(2),
   Commission decimal(10,2),
   Salary decimal(7,2) NOT NULL,
   foreign key(Manager) REFERENCES EMPLOYEE(Eno),
   foreign key(Dno) REFERENCES DEPARTMENT(Dno)
);
```

| Table | Column | Data Type | Length | Precision | Scale | Primary Key | Nullable | Default | Comment |
|---|---|---|---|---|---|---|---|---|---|
| EMPLOYEE | ENO | Char | 3 | - | - | 1 | - | - | - |
| | ENAME | Varchar2 | 50 | - | - | - | - | - | - |
| | JOB_TYPE | Varchar2 | 50 | - | - | - | - | - | - |
| | MANAGER | Char | 3 | - | - | - | ✓ | - | - |
| | HIRE_DATE | Date | 7 | - | - | - | - | - | - |
| | DNO | Number | - | 2 | 0 | - | ✓ | - | - |
| | COMMISSION | Number | - | 10 | 2 | - | ✓ | - | - |
| | SALARY | Number | - | 7 | 2 | - | - | - | - |

| ENO | ENAME | JOB_TYPE | MANAGER | HIRE_DATE | DNO | COMMISSION | SALARY |
|---|---|---|---|---|---|---|---|
| 783 | King | President | - | 17-NOV-81 | 10 | 0 | 2950 |
| 756 | Jones | Manager | 783 | 02-APR-81 | 20 | 0 | 2300 |
| 778 | Clark | Manager | 783 | 09-JUN-81 | 10 | 0 | 2900 |
| 769 | Blake | Manager | 783 | 01-MAY-81 | 30 | 0 | 2870 |
| 752 | Ward | Sales_man | 769 | 22-FEB-81 | 30 | 500 | 1300 |
| 749 | Allan | Sales_man | 769 | 20-FEB-81 | 30 | 300 | 2000 |
| 784 | Turner | Sales_man | 769 | 08-SEP-81 | 30 | 0 | 1450 |
| 792 | Ford | Analyst | 756 | 03-DEC-81 | 20 | 0 | 2600 |
| 788 | Scott | Analyst | 756 | 09-DEC-82 | 20 | 0 | 2850 |
| 790 | James | Clerk | 769 | 03-DEC-81 | 30 | 0 | 950 |
| 736 | Smith | Clerk | 790 | 17-DEC-80 | 20 | 0 | 1000 |
| 793 | Miller | Clerk | 788 | 23-JAN-82 | 40 | 0 | 1300 |
| 787 | Adams | Clerk | 778 | 12-JAN-83 | 20 | 0 | 1150 |
| 765 | Martin | Sales_man | 769 | 22-APR-81 | 30 | 1400 | 1250 |

**1) Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.**

```
SELECT ENO, ENAME, JOB_TYPE, HIRE_DATE
FROM EMPLOYEE
```

| ENO | ENAME | JOB_TYPE | HIRE_DATE |
|---|---|---|---|
| 783 | King | President | 17-NOV-81 |
| 756 | Jones | Manager | 02-APR-81 |
| 778 | Clark | Manager | 09-JUN-81 |
| 769 | Blake | Manager | 01-MAY-81 |
| 752 | Ward | Sales_man | 22-FEB-81 |
| 749 | Allan | Sales_man | 20-FEB-81 |
| 784 | Turner | Sales_man | 08-SEP-81 |
| 792 | Ford | Analyst | 03-DEC-81 |
| 788 | Scott | Analyst | 09-DEC-82 |
| 790 | James | Clerk | 03-DEC-81 |
| 736 | Smith | Clerk | 17-DEC-80 |
| 793 | Miller | Clerk | 23-JAN-82 |
| 787 | Adams | Clerk | 12-JAN-83 |
| 765 | Martin | Sales_man | 22-APR-81 |

**2) Query to display Unique Jobs from the Employee Table.**

```
SELECT DISTINCT JOB_TYPE
FROM EMPLOYEE
```

| JOB_TYPE |
|---|
| Manager |
| Analyst |
| Clerk |
| President |
| Sales_man |

**3) Query to display the Employee Name concatenated by a Job separated by a comma.**

```
SELECT(ENAME || ' , ' || JOB_TYPE)
FROM EMPLOYEE
```

| (ENAME\|\|','\|\|JOB_TYPE) |
|---|
| King , President |
| Jones , Manager |
| Clark , Manager |
| Blake , Manager |
| Ward , Sales_man |
| Allan , Sales_man |
| Turner , Sales_man |
| Ford , Analyst |
| Scott , Analyst |
| James , Clerk |
| Smith , Clerk |
| Miller , Clerk |
| Adams , Clerk |
| Martin , Sales_man |

**4) Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.**

