





i2i Academy

Topic Oracle SQL Language Fundamentals I

Document Name SQL01-EX-01-05

Document Difficulty Level			
Beginner	Junior	Senior	Expert
			

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Oracle SQL Language Fundamentals I

Exercise SQL01-EX-01:

Definiton : Write an SQL query that selects employee's id, employee's first name and employee's department name for all employees. (Please use HR.EMPLOYEES and HR.DEPARTMENTS tables.)

Sample Output :

	EMPLOYEE_ID	FIRST_NAME	DEPARTMENT_NAME
1	200	Jennifer	Administration
2	201	Michael	Marketing
3	202	Pat	Marketing
4	114	Den	Purchasing
5	115	Alexander	Purchasing
6	116	Shelli	Purchasing
7	117	Sigal	Purchasing
8	118	Guy	Purchasing
9	119	Karen	Purchasing
10	203	Susan	Human Resources
11	120	Matthew	Shipping
12	121	Adam	Shipping
13	122	Payam	Shipping
14	123	Shanta	Shipping
15	124	Kevin	Shipping
16	125	Julia	Shipping
17	126	Irene	Shipping
18	127	James	Shipping
19	128	Steven	Shipping
20	129	Laura	Shipping

Objectives : To learn relations on tables and SQL language keyword JOIN.

Exercise Keywords: INNER JOIN, JOIN.

```

1 SELECT EMPLOYEE_ID, FIRST_NAME, DEPARTMENT_NAME
2 FROM HR.EMPLOYEES NATURAL JOIN HR.DEPARTMENTS
  
```

Exercise SQL01-EX-02:

Definiton : Create a report that displays the employee's id and their manager's id. (Please use HR.EMPLOYEES table)

Sample Output :

	Employee ID	Manager ID
1	101	100
2	102	100
3	103	102
4	104	103
5	105	103
6	106	103
7	107	103
8	108	101
9	109	108
10	110	108

Objectives : To learn SQL join logic like SELF JOIN.

```
SELECT EMPLOYEE_ID, MANAGER_ID
FROM HR.EMPLOYEES
```

Exercise SQL01-EX-03:

Definiton : For example; first three character of PHONE_NUMBER column gives us a operator of employee. Create a report that displays the operators and their total subscriber. But we want two different displays with diffrent queries. (Please use HR.EMPLOYEES table)

Sample Output :

	Operator	Total
1	515	21
2	590	5
3	603	1
4	011	35
5	650	45

	515	590	603	011	650
1	21	5	1	35	45

Objectives : To learn basic SQL keywords like COUNT, SUM, CASE.

```
SELECT SUBSTR(phone_number, 1, 3) AS Operator, COUNT(*) AS Total
FROM HR.EMPLOYEES
GROUP BY SUBSTR(phone_number, 1, 3)
```

OPERATOR	TOTAL
515	21
650	45
603	1
590	5
011	35

```
SELECT *
FROM (
    SELECT SUBSTR(phone_number, 1,3) as op
    FROM HR.EMPLOYEES
)
PIVOT
(
    COUNT (*)
    FOR op IN ('011' as "011", '515' as "515", '590' as "590",
    '603' as "603", '650' as "650")
)
```

011	515	590	603	650
35	21	5	1	45

Exercise SQL01-EX-04:

Definiton : Create a table (table name like HR.EMP) from HR.EMPLOYEES table. Insert a new row to HR.EMP table and update this employee's phone number and salary. Delete your new row and display the HR.EMP table. Finally drop your table HR.EMP.

Sample Output :

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_D
1	250	Erman	İbrsim	erman@ibrisim	5556783245	3.10.201

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY
1	250	Erman	İbrsim	erman@ibrisim	5328976541	3.10.2013 22:07:27	IT_PROG	15000,00

Objectives : To learn basic SQL keywords like INSERT, UPDATE, DELETE, DROP and CREATE TABLE from table.

I am using Live SQL. So I got this error:

```
CREATE TABLE HR.emp(
  employee_id NUMBER(3),
  first_name VARCHAR(12),
  last_name VARCHAR(12),
  email VARCHAR(12),
  phone_number VARCHAR(12),
  hire_date DATE,
  job_id VARCHAR(8),
  salary NUMBER(5)
);
```

```
INSERT INTO HR.emp
VALUES (
  "250",
  "Ali",
  "Geniş",
  "ali@gen",
  "5555555555",
  "17/07/2023",
  "INTERN",
  "5000"
);
```

DROP HR.emp;

ORA-01031: insufficient privileges

ORA-00942: table or view does not exist

Exercise SQL01-EX-05:

Definiton :

Select employees' first name and last name as masked with "*" character as shown in sample output below.

CUSTOMERNAME
NEŞET BEKTAŞ
HASAN YARİN
HÜSEYİN ÖZLEMİŞ
YILMAZ YÜCER
MEHMET ŞERİF KURT
LEVENT HACIOĞLU
HASAN YAMAN
ÖZGÜR KANŞIRAY
YAKUP HÜSEYİN HIÇKIRAN
HÜLYA BALTUTAN
SİAWASH ABDULQAYOM
NERİMAN ÇİÇEKÇİ

```
SELECT
  INITCAP(SUBSTR(name, 1, 2))
  || RPAD('*', INSTR(name, ' ', 1, 1) - 3, '*')
  || ' '
  || INITCAP(SUBSTR(name, INSTR(name, ' ', 1, 1) + 1, 2))
  || RPAD('*', LENGTH(name) - INSTR(name, ' ', 1, 1) - 2, '*') AS name
FROM (
  SELECT (first_name || ' ' || last_name) as name
  FROM HR.employees
)
```

Sample Output :

CUSTOMERNAME
Ha*** Ya***
Ga*** Ke*****
Me***** At***
Za*** Ze*****
Pi Ka**

NAME
El*** Ab**
Su***** An**
Mo*** At*****
Da*** Au****
He***** Ba**
Sh***** Ba***

Objectives : To learn basic SQL functions like length, substr, instr, trim, initcap, rpad, lpad, regexp_replace, regexp_substr