Bahria University, Islamabad Campus

Department of Computer Sciences

Mid Term Examination

Class/Section: BS(CS)-4B

(Spring 2021 Semester)

Course: DBMS-LAB		Date: 4-22-2021
Course Code: CSL-220		Time: Session -I
Faculty's Name: Sami Ullah		Max Marks: 20
Time Allowed: 2 hours		Total Pages: 2

INSTRUCTIONS:

I. All questions are compulsory.
II. There are a total of 10 questions.
III. The paper is a closed book.
IV. All tasks perform on SQL Plus
V. **Submit your answer sheet in pdf format.**
VI. The submission on LMS is acceptable only.

Student Name: Malik Zohaib Mustafa **Enrollment No.** 01-34192-030

Note: Read all instructions carefully

Marks Distribution:

	Q#1	Q#2	Q#3	Q#4	Q#5	Q#6	Q#7	Q#8	Q#9	Q#10	Total Marks
Marks Assigned	2	2	2	2	2	2	2	2	2	2	20
Obtained Marks											

1. The HR departments needs to find high-salary and low-salary employees. Display the ename and salary for any employee whose salary is not in the range of Rs800 to Rs1250.
2. Create a query to display the ename and salary for all employees. Format the salary to be 15 characters long, left-padded with the "$" symbol. Label the column "SALARY".
3. Display the ename, hire date, and day of the week on which the employee started. Label the column DAY. Order the results by the day of the week, starting with Monday.
4. Create a query that displays the employees' last names and commission amounts. If an employee does not earn commission, show "No Commission." Label the column COMM.
5. List the employee names that do not end with 's'.
6. Display all records from employees record whose name is Blake using first letter capital.

7. Display the number of employees department-wise and jobwise. The output look like as:

DEPTNO	JOB	Total
-------	----------	--------
10	CLERK	1
10	MANAGER	1
10	PRESIDENT	1
20	CLERK	2
30	SALESMAN	4

8. Display the first, second, third highest and lowest salaries department wise. The output look like as:

DEPTNO	LOWEST	HIGHEST
1	1200	52000
2	800	6950
3	4560	19856

9. Show the system time in two different columns with different formats and aliases as shown below:

12hrsPM	**Date**
03:26:09 PM	05-22-2021 pm

10. Calculate your age and Column name is your name. Sample Output

Sami Ullah
27

1.

```
SQL> /*
SQL>
SQL> MALIK ZOHAIB MUSTAFA
SQL>
SQL> 01-134192-030
SQL>
SQL> BSCS-4B
SQL>
SQL> DBMS LAB MID TERM 2021
SQL> */
SQL> /*
SQL> Task 1
SQL> */
SQL>
SQL> SELECT
  2  ENAME,
  3  SAL
  4  FROM
  5  EMP
  6  WHERE
  7  SAL
  8  NOT BETWEEN
  9  800 AND 1250
 10  ;

ENAME              SAL
---------- ----------
ALLEN            1600
JONES            2975
BLAKE            2850
CLARK            2450
SCOTT            3000
KING             5000
TURNER           1500
FORD             3000
MILLER           1300

9 rows selected.
```

2.

```
SQL> /*
SQL>
SQL> MALIK ZOHAIB MUSTAFA
SQL>
SQL> 01-134192-030
SQL>
SQL> BSCS-4B
SQL>
SQL> DBMS LAB MID TERM 2021
SQL> */
SQL> /*
SQL> TASK 2
SQL> */
SQL> SELECT
  2  ENAME,
  3  LPAD(SAL,15,'S') "SALARY"
  4  FROM
  5  EMP;

ENAME      SALARY
---------- ---------------
SMITH      SSSSSSSSSSSS800
ALLEN      SSSSSSSSSSS1600
WARD       SSSSSSSSSSS1250
JONES      SSSSSSSSSSS2975
MARTIN     SSSSSSSSSSS1250
BLAKE      SSSSSSSSSSS2850
CLARK      SSSSSSSSSSS2450
SCOTT      SSSSSSSSSSS3000
KING       SSSSSSSSSSS5000
TURNER     SSSSSSSSSSS1500
ADAMS      SSSSSSSSSSS1100

ENAME      SALARY
---------- ---------------
JAMES      SSSSSSSSSSSS950
FORD       SSSSSSSSSSS3000
MILLER     SSSSSSSSSSS1300

14 rows selected.

SQL>
```

3.

