Fatima Jinnah Women University
Department of Software Engineering

LAB 5

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Section: A

Semester: Fourth

Course: Data Base (LAB)

TASKS

1. **Write a query to display the current date.**

```
SQL> select sysdate from dual;

SYSDATE
---------
19-APR-22
```

2. **For each employee, display the employee ID number, employee name, salary and salary increased by 15% and expressed as whole number. Label the column New Salary.**

```
SQL> select ename, round(sal+(sal*15/100)) as NEWSALARY from emp;

ENAME      NEWSALARY
---------- ----------
SMITH             920
ALLEN            1840
WARD             1438
JONES            3421
MARTIN           1438
BLAKE            3278
CLARK            2818
SCOTT            3450
KING             5750
TURNER           1725
ADAMS            1265

ENAME      NEWSALARY
---------- ----------
JAMES            1093
FORD             3450
MILLER           1495

14 rows selected.
```

3. **Modify the above query to add a column that subtracts the old salary from the new salary. Label the Column Increase.**

```
SQL>  select ename, round(sal+(sal*15/100)) as NEWSALARY  , round(sal+ (sal*15/100))-sal as COLOUMINCREASE from emp;

ENAME       NEWSALARY COLOUMINCREASE
---------- ---------- --------------
SMITH             920            120
ALLEN            1840            240
WARD             1438            188
JONES            3421            446
MARTIN           1438            188
BLAKE            3278            428
CLARK            2818            368
SCOTT            3450            450
KING             5750            750
TURNER           1725            225
ADAMS            1265            165

ENAME       NEWSALARY COLOUMINCREASE
---------- ---------- --------------
JAMES            1093            143
FORD             3450            450
MILLER           1495            195

14 rows selected.
```

4. **Write a query that displays the employee's names with the first letter capitalize and all other letters lowercase and length of the names, for all employees whose name start with J, A or M. Give each column an appropriate label. Sort the results by employees' name.**

```
SQL> select initcap(ename) as capptical,length(ename) as length from emp where ename like 'j%' or ename like 'A%' or ename like 'M%';

CAPPTICAL      LENGTH
---------- ----------
Allen               5
Martin              6
Adams               5
Miller              6
```

5. **For each employee, display the employee name and calculate the number of months between today and a day the employee was hired. Label the column MONTHS_WORKED. Order your results by the number of months employed. Round the number of results up to closest whole number**.

```
SQL>  select  ename ,hiredate,round(months_between(sysdate , hiredate),0) as MONTHS_WORKED from emp order by months_between(sysdate,hiredate);

ENAME      HIREDATE  MONTHS_WORKED
---------- --------- -------------
ADAMS      23-MAY-87           419
SCOTT      19-APR-87           420
MILLER     23-JAN-82           483
FORD       03-DEC-81           485
JAMES      03-DEC-81           485
KING       17-NOV-81           485
MARTIN     28-SEP-81           487
TURNER     08-SEP-81           487
CLARK      09-JUN-81           490
BLAKE      01-MAY-81           492
JONES      02-APR-81           493

ENAME      HIREDATE  MONTHS_WORKED
---------- --------- -------------
WARD       22-FEB-81           494
ALLEN      20-FEB-81           494
SMITH      17-DEC-80           496

14 rows selected.
```

6. Write a query that produces the following for each employee:

Employee name, earns salary monthly but wants 3 times salary. Label the column Dream Salaries.

//Salary should be in this format $99,999.00

```
SQL> select ename ||'earns'||sal|| 'monthly but wants to earn '|| to_char(sal*3,'$99,999.00') as dream_salary from emp;

DREAM_SALARY
--------------------------------------------------------------------------------
SMITHearns800monthly but wants to earn   $2,400.00
ALLENearns1600monthly but wants to earn   $4,800.00
WARDearns1250monthly but wants to earn   $3,750.00
JONESearns2975monthly but wants to earn   $8,925.00
MARTINearns1250monthly but wants to earn   $3,750.00
BLAKEearns2850monthly but wants to earn   $8,550.00
CLARKearns2450monthly but wants to earn   $7,350.00
SCOTTearns3000monthly but wants to earn   $9,000.00
KINGearns5000monthly but wants to earn  $15,000.00
TURNERearns1500monthly but wants to earn   $4,500.00
ADAMSearns1100monthly but wants to earn   $3,300.00

DREAM_SALARY
--------------------------------------------------------------------------------
JAMESearns950monthly but wants to earn   $2,850.00
FORDearns3000monthly but wants to earn   $9,000.00
MILLERearns1300monthly but wants to earn   $3,900.00

14 rows selected.
```

7. Create a query to display the employee name and salary of all employees. Format the salary to be 15 characters long, left-padded with $. Label the column SALARY.

```
SQL> select ename,LPAD(sal,15,'$') as salary from emp;

ENAME      SALARY
---------- ---------------
SMITH      $$$$$$$$$$$800
ALLEN      $$$$$$$$$$1600
WARD       $$$$$$$$$$1250
JONES      $$$$$$$$$$2975
MARTIN     $$$$$$$$$$1250
BLAKE      $$$$$$$$$$2850
CLARK      $$$$$$$$$$2450
SCOTT      $$$$$$$$$$3000
KING       $$$$$$$$$$5000
TURNER     $$$$$$$$$$1500
ADAMS      $$$$$$$$$$1100

ENAME      SALARY
---------- ---------------
JAMES      $$$$$$$$$$$950
FORD       $$$$$$$$$$3000
MILLER     $$$$$$$$$$1300

14 rows selected.
```

