



SWE1004 - (L 9 + L10)

Lab Sheet 5

Date functions & Strings

Perform following queries

(1) Retrieve all data from employee, jobs and deposit.

```
SQL> SELECT*FROM EMPLOYEE_21mia1119;
```

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	JOB_ID
106	SNEHA	2450	24500	10	LEC
107	ANAMIKA	2975	0	30	LEC

```
SQL> SELECT*FROM JOB_21mia1119;
```

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
IT_PROG	Programmer	4000	10000
MK_MGR	Marketing manager	9000	15000
FI_MGR	Finance manager	8200	12000

```
SQL> SELECT*FROM DEPOSI_21mia1119;
```

A_NO	CNAME	BNAME	AMOUNT	A_DATE
101	Anil	andheri	7000	01-JAN-06
102	sunil	virar	5000	15-JUL-06
104	vijay	andheri	8000	17-SEP-06

(2) Give details of account no. and deposited rupees of customers having account opened between dates 01-01-06 and 25-07-06.

```
SQL> SELECT A_NO,AMOUNT FROM DEPOSI_21mia1119  
2 WHERE A_DATE>01-JAN-06 AND A_DATE<25-JULY-06;
```

A_NO	AMOUNT
102	5000
103	6500
104	8000

(3) Display all jobs with minimum salary is greater than 4000.

```
SQL> SELECT*FROM JOB_21mia1119
2 WHERE MIN_SAL>4000;
```

JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
MK_MGR	Marketing manager	9000	15000
FI_MGR	Finance manager	8200	12000

(4) Display name and salary of employee whose department no is 20. Give alias name to name of employee.

```
SQL> SELECT EMP_NAME,EMP_SAL FROM EMPLOYEE_21mia1119
2 WHERE DEPT_NO=20;
```

no rows selected

(5) Display employee no, name and department details of those employee whose department lies in (10, 20)

```
SQL> SELECT*FROM EMPLOYEE_21mia1119
2 WHERE DEPT_NO>10 AND DEPT_NO<20;
```

no rows selected

To study various options of LIKE predicate:

(6) Display all employee whose name start with 'A' and third character is 'a'.

```
SQL> SELECT*FROM EMPLOYEE_21mia1119
2 WHERE EMP_NAME LIKE 'A%';
```

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	JOB_ID
107	ANAMIKA	2975	0	30	LEC

(7) Display name, number and salary of those employees whose name is 5 characters long and first three characters are 'Ani'.

```
SQL> SELECT*FROM EMPLOYEE_21mia1119
2 WHERE EMP_NAME LIKE 'ANI__%';
```

no rows selected

(8) Display the non-null values of employees and also employee name second character should be 'n' and string should be 5 character long.

```
SQL> SELECT*FROM EMPLOYEE_21mia1119
2 WHERE EMP_NAME LIKE '_N__%';
```

EMP_NO	EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO	JOB_ID
106	SNEHA	2450	24500	10	LEC
107	ANAMIKA	2975	0	30	LEC

(9) Display the null values of employee and also employee name's third character should be 'a'.

```
SQL> select * from EMP_21MIA1118 where EMP_NAME like '__A%' AND EMP_COMM = 'NULL';
no rows selected
```

(10) What will be output if you are giving LIKE predicate as '%_%' ESCAPE '\'

```
SQL> SELECT*FROM EMPLOYEE_21mia1119
2 WHERE EMP_NAME LIKE '%\_%' ESCAPE '\'
3 ;
WHERE EMP_NAME LIKE `%\_%' ESCAPE `\'
*
ERROR at line 2:
ORA-00911: invalid character
```

Create tables according to the following definition.

```
CREATE TABLE JOB_21mia1119 (JOB_ID VARCHAR2(8), JOB_TITLE VARCHAR2(30),
MIN_SAL NUMBER(7,2),MAX_SAL NUMBER(7,2));
```

```
CREATE TABLE EMPLOYEE_21mia1119 (EMP_NO NUMBER(3), EMP_NAME
VARCHAR2(12), EMP_SAL NUMBER(8,2), EMP_COMM NUMBER(6,1) DEPT_NO
NUMBER(3), JOB_ID VARCHAR2(15));
```

```
CREATE TABLE DEPOSI_21mia1119 (A_NO VARCHAR2(5), CNAME VARCHAR2(10),
BNAME VARCHAR2(10), AMOUNT NUMBER(7,2), A-DATE DATE);
```

```
CREATE TABLE BORR_21mia1119 (LOANNO VARCHAR2(5), CNAME VARCHAR2(10),
BNAME VARCHAR2(10), AMOUNT NUMBER (7,2));
```