Method 1

```
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> Task 3
SQL> */
SQL> SELECT
  2  ENAME
  3  ,HIREDATE,
  4  TO_CHAR(HIREDATE,'DAY')"DAY"
  5  FROM EMP
  6  ORDER BY
  7  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.
```

Method 2:

```
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> Task 3
SQL> */
SQL> SELECT
  2  ENAME
  3  ,HIREDATE,
  4  TO_CHAR(HIREDATE,'DAY')"DAY"
  5  FROM EMP
  6  ORDER BY
  7  MOD(TO_CHAR(HIREDATE,'D')+5,7);

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.
```

4.

```
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> TASK 4
SQL>
SQL> */
SQL>
SQL> SELECT
  2  ENAME AS "LAST NAME" ,
  3  NVL (TO_CHAR(COMM),'NO COMISSION') AS "COMM"
  4  FROM EMP;

LAST NAME  COMM
---------- ----------------------------------------
SMITH      NO COMISSION
ALLEN      300
WARD       500
JONES      NO COMISSION
MARTIN     1400
BLAKE      NO COMISSION
CLARK      NO COMISSION
SCOTT      NO COMISSION
KING       NO COMISSION
TURNER     0
ADAMS      NO COMISSION

LAST NAME  COMM
---------- ----------------------------------------
JAMES      NO COMISSION
FORD       NO COMISSION
MILLER     NO COMISSION

14 rows selected.
```

5.

```
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> TASK 5
SQL> */
SQL> SELECT
  2  ENAME
  3  FROM EMP
  4  WHERE
  5  ENAME NOT LIKE '%S';

ENAME
----------
SMITH
ALLEN
WARD
MARTIN
BLAKE
CLARK
SCOTT
KING
TURNER
FORD
MILLER

11 rows selected.
```

6.

```
SQL>
SQL>   /*
SQL>
SQL>   MALIK ZOHAIB MUSTAFA
SQL>
SQL>   01-134192-030
SQL>
SQL>   BSCS-4B
SQL>
SQL>   DBMS LAB MID TERM 2021
SQL>   */
SQL>  /*
SQL>  TASK 6
SQL>  */
SQL>  SELECT *
  2   FROM EMP
  3   WHERE ENAME='BLAKE';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30

SQL>  SELECT *
  2   FROM EMP
  3  WHERE
  4  INITCAP(ENAME)='Blake';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30

     .
```

7.

```
SQL>
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> TASK 7
SQL> */
SQL>
SQL> SELECT DEPTNO ,
  2  JOB, COUNT(*) AS "TOTAL"
  3  FROM EMP
  4  GROUP BY DEPTNO,JOB
  5  ORDER BY DEPTNO ASC;

    DEPTNO JOB              TOTAL
---------- --------- ----------
        10 CLERK              1
        10 MANAGER            1
        10 PRESIDENT          1
        20 ANALYST            2
        20 CLERK              2
        20 MANAGER            1
        30 CLERK              1
        30 MANAGER            1
        30 SALESMAN           4

9 rows selected.
```

8.

```
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> Task 8
SQL>
SQL> */SELECT DEPTNO,
  2  MIN(SAL) AS "LOWEST",
  3  MAX(SAL) AS "HIGHEST"
  4  FROM EMP
  5  GROUP BY DEPTNO
  6  ORDER BY DEPTNO ASC;

    DEPTNO     LOWEST    HIGHEST
---------- ---------- ----------
        10       1300       5000
        20        800       3000
        30        950       2850
```

Method 2:

```
SQL>  SELECT DEPTNO,
  2   MIN(SAL) AS "LOWEST",
  3   MAX(SAL) AS "HIGHEST"
  4   FROM EMP
  5    GROUP BY DEPTNO,SAL
  6   ORDER BY DEPTNO ASC;

    DEPTNO     LOWEST    HIGHEST
---------- ---------- ----------
        10       1300       1300
        10       2450       2450
        10       5000       5000
        20        800        800
        20       1100       1100
        20       2975       2975
        20       3000       3000
        30        950        950
        30       1250       1250
        30       1500       1500
        30       1600       1600

    DEPTNO     LOWEST    HIGHEST
---------- ---------- ----------
        30       2850       2850
```

9.

```
SQL>
SQL>  /*
SQL>
SQL>  MALIK ZOHAIB MUSTAFA
SQL>
SQL>  01-134192-030
SQL>
SQL>  BSCS-4B
SQL>
SQL>  DBMS LAB MID TERM 2021
SQL>  */
SQL> /*
SQL> task 9
SQL> */
SQL> SELECT TO_CHAR(SYSDATE,'HH:MM:SS PM')  "12HRSPM",
  2  TO_CHAR(SYSDATE,'DD-MM-YYYY PM')"DATE"
  3  FROM DUAL;

12HRSPM     DATE
----------- -------------
12:04:30 PM 22-04-2021 PM
```

10.

```
SQL>   /*
SQL>
SQL>   MALIK ZOHAIB MUSTAFA
SQL>
SQL>   01-134192-030
SQL>
SQL>   BSCS-4B
SQL>
SQL>   DBMS LAB MID TERM 2021
SQL>   */
SQL>  /*
SQL>  Task 10
SQL>
SQL> */
SQL> SELECT ROUND((SYSDATE-TO_DATE('06-APR-2001'))/365.25,0)"MY AGE" FROM DUAL;

    MY AGE
----------
        20
```