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Batch D1
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Practical 3

Do as directed.

1) Print the incremented salary of all employee with 10% increment.

```
SQL> select salary*1.1 from employees;

SALARY*1.1
----------
     26400
     18700
     18700
      9900
      6600
      5280
      5280
     12100
      2750
      9130

10 rows selected.

SQL> spool off;
```

2) Find the (salary + Commission) as Total salary of all employees.

```
SQL> select salary+commission_pct "Total Salary" from employees;

Total Salary
------------

     17000


      6000
      4800
      4800
     11000
```

```
10 rows selected.

SQL> spool off;
```

3) Find the gross salary of employee by following formula:

Gross_Salary= Basic Salary+DA+HRA+TA+MA
DA=110% of Basic Salary
HRA=30% of Basic Salary
TA= 1500
MA= 1000

```
SQL> select salary + salary * 1.1 + salary * 0.3 + 1500 + 1000 "Gross Salary" from
employees;


Gross Salary
------------
      60100
      43300
      43300
      24100
      16900
      14020
      14020
      28900
       8500
      22420

10 rows selected.

SQL> spool off;
```

4) Display the first name in lower case and last name in upper case, for all employees whose employee number is in the range between 80 and 150.

```
SQL> ed
Wrote file afiedt.buf

  1* select lower(first_name),upper(last_name) from employees where employee_id
between 80 and 150

SQL> /

LOWER(FIRST_NAME)   UPPER(LAST_NAME)
------------------- -------------------------
steven              KING
neena               KOCHHAR
lex                 DE HAAN
alexander           HUNOLD
```

```
bruce          ERNST
david          AUSTIN
valli          PATABALLA
den            RAPHAELY
karen          COLMENARES

9 rows selected.

SQL> spool off;
```

5) Generating new email address

a) For each employee, display the first name, last name, and email address. The email address will be composed from the first letter of first name, concatenated with the three first letters of last name, concatenated with @oracle.com.

```
SQL> ed
Wrote file afiedt.buf

  1  select
  2  first_name, last_name,
  3  concat(
  4  concat(
  5  substr(first_name, 1, 1) ,
  6  substr(last_name, 1 , 3)
  7  ) ,
  8  '@oracle.com'
  9  )
 10* from employees
SQL> /

FIRST_NAME       LAST_NAME          CONCAT(CONCAT(SUBSTR(FIRST_
-------------------- ------------------------- --------------------------
Steven           King               SKin@oracle.com
Neena            Kochhar              NKoc@oracle.com
Lex              De Haan             LDe @oracle.com
Alexander          Hunold               AHun@oracle.com
Bruce            Ernst              BErn@oracle.com
David            Austin             DAus@oracle.com
Valli            Pataballa          VPat@oracle.com
Den              Raphaely            DRap@oracle.com
Karen            Colmenares           KCol@oracle.com
William          Gietz              WGie@oracle.com

10 rows selected.
```

b) For each employee, display the first name, last name, and email address. The email address will be composed from the first letter of first name, concatenated with the three last letters of last name, concatenated with @oracle.com.

```
SQL> ed
Wrote file afiedt.buf

  1  select
  2  first_name, last_name,
  3  concat(
  4  concat(
  5  substr(first_name, 1, 1) ,
  6  substr(last_name, length(last_name)-2,3)
  7  ) ,
  8  '@oracle.com'
  9  )
 10* from employees
SQL> /

FIRST_NAME       LAST_NAME          CONCAT(CONCAT(SUBSTR(FIRST_
-------------------- ------------------------- --------------------------
Steven           King               Sing@oracle.com
Neena            Kochhar              Nhar@oracle.com
Lex              De Haan             Laan@oracle.com
Alexander          Hunold               Aold@oracle.com
Bruce            Ernst              Bnst@oracle.com
David            Austin             Dtin@oracle.com
Valli            Pataballa          Vlla@oracle.com
Den              Raphaely            Dely@oracle.com
Karen            Colmenares           Kres@oracle.com
William          Gietz              Wetz@oracle.com

10 rows selected.

SQL> spool off;
```

6) For each employee, display the first name concatenated with the last name, concatenated with hire date.

```
SQL> ;
  1* select concat(concat(first_name,last_name),hire_date) from employees
SQL> ed
Wrote file afiedt.buf

  1* select concat(concat(first_name,last_name),hire_date) from employees
SQL> /

CONCAT(CONCAT(FIRST_NAME,LAST_NAME),HIRE_DATE)
--------------------------------------------------
```

```
StevenKing17-06-00
NeenaKochhar18-06-12
LexDe Haan19-06-17
AlexanderHunold20-05-16
BruceErnst20-05-14
DavidAustin17-09-01
ValliPataballa20-09-01
DenRaphaely01-09-90
KarenColmenares06-07-87
WilliamGietz06-07-05

10 rows selected.

SQL> spool off;
```