```
SELECT(ENO || ' , ' || ENAME || ' , ' || JOB_TYPE || ' , ' || MANAGER || ' , ' || HIRE_DATE || ' , ' || DNO || ' , ' || COMMISSION || ' , ' || SALARY )
THE_OUTPUT
FROM EMPLOYEE
```

| THE_OUTPUT |
|---|
| 783 , King , President , , 17-NOV-81 , 10 , 0 , 2950 |
| 756 , Jones , Manager , 783 , 02-APR-81 , 20 , 0 , 2300 |
| 778 , Clark , Manager , 783 , 09-JUN-81 , 10 , 0 , 2900 |
| 769 , Blake , Manager , 783 , 01-MAY-81 , 30 , 0 , 2870 |
| 752 , Ward , Sales_man , 769 , 22-FEB-81 , 30 , 500 , 1300 |
| 749 , Allan , Sales_man , 769 , 20-FEB-81 , 30 , 300 , 2000 |
| 784 , Turner , Sales_man , 769 , 08-SEP-81 , 30 , 0 , 1450 |
| 792 , Ford , Analyst , 756 , 03-DEC-81 , 20 , 0 , 2600 |
| 788 , Scott , Analyst , 756 , 09-DEC-82 , 20 , 0 , 2850 |
| 790 , James , Clerk , 769 , 03-DEC-81 , 30 , 0 , 950 |
| 736 , Smith , Clerk , 790 , 17-DEC-80 , 20 , 0 , 1000 |
| 793 , Miller , Clerk , 788 , 23-JAN-82 , 40 , 0 , 1300 |
| 787 , Adams , Clerk , 778 , 12-JAN-83 , 20 , 0 , 1150 |
| 765 , Martin , Sales_man , 769 , 22-APR-81 , 30 , 1400 , 1250 |

**5) Query to display the Employee Name & Salary of all the employees earning more than $2850.**

```
SELECT ENAME, SALARY
FROM EMPLOYEE
WHERE SALARY > 2850
```

| ENAME | SALARY |
|---|---|
| King | 2950 |
| Clark | 2900 |
| Blake | 2870 |

**6) Query to display Employee Name & Department Number for the Employee No= 790.**

```
SELECT ENAME,DNO
FROM EMPLOYEE
WHERE ENO=790
```

| ENAME | DNO |
|---|---|
| James | 30 |

**7) Query to display Employee Name & Salary for all employees whose salary is not in the range of $1500 and $2850.**

```
SELECT ENAME, SALARY
FROM EMPLOYEE
WHERE SALARY NOT BETWEEN 1500 AND 2850
```

| ENAME | SALARY |
|---|---|
| King | 2950 |
| Clark | 2900 |
| Blake | 2870 |
| Ward | 1300 |
| Turner | 1450 |
| James | 950 |
| Smith | 1000 |
| Miller | 1300 |
| Adams | 1150 |
| Martin | 1250 |

**8) Query to display Employee Name, Job, and Hire Date of all the employees hired between Feb 20, 1981 and May 1, 1981. Order the query in ascending order of Hire Date.**

```
SELECT ENAME, JOB_TYPE, HIRE_DATE
FROM EMPLOYEE
WHERE HIRE_DATE BETWEEN '20-FEB-81' AND '01-MAY-81'
ORDER BY HIRE_DATE
```

| ENAME | JOB_TYPE | HIRE_DATE |
|---|---|---|
| Allan | Sales_man | 20-FEB-81 |
| Ward | Sales_man | 22-FEB-81 |
| Jones | Manager | 02-APR-81 |
| Martin | Sales_man | 22-APR-81 |
| Blake | Manager | 01-MAY-81 |

**9) Query to display Employee Name & Department No. of all the employees in Dept 10 and Dept 30 in the alphabetical order by name.**

```
SELECT ENAME,DNO
FROM EMPLOYEE
WHERE DNO=10 OR DNO=30
ORDER BY ENAME
```

| ENAME | DNO |
|---|---|
| Allan | 30 |
| Blake | 30 |
| Clark | 10 |
| James | 30 |
| King | 10 |
| Martin | 30 |
| Turner | 30 |
| Ward | 30 |

**10) Query to display Employee Name & Salary of employees who earned more than $1500 and are in Department 10 or 30.**

```
SELECT ENAME,SALARY
FROM EMPLOYEE
WHERE SALARY > 1500 AND (DNO=10 OR DNO=30)
```

| ENAME | SALARY |
|---|---|
| King | 2950 |
| Clark | 2900 |
| Blake | 2870 |
| Allan | 2000 |

**11) Query to display Name & Hire Date of every Employee who was hired in 1981.**

