## Lab 4 Database Systems

**Slides:**

Statement#1:

SELECT ROUND(45.923,2), ROUND(45.923,0), ROUND(45.923,-1) FROM DUAL;

|  |  |  |
| --- | --- | --- |
| **ROUND(45.923,2)** | **ROUND(45.923,0)** | **ROUND(45.923,-1)** |
| 45.92 | 46 | 50 |

Statement#2:

SELECT ROUND(45.923,2), ROUND(45.923,0), ROUND(45.923,-1) FROM DUAL;

|  |  |  |
| --- | --- | --- |
| **ROUND(45.923,2)** | **ROUND(45.923,0)** | **ROUND(45.923,-1)** |
| 45.92 | 46 | 50 |

Statement#3:

SELECT TRUNC(45.923,2), TRUNC(45.923), TRUNC(45.923,-1) FROM DUAL;

|  |  |  |
| --- | --- | --- |
| **TRUNC(45.923,2)** | **TRUNC(45.923)** | **TRUNC(45.923,-1)** |
| 45.92 | 45 | 40 |

Statement#4:

SELECT ename, sal, comm, MOD(sal, comm) FROM emp WHERE job = 'SALESMAN';

|  |  |  |  |
| --- | --- | --- | --- |
| **ENAME** | **SAL** | **COMM** | **MOD(SAL,COMM)** |
| ALLEN | 1600 | 300 | 100 |
| WARD | 1250 | 500 | 250 |
| MARTIN | 1250 | 1400 | 1250 |
| TURNER | 1500 | 0 | 1500 |

Statement#5:

SELECT ename, (SYSDATE-hiredate)/7 WEEKS FROM emp WHERE deptno = 10;

|  |  |
| --- | --- |
| **ENAME** | **WEEKS** |
| CLARK | 1745.29426 |
| KING | 1722.29426 |
| MILLER | 1712.72283 |

Statement#6:

SELECT MONTHS\_BETWEEN ('01-SEP-95','11-JAN-94') FROM DUAL;

|  |
| --- |
| **MONTHS\_BETWEEN('01-SEP-95','11-JAN-94')** |
| 19.6774194 |

Statement#7:

SELECT ADD\_MONTHS ('11-JAN-94',6) FROM DUAL;

|  |
| --- |
| **ADD\_MONTH** |
| 11-JUL-94 |

Statement#8:

SELECT NEXT\_DAY ('01-SEP-95','FRIDAY') FROM DUAL;

|  |
| --- |
| **NEXT\_DAY(** |
| 08-SEP-95 |

Statement#9:

SELECT LAST\_DAY('01-SEP-95') FROM DUAL;

|  |
| --- |
| **LAST\_DAY(** |
| 30-SEP-95 |

Statement#10:

SELECT ename, TO\_CHAR(hiredate, 'fmDD Month YYYY') HIREDATE FROM emp;

|  |  |
| --- | --- |
| **ENAME** | **HIREDATE** |
| SMITH | 17 December 1980 |
| ALLEN | 20 February 1981 |
| WARD | 22 February 1981 |
| JONES | 2 April 1981 |
| MARTIN | 28 September 1981 |
| BLAKE | 1 May 1981 |
| CLARK | 9 June 1981 |
| SCOTT | 9 December 1982 |
| KING | 17 November 1981 |
| TURNER | 8 September 1981 |
| ADAMS | 12 January 1983 |
| JAMES | 3 December 1981 |
| FORD | 3 December 1981 |
| MILLER | 23 January 1982 |

Statement#11:

SELECT TO\_CHAR(sal,'$99,999') SALARY FROM emp WHERE ename = 'SCOTT';

|  |
| --- |
| **SALARY** |
| $3,000 |

Statement#12:

SELECT ename, sal, comm, (sal\*12)+NVL(comm,0) FROM emp;

|  |  |  |  |
| --- | --- | --- | --- |
| **ENAME** | **SAL** | **COMM** | **(SAL\*12)+NVL(COMM,0)** |
| SMITH | 800 |  | 9600 |
| ALLEN | 1600 | 300 | 19500 |
| WARD | 1250 | 500 | 15500 |
| JONES | 2975 |  | 35700 |
| MARTIN | 1250 | 1400 | 16400 |
| BLAKE | 2850 |  | 34200 |
| CLARK | 2450 |  | 29400 |
| SCOTT | 3000 |  | 36000 |
| KING | 5000 |  | 60000 |
| TURNER | 1500 | 0 | 18000 |
| ADAMS | 1100 |  | 13200 |
| JAMES | 950 |  | 11400 |
| FORD | 3000 |  | 36000 |
| MILLER | 1300 |  | 15600 |

Statement#13:

SELECT job, sal, DECODE(job, 'ANALYST', SAL\*1.1, 'CLERK', SAL\*1.15, 'MANAGER', SAL\*1.20, SAL)

REVISED\_SALARY

FROM emp;

|  |  |  |
| --- | --- | --- |
| **JOB** | **SAL** | **REVISED\_SALARY** |
| CLERK | 800 | 920 |
| SALESMAN | 1600 | 1600 |
| SALESMAN | 1250 | 1250 |
| MANAGER | 2975 | 3570 |
| SALESMAN | 1250 | 1250 |
| MANAGER | 2850 | 3420 |
| MANAGER | 2450 | 2940 |
| ANALYST | 3000 | 3300 |
| PRESIDENT | 5000 | 5000 |
| SALESMAN | 1500 | 1500 |
| CLERK | 1100 | 1265 |
| CLERK | 950 | 1092.5 |
| ANALYST | 3000 | 3300 |
| CLERK | 1300 | 1495 |

Statement#14:

SELECT ename, sal,

DECODE(TRUNC(sal/1000, 0), 0, 0.00, 1, 0.09, 2, 0.20, 3, 0.30,

4, 0.40,

5, 0.42,

6, 0.44, 0.45) TAX\_RATE

FROM emp

WHERE deptno = 30;

|  |  |  |
| --- | --- | --- |
| **ENAME** | **SAL** | **TAX\_RATE** |
| ALLEN | 1600 | .09 |
| WARD | 1250 | .09 |
| MARTIN | 1250 | .09 |
| BLAKE | 2850 | .2 |
| TURNER | 1500 | .09 |
| JAMES | 950 | 0 |

Statement#15:

SELECT ename, NVL(TO\_CHAR(mgr),'No Manager') FROM emp WHERE mgr IS NULL;

|  |  |
| --- | --- |
| **ENAME** | **NVL(TO\_CHAR(MGR),'NOMANAGER')** |
| KING | No Manager |

**Exercise:**

Q.1:

SELECT SYSDATE FROM DUAL

|  |
| --- |
| **SYSDATE** |
| 19-NOV-14 |

Q.2 saved

Q.3

SELECT EMPNO, ENAME, SAL, ROUND(SAL\*(15/100)+SAL,0) AS "New Salary" FROM EMP;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **SAL** | **New Salary** |
| 7369 | SMITH | 800 | 920 |
| 7499 | ALLEN | 1600 | 1840 |
| 7521 | WARD | 1250 | 1438 |
| 7566 | JONES | 2975 | 3421 |
| 7654 | MARTIN | 1250 | 1438 |
| 7698 | BLAKE | 2850 | 3278 |
| 7782 | CLARK | 2450 | 2818 |
| 7788 | SCOTT | 3000 | 3450 |
| 7839 | KING | 5000 | 5750 |
| 7844 | TURNER | 1500 | 1725 |
| 7876 | ADAMS | 1100 | 1265 |
| 7900 | JAMES | 950 | 1093 |
| 7902 | FORD | 3000 | 3450 |
| 7934 | MILLER | 1300 | 1495 |

Q.4

SELECT EMPNO, ENAME, SAL, ROUND(SAL\*(15/100)+SAL,0) AS "New Salary", ROUND(SAL\*(15/100)+SAL,0)-SAL As "Increase" FROM EMP;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **SAL** | **New Salary** | **Increase** |
| 7369 | SMITH | 800 | 920 | 120 |
| 7499 | ALLEN | 1600 | 1840 | 240 |
| 7521 | WARD | 1250 | 1438 | 188 |
| 7566 | JONES | 2975 | 3421 | 446 |
| 7654 | MARTIN | 1250 | 1438 | 188 |
| 7698 | BLAKE | 2850 | 3278 | 428 |
| 7782 | CLARK | 2450 | 2818 | 368 |
| 7788 | SCOTT | 3000 | 3450 | 450 |
| 7839 | KING | 5000 | 5750 | 750 |
| 7844 | TURNER | 1500 | 1725 | 225 |
| 7876 | ADAMS | 1100 | 1265 | 165 |
| 7900 | JAMES | 950 | 1093 | 143 |
| 7902 | FORD | 3000 | 3450 | 450 |
| 7934 | MILLER | 1300 | 1495 | 195 |