Table values

```
INSERT INTO EMPLOYEE_21mia1119 VALUES (105,'ANITA',5000,50,000,10,'FI_ACC');
```

```
(EMP_NO,EMP_NAME,EMP_SALARY,EMP_COMM,DEPT_NO,JOB_ID)
```

```
VALUES (105,'ANITA',5000,50,000,10,'FI_ACC');
```

```
INSERT INTO EMPLOYEE_21mia1119 VALUES (106,'SNEHA',2450, 24500,10, 'LEC');
```

```

(EMP_NO,EMP_NAME,EMP_SALARY,EMP_COMM,DEPT_NO,JOB_ID)
VALUES (106,'SNEHA',2450, 24,500,10, 'LEC');

INSERT INTO EMPLOYEE_21mia1119 VALUES (107,'ANAMIKA',2975, NULL,30,'LEC');
(EMP_NO,EMP_NAME,EMP_SALARY,EMP_COMM,DEPT_NO,JOB_ID)
VALUES (107,'ANAMIKA',2975, NULL,30,'LEC');


INSERT INTO JOB_21mia1119 VALUES ('IT_PROG ',' Programmer', 4000, 10000);
(JOB_ID,_JOB_NAME,MIN_SAL,MAX_SAL)
VALUES ('IT_PROG ',' Programmer', 4000, 10000);

INSERT INTO JOB_21mia1119 VALUES ('MK_MGR',' Marketing manager', 9000, 15000);
(JOB_ID,_JOB_NAME,MIN_SAL,MAX_SAL)
VALUES ('MK_MGR',' Marketing manager', 9000, 15000);

INSERT INTO JOB_21mia1119 VALUES ('FI_MGR','Finance manager ', 8200,12000);
(JOB_ID,_JOB_NAME,MIN_SAL,MAX_SAL)
VALUES ('FI_MGR','Finance manager ', 8200,12000);


INSERT INTO DEPOSI_21mia1119 VALUES ('101','Anil','andheri',7000,'01-jan-06');
(A_NO,CNAME,BNAME,AMOUNT,A_DATE)
VALUES ('101','Anil','andheri',7000,'01-jan-06');

INSERT INTO DEPOSI_21mia1119 VALUES ('102','sunil','virar',5000,'15-jul-06');
(A_NO,CNAME,BNAME,AMOUNT,A_DATE)
VALUES ('102','sunil','virar',5000,'15-jul-06');

INSERT INTO DEPOSI_21mia1119 VALUES ('102','sunil','virar',5000,'15-jul-06');
(A_NO,CNAME,BNAME,AMOUNT,A_DATE)
VALUES ('103','jay','villeparle',6500,'12-mar-06');

INSERT INTO DEPOSI_21mia1119 VALUES ('104','vijay','andheri', 8000,'17-sep-06');
(A_NO,CNAME,BNAME,AMOUNT,A_DATE)
VALUES ('104','vijay','andheri', 8000,'17-sep-06');

INSERT INTO DEPOSI_21mia1119 VALUES ('105','keyur','dadar', 7500,'19-nov-06');
(A_NO,CNAME,BNAME,AMOUNT,A_DATE)
VALUES ('105','keyur','dadar', 7500,'19-nov-06');

```

Important guidelines to be followed

- Every table created should have the last four digits of your registration number **together with the table name(eg:emp_1021)**
- Insert **records** for each table as per the requirements of the query.
- No query must return an answer **"No rows found"**
- Upload a **PDF** document with
 - the screenshots of tables created, Records of the tables,
 - SQL queries with answers

String Operations

- SQL includes a string-matching operator for comparisons on character strings. The operator **like** uses patterns that are described using two special characters:
 - percent (%). The % character matches any substring.
 - underscore (_). The _ character matches any character.
- Find the names of all instructors whose name includes the substring "dar".

```
select name
from instructor
where name like '%dar%'
```

- Match the string "100%"

```
like '100 \%' escape '\'
```

in that above we use backslash (\) as the escape character.

- Patterns are case sensitive.
- Pattern matching examples:
 - 'Intro%' matches any string beginning with "Intro".
 - '%Comp%' matches any string containing "Comp" as a substring.
 - '___' matches any string of exactly three characters.
 - '___ %' matches any string of at least three characters.
- SQL supports a variety of string operations such as
 - concatenation (using "||")
 - converting from upper to lower case (and vice versa)
 - finding string length, extracting substrings, etc.