```
SELECT ENAME, HIRE_DATE
FROM EMPLOYEE
WHERE HIRE_DATE LIKE '%81'
```

| ENAME | HIRE_DATE |
|---|---|
| King | 17-NOV-81 |
| Jones | 02-APR-81 |
| Clark | 09-JUN-81 |
| Blake | 01-MAY-81 |
| Ward | 22-FEB-81 |
| Allan | 20-FEB-81 |
| Turner | 08-SEP-81 |
| Ford | 03-DEC-81 |
| James | 03-DEC-81 |
| Martin | 22-APR-81 |

**12) Query to display Name & Job of all employees who don't have a current Manager.**

```
SELECT ENAME, JOB_TYPE
FROM EMPLOYEE
WHERE MANAGER IS NULL
```

| ENAME | JOB_TYPE |
|---|---|
| King | President |

**13) Query to display the Name, Salary & Commission for all the employees who earn commission. Sort the data in descending order of Salary and Commission.**

```
SELECT ENAME, SALARY, COMMISSION
FROM EMPLOYEE
WHERE COMMISSION > 0
ORDER BY SALARY DESC,COMMISSION DESC
```

| ENAME | SALARY | COMMISSION |
|---|---|---|
| Allan | 2000 | 300 |
| Ward | 1300 | 500 |
| Martin | 1250 | 1400 |

**14) Query to display Name of all the employees where the third letter of their name is ‘A’.**

```
SELECT ENAME
FROM EMPLOYEE
WHERE ENAME LIKE '__a%'
```

| ENAME |
|---|
| Clark |
| Blake |
| Adams |

**15) Query to display Name of all employees either have two ‘R’s or have two ‘A’s in their name & are either in Dept No = 30 or their Manger’s Employee No = 778.**

```
SELECT ENAME
FROM EMPLOYEE
WHERE (ENAME LIKE 'R%r%' OR ENAME LIKE '%r%r%' OR ENAME LIKE 'A%a%' OR ENAME
LIKE '%a%a%') AND (DNO=30 OR MANAGER=778)
```

| ENAME |
|---|
| Allan |
| Turner |
| Adams |

**16) Query to display Name, Job and Salary of all employees whose Job is Clerical or Analyst & their salaries are not equal to 1000, 3000, or 5000.**

```
SELECT ENAME, JOB_TYPE, SALARY
FROM EMPLOYEE
WHERE (JOB_TYPE='Clerk' OR JOB_TYPE='Analyst') AND SALARY NOT IN(1000,3000,5000)
```

| ENAME | JOB_TYPE | SALARY |
|---|---|---|
| Ford | Analyst | 2600 |
| Scott | Analyst | 2850 |
| James | Clerk | 950 |
| Miller | Clerk | 1300 |
| Adams | Clerk | 1150 |

**17) Query to display Name, Salary and Commission for all employees whose Commission Amount is greater than their Salary increased by 5 %.**

```
SELECT ENAME, SALARY, COMMISSION
FROM EMPLOYEE
WHERE (COMMISSION > 1.05 * SALARY)
```

| ENAME | SALARY | COMMISSION |
|---|---|---|
| Martin | 1250 | 1400 |

**18) Query to display the Current Date.**

```
SELECT sysdate
FROM DUAL
```

| SYSDATE |
|---|
| 16-SEP-15 |

**19) Query to display Employee No., Name, Salary and the Salary increased by 15 % expressed as a absolute whole number.**