Q.5

SELECT ENAME, HIREDATE, TO\_CHAR(NEXT\_DAY(add\_months(hiredate,6),'MONDAY'),'Day, "the" fmddspth "of" Month "," yyyy') As REVIEW FROM EMP;

|  |  |  |
| --- | --- | --- |
| **ENAME** | **HIREDATE** | **REVIEW** |
| SMITH | 17-DEC-80 | Monday , the twenty-second of June , 1981 |
| ALLEN | 20-FEB-81 | Monday , the twenty-fourth of August , 1981 |
| WARD | 22-FEB-81 | Monday , the twenty-fourth of August , 1981 |
| JONES | 02-APR-81 | Monday , the fifth of October , 1981 |
| MARTIN | 28-SEP-81 | Monday , the twenty-ninth of March , 1982 |
| BLAKE | 01-MAY-81 | Monday , the second of November , 1981 |
| CLARK | 09-JUN-81 | Monday , the fourteenth of December , 1981 |
| SCOTT | 09-DEC-82 | Monday , the thirteenth of June , 1983 |
| KING | 17-NOV-81 | Monday , the twenty-fourth of May , 1982 |
| TURNER | 08-SEP-81 | Monday , the fifteenth of March , 1982 |
| ADAMS | 12-JAN-83 | Monday , the eighteenth of July , 1983 |
| JAMES | 03-DEC-81 | Monday , the seventh of June , 1982 |
| FORD | 03-DEC-81 | Monday , the seventh of June , 1982 |
| MILLER | 23-JAN-82 | Monday , the twenty-sixth of July , 1982 |

Q.6

SELECT ENAME, round(months\_between(sysdate,hiredate)) As Months\_worked FROM EMP;

|  |  |
| --- | --- |
| **ENAME** | **MONTHS\_WORKED** |
| SMITH | 407 |
| ALLEN | 405 |
| WARD | 405 |
| JONES | 404 |
| MARTIN | 398 |
| BLAKE | 403 |
| CLARK | 401 |
| SCOTT | 383 |
| KING | 396 |
| TURNER | 398 |
| ADAMS | 382 |
| JAMES | 396 |
| FORD | 396 |
| MILLER | 394 |

Q.7

SELECT concat(ENAME, concat(' earns ', concat(to\_char(sal,'$99,9999.00'), (concat(' monthly but wants ', to\_char(sal\*3,'$99,9999.00')))))) As "Dream Salaries" FROM EMP;

|  |
| --- |
| **Dream Salaries** |
| SMITH earns $800.00 monthly but wants $2400.00 |
| ALLEN earns $1600.00 monthly but wants $4800.00 |
| WARD earns $1250.00 monthly but wants $3750.00 |
| JONES earns $2975.00 monthly but wants $8925.00 |
| MARTIN earns $1250.00 monthly but wants $3750.00 |
| BLAKE earns $2850.00 monthly but wants $8550.00 |
| CLARK earns $2450.00 monthly but wants $7350.00 |
| SCOTT earns $3000.00 monthly but wants $9000.00 |
| KING earns $5000.00 monthly but wants $1,5000.00 |
| TURNER earns $1500.00 monthly but wants $4500.00 |
| ADAMS earns $1100.00 monthly but wants $3300.00 |
| JAMES earns $950.00 monthly but wants $2850.00 |
| FORD earns $3000.00 monthly but wants $9000.00 |
| MILLER earns $1300.00 monthly but wants $3900.00 |

Q.10

SELECT ename , hiredate , to\_char(hiredate , 'Day') as "DAY"

from emp

order by to\_char(hiredate - 1 , 'D')

|  |  |  |
| --- | --- | --- |
| **ENAME** | **HIREDATE** | **DAY** |
| MARTIN | 28-SEP-81 | Monday |
| CLARK | 09-JUN-81 | Tuesday |
| KING | 17-NOV-81 | Tuesday |
| TURNER | 08-SEP-81 | Tuesday |
| SMITH | 17-DEC-80 | Wednesday |
| ADAMS | 12-JAN-83 | Wednesday |
| JONES | 02-APR-81 | Thursday |
| FORD | 03-DEC-81 | Thursday |
| SCOTT | 09-DEC-82 | Thursday |
| JAMES | 03-DEC-81 | Thursday |
| ALLEN | 20-FEB-81 | Friday |
| BLAKE | 01-MAY-81 | Friday |
| MILLER | 23-JAN-82 | Saturday |
| WARD | 22-FEB-81 | Sunday |

**Quiz:**

Q.1

select ename, to\_char(hiredate, 'fmddth "of" MONTH "," YYYY') as "Hire Date", concat(trunc(months\_between(sysdate, hiredate)/12), ' years') as "Employment Duration" from emp;

select ename, to\_char(hiredate, 'fmddth "of" MONTH "," YYYY') as "Hire Date", concat(

concat(trunc(months\_between(sysdate, hiredate)/12), ' years and '),

concat(months\_between(sysdate, hiredate)- trunc(months\_between(sysdate, hiredate)/12)/12, 'as months') ) as "Employment Duration" from emp;