

i2i Academy

Topic Oracle SQL Language Fundamentals I

Document Name | SQL01-EX-01-05

| Document Difficulty Level | | | | | |
|---------------------------|-----------------|--|--------|--|--|
| Beginner | Beginner Junior | | Expert | | |
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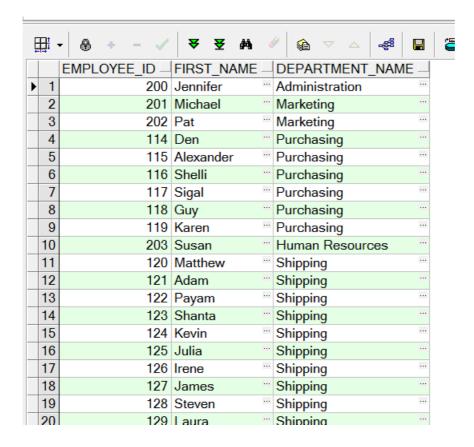
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Oracle SQL Language Fundamentals I

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:



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

Exercise Keywords: INNER JOIN, JOIN.

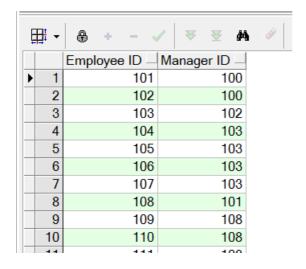
1 SELECT EMPLOYEE_ID, FIRST_NAME, DEPARTMENT_NAME
2 FROM HR.EMPLOYEES NATURAL JOIN HR.DEPARTMENTS



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:



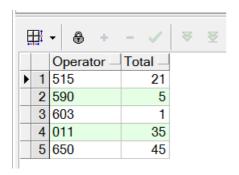
Objectives: To learn SQL join logic like SELF JOIN.

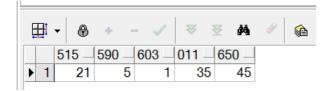
SELECT EMPLOYEE_ID, MANAGER_ID FROM HR.EMPLOYEES

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:





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 | |

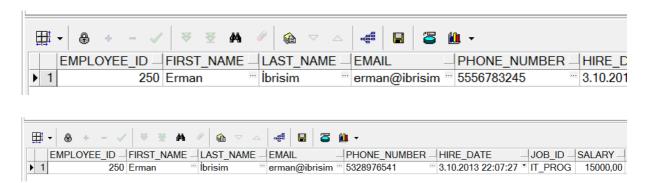
```
SELECT *
FROM (
    SELECT SUBSTR(phone_number, 1,3) as op
    FROM HR.EMPLOYEES
)
PIVOT
(
    COUNT (*)
    FOR op IN ('011' as "011", '515' as "515", '590' as "590",
    '603' as "603", '650' as "650")
)
```

| 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:



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

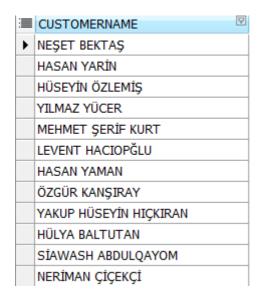
I am using Live SQL. So I got this error:

```
CREATE TABLE HR.emp(
   employee_id NUMBER(3),
   first_name VARCHAR(12),
   last_name VARCHAR(12),
   email VARCHAR(12),
                                                                DROP HR.emp;
   phone_number VARCHAR(12),
   hire_date DATE,
   job_id VARCHAR(8),
   salary NUMBER(5)
);
INSERT INTO HR.emp
VALUES (
    "250",
    "Ali",
    "Geniş",
                                                   ORA-01031: insufficient privileges
    "ali@gen",
    "555555555",
    "17/07/2023",
    "INTERN",
    "5000"
                                                   ORA-00942: table or view does not exist
);
```

Exercise SQL01-EX-05:

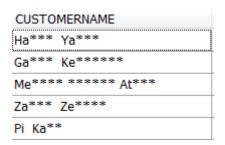
Definition:

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



```
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:





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