```
SELECT ENO, ENAME, SALARY, round(SALARY*1.15)
FROM EMPLOYEE
```

| ENO | ENAME | SALARY | ROUND(SALARY*1.15) |
|---|---|---|---|
| 783 | King | 2950 | 3393 |
| 756 | Jones | 2300 | 2645 |
| 778 | Clark | 2900 | 3335 |
| 769 | Blake | 2870 | 3301 |
| 752 | Ward | 1300 | 1495 |
| 749 | Allan | 2000 | 2300 |
| 784 | Turner | 1450 | 1668 |
| 792 | Ford | 2600 | 2990 |
| 788 | Scott | 2850 | 3278 |
| 790 | James | 950 | 1093 |
| 736 | Smith | 1000 | 1150 |
| 793 | Miller | 1300 | 1495 |
| 787 | Adams | 1150 | 1323 |
| 765 | Martin | 1250 | 1438 |

**20) Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.**

SELECT ENAME, HIRE_DATE, next_day(add_months(HIRE_DATE,6),'Monday') AS "SALARY REVIEW DATE"
FROM EMPLOYEE

| ENAME | HIRE_DATE | SALARY REVIEW DATE |
|---|---|---|
| King | 17-NOV-81 | 24-MAY-82 |
| Jones | 02-APR-81 | 05-OCT-81 |
| Clark | 09-JUN-81 | 14-DEC-81 |
| Blake | 01-MAY-81 | 02-NOV-81 |
| Ward | 22-FEB-81 | 24-AUG-81 |
| Allan | 20-FEB-81 | 24-AUG-81 |
| Turner | 08-SEP-81 | 15-MAR-82 |
| Ford | 03-DEC-81 | 07-JUN-82 |
| Scott | 09-DEC-82 | 13-JUN-83 |
| James | 03-DEC-81 | 07-JUN-82 |
| Smith | 17-DEC-80 | 22-JUN-81 |
| Miller | 23-JAN-82 | 26-JUL-82 |
| Adams | 12-JAN-83 | 18-JUL-83 |
| Martin | 22-APR-81 | 26-OCT-81 |

**21) Query to display the employees that earn a salary that is higher than the salary of any of the clerks.**

SELECT *
FROM EMPLOYEE
WHERE SALARY > ANY ( SELECT SALARY FROM EMPLOYEE WHERE JOB_TYPE = 'Clerk' )

| ENO | ENAME | JOB_TYPE | MANAGER | HIRE_DATE | DNO | COMMISSION | SALARY |
|---|---|---|---|---|---|---|---|
| 783 | King | President | - | 17-NOV-81 | 10 | 0 | 2950 |
| 778 | Clark | Manager | 783 | 09-JUN-81 | 10 | 0 | 2900 |
| 769 | Blake | Manager | 783 | 01-MAY-81 | 30 | 0 | 2870 |
| 788 | Scott | Analyst | 756 | 09-DEC-82 | 20 | 0 | 2850 |
| 792 | Ford | Analyst | 756 | 03-DEC-81 | 20 | 0 | 2600 |
| 756 | Jones | Manager | 783 | 02-APR-81 | 20 | 0 | 2300 |
| 749 | Allan | Sales_man | 769 | 20-FEB-81 | 30 | 300 | 2000 |
| 784 | Turner | Sales_man | 769 | 08-SEP-81 | 30 | 0 | 1450 |
| 752 | Ward | Sales_man | 769 | 22-FEB-81 | 30 | 500 | 1300 |
| 793 | Miller | Clerk | 788 | 23-JAN-82 | 40 | 0 | 1300 |
| 765 | Martin | Sales_man | 769 | 22-APR-81 | 30 | 1400 | 1250 |
| 787 | Adams | Clerk | 778 | 12-JAN-83 | 20 | 0 | 1150 |
| 736 | Smith | Clerk | 790 | 17-DEC-80 | 20 | 0 | 1000 |

**22) Query to display Name and calculate the number of months between today and the date each employee was hired.**

SELECT ENAME, round(months_between(sysdate,hire_date))as "Months Between"
FROM EMPLOYEE

| ENAME | Months Between |
|---|---|
| King | 406 |
| Jones | 413 |
| Clark | 411 |
| Blake | 413 |
| Ward | 415 |
| Allan | 415 |
| Turner | 408 |
| Ford | 405 |
| Scott | 393 |
| James | 405 |
| Smith | 417 |
| Miller | 404 |
| Adams | 392 |
| Martin | 413 |

**23) Query to display the following for each employee:-**
**<E-Name> earns < Salary> monthly but wants < 3 * Current Salary >.**
**Label the Column as Dream Salary.**

SELECT ENAME || ' earns ' || SALARY || ' monthly but wants ' || 3 * SALARY as "DREAM SALARY"
FROM EMPLOYEE

| DREAM SALARY |
|---|
| King earns 2950 monthly but wants 8850 |
| Jones earns 2300 monthly but wants 6900 |
| Clark earns 2900 monthly but wants 8700 |
| Blake earns 2870 monthly but wants 8610 |
| Ward earns 1300 monthly but wants 3900 |
| Allan earns 2000 monthly but wants 6000 |
| Turner earns 1450 monthly but wants 4350 |
| Ford earns 2600 monthly but wants 7800 |
| Scott earns 2850 monthly but wants 8550 |
| James earns 950 monthly but wants 2850 |
| Smith earns 1000 monthly but wants 3000 |
| Miller earns 1300 monthly but wants 3900 |
| Adams earns 1150 monthly but wants 3450 |
| Martin earns 1250 monthly but wants 3750 |

**24) Query to display Name and Salary for all employees. Format the salary to be 15 character long, left padded with $ sign.**