7) **Display the last name for all employees where last name's length is greater than 8 characters.**

```
SQL> ed
Wrote file afiedt.buf

  1* select last_name from employees where length(last_name) > 8
SQL> /

LAST_NAME
-------------------------
Pataballa
Colmenares

SQL> spool off;
```

8) **For each employee, display the first name, last name, phone number and a new phone number. In the new phone number, replace all occurrences of *515* with *815*.**

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name, last_name, phone_number,
  2  replace(phone_number, '515', '815')
  3* from employees
SQL> /

FIRST_NAME       LAST_NAME          PHONE_NUMBER
REPLACE(PHONE_NUMBER,'515','815')

-------------------- ------------------------- -------------------- --------------------------------------------------------------------
Steven           King               515.123.4567       815.123.4567
Neena            Kochhar              515.123.4568       815.123.4568
Lex              De Haan              123.515.4569       123.815.4569
Alexander          Hunold               590.423.4567       590.423.4567
Bruce            Ernst              590.423.4568       590.423.4568
David            Austin             590.423.4569       590.423.4569
```

```
Valli          Pataballa          590.423.4560       590.423.4560
Den            Raphaely           515.127.4561       815.127.4561
Karen          Colmenares         515.127.4566       815.127.4566
William        Gietz              515.123.8181       815.123.8181

10 rows selected.

SQL> spool off;
```

9) For each employee, display first name, salary, salary after a raise of 12%, salary after a raise of 12%, expressed as a whole number, salary after a raise of 12%, round down to the nearest whole number.

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name, salary, salary * 1.12 , round(salary * 1.12, 2),ceil(salary * 1.12) ,
floor(salary * 1.12)

  2* from employees
SQL> /

FIRST_NAME          SALARY SALARY*1.12 ROUND(SALARY*1.12,2)
CEIL(SALARY*1.12) FLOOR(SALARY*1.12)

-------------------- ---------- ----------- -------------------- ----------------- ------------------
Steven               24000     26880           26880         26880          26880
Neena                17000     19040           19040         19040          19040
Lex                  17000     19040           19040         19040          19040
Alexander             9000     10080           10080         10080          10080
Bruce                 6000      6720           6720          6720           6720
David                 4800      5376           5376          5376           5376
Valli                 4800      5376           5376          5376           5376
Den                  11000     12320           12320         12320          12320
Karen                 2500      2800           2800          2800           2800
William               8300      9296           9296          9296           9296

10 rows selected.

SQL> spool off;
```

10) For each employee, display the first name, hire date, hire date minus 10 days, hire date plus one month, and the day difference between current date and hire date.

```
SQL> ed
Wrote file afiedt.buf

  1* select first_name,last_name,hire_date,  hire_date-10,add_months(hire_date,1),
sysdate-hire_date from employees

SQL> /
```

```
FIRST_NAME        LAST_NAME            HIRE_DAT HIRE_DAT ADD_MONT SYSDATE-
HIRE_DATE

-------------------- ------------------------- -------- -------- -------- -----------------
Steven            King                 17-06-00 07-06-00 17-07-00       7542.77661
Neena             Kochhar                18-06-12 08-06-12 18-07-12       3158.77661
Lex               De Haan              19-06-17 09-06-17 19-07-17       1331.77661
Alexander           Hunold                 20-05-16 10-05-16 20-06-16       1726.77661
Bruce             Ernst                20-05-14 10-05-14 20-06-14       2457.77661
David             Austin               17-09-01 07-09-01 17-10-01       7085.77661
Valli             Pataballa            20-09-01 10-09-01 20-10-01       7082.77661
Den               Raphaely              01-09-90 22-08-90 01-10-90       11119.7766
Karen             Colmenares              06-07-87 26-06-87 06-08-87       12272.7766
William           Gietz                06-07-05 26-06-05 06-08-05       5697.77661

10 rows selected.

SQL> spool off;
```

11) For each employee, display the first name, last name, hire date, number of months he works in the company, and number of years he works in the company.