8. Display each employee name, hiredate and salary review date, which is the first Monday after six months of service. Label the column REVIEW. Format the dates to appear similar to "Monday, the Thirty-first of July, 2000".

```
SQL> select ename, hiredate, to_char(next_day(add_months(hiredate,6),'MONDAY'), 'DAY, "the" ddspth "of" MONTH,YYY') as review from emp;

ENAME      HIREDATE  REVIEW
---------- --------- --------------------------------------------
SMITH      17-DEC-80 MONDAY   , the twenty-second of JUNE     ,981
ALLEN      20-FEB-81 MONDAY   , the twenty-fourth of AUGUST   ,981
WARD       22-FEB-81 MONDAY   , the twenty-fourth of AUGUST   ,981
JONES      02-APR-81 MONDAY   , the fifth of OCTOBER  ,981
MARTIN     28-SEP-81 MONDAY   , the twenty-ninth of MARCH    ,982
BLAKE      01-MAY-81 MONDAY   , the second of NOVEMBER ,981
CLARK      09-JUN-81 MONDAY   , the fourteenth of DECEMBER ,981
SCOTT      19-APR-87 MONDAY   , the twenty-sixth of OCTOBER  ,987
KING       17-NOV-81 MONDAY   , the twenty-fourth of MAY      ,982
TURNER     08-SEP-81 MONDAY   , the fifteenth of MARCH    ,982
ADAMS      23-MAY-87 MONDAY   , the thirtieth of NOVEMBER ,987

ENAME      HIREDATE  REVIEW
---------- --------- --------------------------------------------
JAMES      03-DEC-81 MONDAY   , the seventh of JUNE     ,982
FORD       03-DEC-81 MONDAY   , the seventh of JUNE     ,982
MILLER     23-JAN-82 MONDAY   , the twenty-sixth of JULY     ,982

14 rows selected.
```

9. Display the employee name, hiredate, and day of the week on which the employee started. Label the column DAY. Order the results by the day started with Monday.

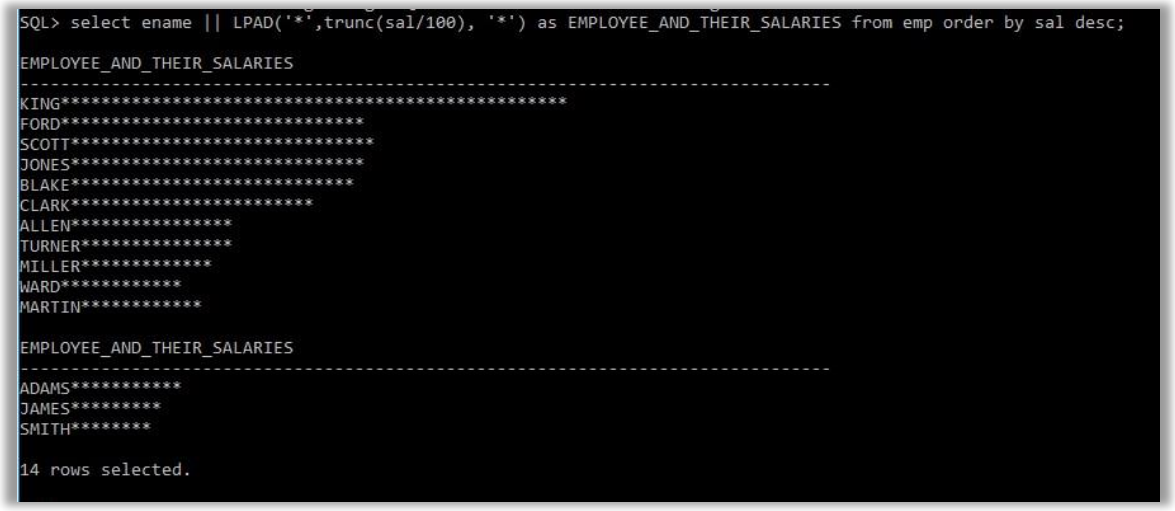
```
SQL> select ename, hiredate, to_char(hiredate, 'DAY') as DAY from emp order by to_char(hiredate -1, 'D');

ENAME      HIREDATE  DAY
---------- --------- ---------
MARTIN     28-SEP-81 MONDAY
CLARK      09-JUN-81 TUESDAY
TURNER     08-SEP-81 TUESDAY
KING       17-NOV-81 TUESDAY
SMITH      17-DEC-80 WEDNESDAY
JAMES      03-DEC-81 THURSDAY
JONES      02-APR-81 THURSDAY
FORD       03-DEC-81 THURSDAY
ALLEN      20-FEB-81 FRIDAY
BLAKE      01-MAY-81 FRIDAY
ADAMS      23-MAY-87 SATURDAY

ENAME      HIREDATE  DAY
---------- --------- ---------
MILLER     23-JAN-82 SATURDAY
WARD       22-FEB-81 SUNDAY
SCOTT      19-APR-87 SUNDAY

14 rows selected.
```

10. Create a query that displays the employees' names and indicates the amounts of their salaries through asterisks. Each asterisk signifies a hundred dollars. Sort the data in descending order of salary.
Label the column EMPLOYEE_AND_THEIR_SALARIES.



```
SQL> select ename || LPAD('*',trunc(sal/100), '*') as EMPLOYEE_AND_THEIR_SALARIES from emp order by sal desc;

EMPLOYEE_AND_THEIR_SALARIES
--------------------------------------------------------------------------------
KING**********************************************
FORD*****************************
SCOTT*****************************
JONES*****************************
BLAKE**************************
CLARK************************
ALLEN****************
TURNER***************
MILLER*************
WARD***********
MARTIN***********

EMPLOYEE_AND_THEIR_SALARIES
--------------------------------------------------------------------------------
ADAMS***********
JAMES*********
SMITH********

14 rows selected.
```