```
SELECT ENAME, SALARY, LPAD(SALARY,15,'$')
FROM EMPLOYEE
```

| ENAME | SALARY | LPAD(SALARY,15,'$') |
|---|---|---|
| King | 2950 | $$$$$$$$$$2950 |
| Jones | 2300 | $$$$$$$$$$2300 |
| Clark | 2900 | $$$$$$$$$$2900 |
| Blake | 2870 | $$$$$$$$$$2870 |
| Ward | 1300 | $$$$$$$$$$1300 |
| Allan | 2000 | $$$$$$$$$$2000 |
| Turner | 1450 | $$$$$$$$$$1450 |
| Ford | 2600 | $$$$$$$$$$2600 |
| Scott | 2850 | $$$$$$$$$$2850 |
| James | 950 | $$$$$$$$$$$950 |
| Smith | 1000 | $$$$$$$$$$1000 |
| Miller | 1300 | $$$$$$$$$$1300 |
| Adams | 1150 | $$$$$$$$$$1150 |
| Martin | 1250 | $$$$$$$$$$1250 |

**25) Query to display Name with the 1st letter capitalized and all other letter lower case & length of their name of all the employees whose name starts with 'J','A' and 'M'.**

```
SELECT initcap(ENAME) "NAME", length(ENAME)"LENGTH"
FROM EMPLOYEE
WHERE ENAME LIKE 'J%' OR ENAME LIKE 'A%' OR ENAME LIKE 'M%'
```

| NAME | LENGTH |
|---|---|
| Jones | 5 |
| Allan | 5 |
| James | 5 |
| Miller | 6 |
| Adams | 5 |
| Martin | 6 |

**26) Query to display Name, Hire Date and Day of the week on which the employee started.**

```
SELECT ENAME, HIRE_DATE, to_char(HIRE_DATE,'DAY')"DAY"
FROM EMPLOYEE
```

| ENAME | HIRE_DATE | DAY |
|---|---|---|
| King | 17-NOV-81 | TUESDAY |
| Jones | 02-APR-81 | THURSDAY |
| Clark | 09-JUN-81 | TUESDAY |
| Blake | 01-MAY-81 | FRIDAY |
| Ward | 22-FEB-81 | SUNDAY |
| Allan | 20-FEB-81 | FRIDAY |
| Turner | 08-SEP-81 | TUESDAY |
| Ford | 03-DEC-81 | THURSDAY |
| Scott | 09-DEC-82 | THURSDAY |
| James | 03-DEC-81 | THURSDAY |
| Smith | 17-DEC-80 | WEDNESDAY |
| Miller | 23-JAN-82 | SATURDAY |
| Adams | 12-JAN-83 | WEDNESDAY |
| Martin | 22-APR-81 | WEDNESDAY |

**27) Query to display Name and Commission Amount. If the employee does not earn commission then use default value 'No Commission'.**

```
SELECT ENAME, decode(COMMISSION,0,'No Commission',COMMISSION)"COMMISSION"
FROM EMPLOYEE
```

| ENAME | COMMISSION |
|---|---|
| King | No Commission |
| Jones | No Commission |
| Clark | No Commission |
| Blake | No Commission |
| Ward | 500 |
| Allan | 300 |
| Turner | No Commission |
| Ford | No Commission |
| Scott | No Commission |
| James | No Commission |
| Smith | No Commission |
| Miller | No Commission |
| Adams | No Commission |
| Martin | 140 |

**28) Query to display Name, Department Name and Department No for all the employees.**

```
SELECT ENAME, DNAME, D.DNO
FROM EMPLOYEE E, DEPARTMENT D
WHERE E.DNO = D.DNO
```

| ENAME | DNAME | DNO |
|---|---|---|
| King | Accounting | 10 |
| Jones | Research | 20 |
| Clark | Accounting | 10 |
| Blake | Sales | 30 |
| Ward | Sales | 30 |
| Allan | Sales | 30 |
| Turner | Sales | 30 |
| Ford | Research | 20 |
| Scott | Research | 20 |
| James | Sales | 30 |
| Smith | Research | 20 |
| Miller | Operation | 40 |
| Adams | Research | 20 |
| Martin | Sales | 30 |

**29) Query to display Unique Listing of all Jobs that are in Department # 30.**

```
SELECT DISTINCT JOB_TYPE
FROM EMPLOYEE
WHERE DNO=30
```

| JOB_TYPE |
|---|
| Manager |
| Clerk |
| Sales_man |

**30) Query to display Name, Department Name and Location for all employees earning a commission.**