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name,last_name,hire_date,
months_between(sysdate,hire_date),floor(months_between(sysdate,hire_date)/12)

  2* from employees
SQL> /

FIRST_NAME        LAST_NAME            HIRE_DAT
MONTHS_BETWEEN(SYSDATE,HIRE_DATE)
FLOOR(MONTHS_BETWEEN(SYSDATE,HIRE_DATE)/12)

-------------------- ------------------------- -------- ---------------------------------- ----------------------------------------
Steven            King                 17-06-00                  247.767331                                       20
Neena             Kochhar                18-06-12                   103.735073                                        8
Lex               De Haan              19-06-17                   43.7028147                                        3
Alexander           Hunold                 20-05-16                    56.6705567                                        4
Bruce             Ernst                20-05-14                   80.6705567                                        6
David             Austin               17-09-01                   232.767331                                       19
Valli             Pataballa            20-09-01                   232.670557                                       19
Den               Raphaely              01-09-90                     365.28346                                       30
Karen             Colmenares              06-07-87                    403.12217                                        33
William           Gietz                06-07-05                   187.12217                                        15

10 rows selected.

SQL> spool off;
```

12) For each employee, display the first name, hire date, and hire date plus one year.

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name,hire_date,add_months(hire_date,1*12)
  2* from employees
SQL> /

FIRST_NAME          HIRE_DAT ADD_MONT
-------------------- -------- --------
Steven               17-06-00 17-06-01
Neena                18-06-12 18-06-13
Lex                 19-06-17 19-06-18
Alexander            20-05-16 20-05-17
Bruce               20-05-14 20-05-15
David               17-09-01 17-09-02
Valli               20-09-01 20-09-02
Den                 01-09-90 01-09-91
Karen               06-07-87 06-07-88
William             06-07-05 06-07-06

10 rows selected.

SQL> spool off;
```

13) For each employee, display the first name, hire date, hire date rounded up to the nearest year, and hire date rounded up to the nearest month.

```
SQL> ed
Wrote file afiedt.buf

  1  select
first_name,hire_date,add_months(hire_date,1*12),round(hire_date,'year'),round(hire_
date,'month')

  2* from employees
SQL> /

FIRST_NAME          HIRE_DAT ADD_MONT ROUND(HI ROUND(HI
-------------------- -------- -------- -------- --------
Steven               17-06-00 17-06-01 01-01-00 01-07-00
Neena                18-06-12 18-06-13 01-01-12 01-07-12
Lex                 19-06-17 19-06-18 01-01-17 01-07-17
Alexander            20-05-16 20-05-17 01-01-16 01-06-16
Bruce               20-05-14 20-05-15 01-01-14 01-06-14
David               17-09-01 17-09-02 01-01-02 01-10-01
Valli               20-09-01 20-09-02 01-01-02 01-10-01
Den                 01-09-90 01-09-91 01-01-91 01-09-90
Karen               06-07-87 06-07-88 01-01-88 01-07-87
William             06-07-05 06-07-06 01-01-06 01-07-05
```

```
10 rows selected.

SQL> spool off;
```

14) For each employee, display the first name, the day of his hire date, and the year of his hire date.

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name,extract(day from hire_date),extract(year from hire_date)
  2* from employees
SQL> /

FIRST_NAME       EXTRACT(DAYFROMHIRE_DATE) EXTRACT(YEARFROMHIRE_DATE)
-------------------- ------------------------ -------------------------
Steven                            17                2000
Neena                             18                2012
Lex                               19                2017
Alexander                            20                2016
Bruce                             20                2014
David                             17                2001
Valli                             20                2001
Den                               1                 1990
Karen                             6                 1987
William                           6                 2005

10 rows selected.

SQL> spool off;
```

15) Display the last name in upper case, the salary in format model : '9,999.999', and hire date in format model: 'DD/MM/YYYY', for all employees whose last name begins with the letter *D* or *K* (without using like).

```
SQL> ed
Wrote file afiedt.buf

  1  select upper(last_name),to_char(salary,'00000.000'),to_char(hire_date,'YYYY')
  2  from employees
  3* where substr(last_name,1,1) = 'D' or substr(last_name,1,1) = 'K'
SQL> /

UPPER(LAST_NAME)        TO_CHAR(SA TO_C
------------------------- ---------- ----
KING                 24000.000 2000
KOCHHAR                 17000.000 2012
DE HAAN                 17000.000 2017

SQL> spool off;
```

16) For each employee, display the first name, last name, salary and commission percentage. If an employee doesn't earn a commission, display 0 instead of NULL.