```
SELECT ENAME, DNAME,LOCATION
FROM EMPLOYEE E, DEPARTMENT D
WHERE E.DNO = D.DNO AND COMMISSION > 0
```

| ENAME | DNAME | LOCATION |
|---|---|---|
| Ward | Sales | Chicago |
| Allan | Sales | Chicago |
| Martin | Sales | Chicago |

**31) Query to display Name, Dept Name of all employees who have an ‘A’ in their name.**

```
SELECT ENAME, DNAME
FROM EMPLOYEE E, DEPARTMENT D
WHERE E.DNO = D.DNO AND (ENAME LIKE '%a%' OR ENAME LIKE '%A%')
```

| ENAME | DNAME |
|---|---|
| Clark | Accounting |
| Blake | Sales |
| Ward | Sales |
| Allan | Sales |
| James | Sales |
| Adams | Research |
| Martin | Sales |

**32) Query to display Name, Job, Department No. and Department Name for all the employees working at the Dallas location.**

```
SELECT ENAME, JOB_TYPE, D.DNO, DNAME
FROM EMPLOYEE E, DEPARTMENT D
WHERE E.DNO = D.DNO AND LOCATION = 'Dallas'
```

| ENAME | JOB_TYPE | DNO | DNAME |
|---|---|---|---|
| Jones | Manager | 20 | Research |
| Ford | Analyst | 20 | Research |
| Scott | Analyst | 20 | Research |
| Smith | Clerk | 20 | Research |
| Adams | Clerk | 20 | Research |

**33) Query to display Name and Employee No. along with their Manager’s Name and Manager’s employee no.**

```
SELECT A.ENAME "NAME", A.ENO "ENO", B.ENAME "MGR NAME", B.ENO "MGR ENO"
FROM EMPLOYEE A, EMPLOYEE B
WHERE A.MANAGER = B.ENO
```

| NAME | ENO | MGR NAME | MGR ENO |
|---|---|---|---|
| Jones | 756 | King | 783 |
| Clark | 778 | King | 783 |
| Blake | 769 | King | 783 |
| Ward | 752 | Blake | 769 |
| Allan | 749 | Blake | 769 |
| Turner | 784 | Blake | 769 |
| Ford | 792 | Jones | 756 |
| Scott | 788 | Jones | 756 |
| James | 790 | Blake | 769 |
| Smith | 736 | James | 790 |
| Miller | 793 | Scott | 788 |
| Adams | 787 | Clark | 778 |
| Martin | 765 | Blake | 769 |

**34) Query to display Name and Employee no. along with their Manger's Name and the Manager's employee no; along with the Employees' Name who do not have a Manager.**

SELECT A.ENAME "NAME", A.ENO "ENO", B.ENAME "MGR NAME", B.ENO "MGR ENO"
FROM EMPLOYEE A LEFT OUTER JOIN EMPLOYEE B
ON A.MANAGER = B.ENO

| NAME | ENO | MGR NAME | MGR ENO |
|---|---|---|---|
| King | 783 | - | - |
| Jones | 756 | King | 783 |
| Clark | 778 | King | 783 |
| Blake | 769 | King | 783 |
| Ward | 752 | Blake | 769 |
| Allan | 749 | Blake | 769 |
| Turner | 784 | Blake | 769 |
| Ford | 792 | Jones | 756 |
| Scott | 788 | Jones | 756 |
| James | 790 | Blake | 769 |
| Smith | 736 | James | 790 |
| Miller | 793 | Scott | 788 |
| Adams | 787 | Clark | 778 |
| Martin | 765 | Blake | 769 |

**35) Query to display the Employee No, Name and Salary for all employees who earn than the average salary and who work in a Department with any employee with a 'T' in his/her name.**

```
SELECT ENO, ENAME, SALARY
FROM EMPLOYEE
WHERE DNO IN (SELECT DNO FROM EMPLOYEE WHERE ENAME LIKE '%t%' OR ENAME
LIKE '%T%') AND SALARY > (SELECT avg(SALARY) FROM EMPLOYEE)
```

| ENO | ENAME | SALARY |
|---|---|---|
| 749 | Allan | 2000 |
| 769 | Blake | 2870 |
| 788 | Scott | 2850 |
| 792 | Ford | 2600 |
| 756 | Jones | 2300 |

**36) Query to display Name, Dept No. & Salary of any employee whose department No. and salary matches both the department no. and the salary of any employee who earns a commission.**

```
SELECT ENAME, DNO, SALARY
FROM EMPLOYEE
WHERE (DNO,SALARY) IN (SELECT DNO,SALARY FROM EMPLOYEE WHERE COMMISSION >
0)
```

| ENAME | DNO | SALARY |
|---|---|---|
| Ward | 30 | 1300 |
| Allan | 30 | 2000 |
| Martin | 30 | 1250 |

**37) Query to display Name, Hire Date of any employee hired after the employee Blake was hired by the Company.**

```
SELECT ENAME, HIRE_DATE
FROM EMPLOYEE
WHERE HIRE_DATE > (SELECT HIRE_DATE FROM EMPLOYEE WHERE ENAME='Blake')
```

| ENAME | HIRE_DATE |
|---|---|
| King | 17-NOV-81 |
| Clark | 09-JUN-81 |
| Turner | 08-SEP-81 |
| Ford | 03-DEC-81 |
| Scott | 09-DEC-82 |
| James | 03-DEC-81 |
| Miller | 23-JAN-82 |
| Adams | 12-JAN-83 |

**38) Query to display Name and Hire Dates of all Employees along with their Manager's Name and Hire Date for all the employees who were hired before their managers.**

```
SELECT E.ENAME "NAME", E.HIRE_DATE "HIRE_DATE", M.ENAME "MGR'S NAME",
M.HIRE_DATE "MGR HIRE_DATE"
FROM EMPLOYEE E, EMPLOYEE M
WHERE E.MANAGER = M.ENO AND E.HIRE_DATE < M.HIRE_DATE
```

| NAME | HIRE_DATE | MGR'S NAME | MGR HIRE_DATE |
|---|---|---|---|
| Jones | 02-APR-81 | King | 17-NOV-81 |
| Clark | 09-JUN-81 | King | 17-NOV-81 |
| Blake | 01-MAY-81 | King | 17-NOV-81 |
| Ward | 22-FEB-81 | Blake | 01-MAY-81 |
| Allan | 20-FEB-81 | Blake | 01-MAY-81 |
| Smith | 17-DEC-80 | James | 03-DEC-81 |
| Miller | 23-JAN-82 | Scott | 09-DEC-82 |
| Martin | 22-APR-81 | Blake | 01-MAY-81 |

**39) Query to display Name and Salaries represented by Asterisks – "Each asterisks (*) signifying $100.**

```
SELECT ENAME, rpad('*',round(SALARY/100),'*') "SALARY"
FROM EMPLOYEE
```

| ENAME | SALARY |
|---|---|
| King | ****************************** |
| Jones | ********************** |
| Clark | ****************************** |
| Blake | ****************************** |
| Ward | ************ |
| Allan | ******************** |
| Turner | *************** |
| Ford | ************************** |
| Scott | ****************************** |
| James | ********** |
| Smith | ********** |
| Miller | ************ |
| Adams | ********** |
| Martin | ************ |

**40) Query to display the Highest, Lowest, Sum and Average Salaries of all the employees**

```
SELECT max(SALARY) "HIGHEST", min(SALARY) "LOWEST", sum(SALARY) "SUM", round(avg(SALARY),2)
"AVERAGE"
FROM EMPLOYEE
```

| HIGHEST | LOWEST | SUM | AVERAGE |
|---|---|---|---|
| 2950 | 950 | 26870 | 1919.29 |

**41) Query to display Highest, Lowest, Sum and Average Salary for each unique Job Type**

```
SELECT JOB_TYPE,max(SALARY) "HIGHEST", min(SALARY) "LOWEST", sum(SALARY) "SUM",
round(avg(SALARY),2) "AVERAGE"
FROM EMPLOYEE
GROUP BY JOB_TYPE
```

| JOB_TYPE | HIGHEST | LOWEST | SUM | AVERAGE |
|---|---|---|---|---|
| Manager | 2900 | 2300 | 8070 | 2690 |
| Analyst | 2850 | 2600 | 5450 | 2725 |
| Clerk | 1300 | 950 | 4400 | 1100 |
| President | 2950 | 2950 | 2950 | 2950 |
| Sales_man | 2000 | 1250 | 6000 | 1500 |

**42) Query to display the number of employees performing the same Job type functions.**

```
SELECT JOB_TYPE, count(*)"NO OF EMPLOYEES"
FROM EMPLOYEE
GROUP BY JOB_TYPE
```

| JOB_TYPE | NO OF EMPLOYEES |
|---|---|
| Manager | 3 |
| Analyst | 2 |
| Clerk | 4 |
| President | 1 |
| Sales_man | 4 |

**43) Query to display the no. of managers without listing their names.**

```
SELECT count(*)"NO OF MANAGERS"
FROM EMPLOYEE
WHERE JOB_TYPE = 'Manager'
```

| NO OF MANAGERS |
|---|
| 3 |

**44) Query to display the Difference b/w the Highest and Lowest Salaries.**