```
SQL> ed
Wrote file afiedt.buf

  1  select first_name,last_name,nvl(commission_pct,0)
  2* from employees
SQL> /

FIRST_NAME           LAST_NAME                 NVL(COMMISSION_PCT,0)
-------------------- ------------------------- ---------------------
Steven               King                                         0
Neena                Kochhar                                      0
Lex                  De Haan                                      0
Alexander            Hunold                                       0
Bruce                Ernst                                        0
David                Austin                                       0
Valli                Pataballa                                    0
Den                  Raphaely                                     0
Karen                Colmenares                                   0
William              Gietz                                        0

10 rows selected.

SQL> spool off;
```

17) For each employee, display the first name, last name, salary and commission percentage. If an employee doesn't earn a commission, display "No Commission" instead of NULL.

```
SQL> ed
Wrote file afiedt.buf

  1  SELECT first_name,last_name,salary,
  2     nvl(to_char(commission_pct), 'NO_COMMISSION' )
  3* FROM employees
SQL> /

FIRST_NAME           LAST_NAME                 SALARY NVL(TO_CHAR(COMMISSION_PCT),'NO_COMMISSI
-------------------- ------------------------- ---------- ----------------------------------------
Steven               King                       24000 NO_COMMISSION
Neena                Kochhar                      17000 0
Lex                  De Haan                    17000 NO_COMMISSION
Alexander            Hunold                       9000 NO_COMMISSION
Bruce                Ernst                      6000 0
David                Austin                     4800 0
Valli                Pataballa                  4800 0
Den                  Raphaely                   11000 0
Karen                Colmenares                   2500 NO_COMMISSION
```

```
William          Gietz                    8300 NO_COMMISSION

10 rows selected.

SQL> spool off;
```

18) For each employee, display the first name, last name, salary, and a salary grade based on these conditions :

a) if the salary is between 0 and 5000 – salary grade level is A

b) if the salary is between 5001 and 15000 – salary grade level is B

c) if the salary is between 15001 and 20000 – salary grade level is C

d) for any other range – salary grade level is D

```
SQL> ed
Wrote file afiedt.buf

  1  SELECT first_name,last_name,salary, CASE
  2  WHEN salary BETWEEN 0 and 5000 THEN 'A'
  3  WHEN salary BETWEEN 5001 and 15000 THEN 'B'
  4  WHEN salary BETWEEN 15001 and 20000 THEN 'C'
  5  WHEN salary>20000 or salary<0 THEN 'D'
  6  END
  7  salary_grad
  8* from employees
SQL> /

FIRST_NAME        LAST_NAME              SALARY S
-------------------- ------------------------- ---------- -
Steven           King                    24000 D
Neena            Kochhar                   17000 C
Lex              De Haan                 17000 C
Alexander          Hunold                    9000 B
Bruce            Ernst                   6000 B
David            Austin                  4800 A
Valli            Pataballa               4800 A
Den              Raphaely                 11000 B
Karen            Colmenares                2500 A
William          Gietz                   8300 B

10 rows selected.

SQL> spool off;
```

19) Display the first name, salary and round the salary to thousands.

```
SQL> 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
Den                 11000       11000
Karen                2500        3000
William              8300        8000

10 rows selected.

SQL> spool off;
```

20) Display all the employees who joined in the month of May.

```
SQL> select first_name from employees where extract(month from hire_date) = 5;

FIRST_NAME
--------------------
Alexander
Bruce

SQL> spool off;
```

21) Display the first word in job title.

```
SQL> ed;
Wrote file afiedt.buf

  1* select substr(job_id,0,instr(job_id,' ')-1) job_id_first_word from employees
SQL> /

JOB_ID_FIRST_WORD
--------------------------------------------------------------------------------

VICE
VICE
IT
FINANCIAL
IT
FINANCE
SALES



10 rows selected.

SQL> spool off;
```

22) Display the length of first name for employees whose last name contains character 'b' after the third position. (Without using like).

```
SQL> select length(first_name) from employees where
instr(substr(last_name,4,length(last_name)-3),'b')>0;
```

```
LENGTH(FIRST_NAME)
------------------
                 5

SQL> spool  off;
```

23) Display first name of the employees whose experience in more than 5 years.

```
SQL> select first_name from employees where
floor(months_between(sysdate,hire_date)/12)>5;


FIRST_NAME
--------------------
Steven
Neena
Bruce
David
Valli
Den
Karen
William

8 rows selected.

SQL> spool  off;
```