```
SELECT max(SALARY)- min(SALARY) "DIFFERENCE"
FROM EMPLOYEE
```

| DIFFERENCE |
|---|
| 2000 |

**45) Query to display the Manager's No. & the Salary of the Lowest paid employee for that respective manager. Exclude anyone where the Manager ID is not known.**
**Exclude any groups where the minimum salary is less than $1000.**

```
SELECT MANAGER, min(SALARY)"MINIMUM SALARY"
FROM EMPLOYEE
GROUP BY MANAGER
HAVING min(SALARY) >= 1000 AND MANAGER IS NOT NULL
```

| MANAGER | MINIMUM SALARY |
|---|---|
| 778 | 1150 |
| 788 | 1300 |
| 756 | 2600 |
| 790 | 1000 |
| 783 | 2300 |

**46) Query to display the Department Name, Location Name, No. of Employees & the average salary for all employees in that department.**

```
SELECT DNAME, LOCATION, count(*)"NO OF EMPLOYEES", round(avg(SALARY),2)"AVERAGE SALARY"
FROM EMPLOYEE E, DEPARTMENT D
WHERE E.DNO = D.DNO
GROUP BY D.DNO,DNAME,LOCATION
```

| DNAME | LOCATION | NO OF EMPLOYEES | AVERAGE SALARY |
|---|---|---|---|
| Operation | Boston | 1 | 1300 |
| Research | Dallas | 5 | 1980 |
| Accounting | New York | 2 | 2925 |
| Sales | Chicago | 6 | 1636.67 |

**47) Query to display Name and Hire Date for all employees in the same dept. as Blake.**

```
SELECT ENAME, HIRE_DATE
FROM EMPLOYEE
WHERE DNO IN ( SELECT DNO FROM EMPLOYEE WHERE ENAME='Blake')
```

| ENAME | HIRE_DATE |
|---|---|
| Martin | 22-APR-81 |
| James | 03-DEC-81 |
| Turner | 08-SEP-81 |
| Allan | 20-FEB-81 |
| Ward | 22-FEB-81 |
| Blake | 01-MAY-81 |

**48) Query to display the Employee No. & Name for all employees who earn more than the average salary.**

```
SELECT ENO, ENAME
FROM EMPLOYEE
WHERE SALARY > (SELECT avg(SALARY) FROM EMPLOYEE)
```

| ENO | ENAME |
|---|---|
| 783 | King |
| 756 | Jones |
| 778 | Clark |
| 769 | Blake |
| 749 | Allan |
| 792 | Ford |
| 788 | Scott |

**49) Query to display Employee Number & Name for all employees who work in a department with any employee whose name contains a 'T'.**

```
SELECT ENO, ENAME, DNO
FROM EMPLOYEE
WHERE DNO IN ( SELECT DNO FROM EMPLOYEE WHERE ENAME LIKE '%T%' OR ENAME
LIKE '%t%')
```

| ENO | ENAME | DNO |
|---|---|---|
| 765 | Martin | 30 |
| 790 | James | 30 |
| 784 | Turner | 30 |
| 749 | Allan | 30 |
| 752 | Ward | 30 |
| 769 | Blake | 30 |
| 787 | Adams | 20 |
| 736 | Smith | 20 |
| 788 | Scott | 20 |
| 792 | Ford | 20 |
| 756 | Jones | 20 |

**50) Query to display the employee name and salary of all employees who report to King.**

```
SELECT ENAME, SALARY
FROM EMPLOYEE
WHERE MANAGER = (SELECT ENO FROM EMPLOYEE WHERE ENAME = 'King')
```

| ENAME | SALARY |
|---|---|
| Jones | 2300 |
| Clark | 2900 |
| Blake | 2870 |

**51) Query to display the Department No, Name & Job for all employees in the Sales Dept.**

```
SELECT DNO, ENAME, JOB_TYPE
FROM EMPLOYEE
WHERE DNO = (SELECT DNO FROM DEPARTMENT WHERE DNAME = 'Sales')
```

| DNO | ENAME | JOB_TYPE |
|---|---|---|
| 30 | Blake | Manager |
| 30 | Ward | Sales_man |
| 30 | Allan | Sales_man |
| 30 | Turner | Sales_man |
| 30 | James | Clerk |
| 30 | Martin | Sales_man |

**52) Select manager name getting salary greater than average salary of employees in his department.**

```
SELECT M.ENAME
FROM EMPLOYEE E, EMPLOYEE M
WHERE E.MANAGER = M.ENO
GROUP BY M.ENO, M.ENAME, M.SALARY
HAVING M.SALARY > avg(E.SALARY)
```

| ENAME |
|---|
| Scott |
| Clark |
| King |
| Blake |