

i2i Academy

Training Document

Topic	Oracle SQL Language Fundamentals I
Document Name	SQL03-EX-01-05

Copyright of i2i Systems Turkey 2013

The copyright in this work is vested in i2i Systems Turkey and the information contained herein is confidential. This work (either in whole or in part) must not be modified, reproduced, disclosed or disseminated to others or used for purposes other than that for which it is supplied, without the prior written permission of i2i Systems Turkey. If this work or any part hereof is furnished to a third party by virtue of a contract with that party, use of this work by such party shall be governed by the express contractual terms between the i2i Systems Turkey which is a party to that contract and the said party.

Exercise SQL03-EX-01:

Definiton: Write followig SQL queries:

- Add a colum to employees table named MAX_SALARY.
- Update MAX_SALARY with maximum salary amount with subquery.
- Delete employee who have minimum salary using subquery.

SQL:

ALTER TABLE HR.employees ADD (Max_Salary NUMBER (8));

UPDATE HR.EMPLOYEES

SET Max_Salary = (SELECT MAX(salary) FROM HR.employees
);

DELETE FROM HR.employees

WHERE salary = (SELECT MIN(salary) FROM HR.employees);

Screenshot:

	YEE_II	FIRST_NAME			♦ PHONE_NUMBER			SALARY			MAX_SALARY
1	10	0 Steven	King	SKING	515.123.4567	17/06/2003	AD_PRES	24000		90	24000
2	10	l Neena	Kochhar	NKOCHHAR	515.123.4568	21/09/2005	AD_VP	17000	100	90	24000
3	10	2 Lex	De Haan	LDEHAAN	515.123.4569	13/01/2001	AD_VP	17000	100	90	24000
4	10	3 Alexander	Hunold	AHUNOLD	590.423.4567	03/01/2006	IT_PROG	9000	102	60	24000
5	10	4 Bruce	Ernst	BERNST	590.423.4568	21/05/2007	IT_PROG	6000	103	60	24000
6	10	5 David	Austin	DAUSTIN	590.423.4569	25/06/2005	IT_PROG	4800	103	60	24000
7	10	6 Valli	Pataballa	VPATABAL	590.423.4560	05/02/2006	IT_PROG	4800	103	60	24000
8	10	7 Diana	Lorentz	DLORENTZ	590.423.5567	07/02/2007	IT_PROG	4200	103	60	24000
9	10	8 Nancy	Greenberg	NGREENBE	515.124.4569	17/08/2002	FI_MGR	12008	101	100	24000

Table HR.EMPLOYEES altered.

107 rows updated.

1 row deleted.

Exercise SQL03-EX-02:

Definiton: Write followig SQL queries:

- Define index (named DPR_NAME_IDX) on DEPARTMENT_NAME column of DEPARTMENTS table.
- Define constraint (named CNSTR_SALARY) on employee salary. (Salary must be between 1000\$ and 100.000\$)
- Drop defined index.
- Enable, disable, drop defined constraint.

SQL:

CREATE INDEX DPR_NAME_IDX ON HR.departments (department_name);

ALTER TABLE HR.employees ADD CONSTRAINT CNSTR_SALARY

CHECK (salary>1000 AND salary<100000);

DROP INDEX DPR_NAME_IDX;

ALTER TABLE HR.employees ENABLE CONSTRAINT CNSTR_SALARY;

ALTER TABLE HR.employees DISABLE CONSTRAINT CNSTR_SALARY;

ALTER TABLE HR.employees DROP CONSTRAINT CNSTR_SALARY;

Screenshot:

```
Index DPR_NAME_IDX created.

Table HR.EMPLOYEES altered.

Index DPR_NAME_IDX dropped.

Table HR.EMPLOYEES altered.

Table HR.EMPLOYEES altered.

Table HR.EMPLOYEES altered.
```

Exercise SQL03-EX-03:

Definiton: Create a table from EMPLOYEES with distinct department_id column. Add department_name to that table. With DEPARTMENTS table, update department_name for included department_ids and insert department_id and department_name values for not included rows. Use MERGE keyword.

SQL:

CREATE TABLE NEW_TABLE AS (SELECT department_id FROM HR.departments);

ALTER TABLE NEW_TABLE ADD (department_name VARCHAR2(30));

MERGE INTO NEW_TABLE t USING (SELECT * FROM HR.departments) d ON

(t.department_id = d.department_id) WHEN MATCHED THEN

UPDATE SET t.department_name = d.department_name;

Screenshot:

1	10	Administration
2	20	Marketing
3	30	Purchasing
4	40	Human Resources
5	50	Shipping
6	60	IT
7	70	Public Relations
8	80	Sales

Exercise SQL03-EX-04:

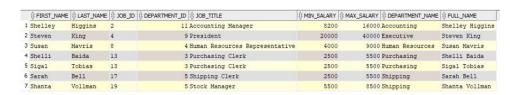
Definiton: Using **WITH** keyword, do following jobs:

- Firstly select first_name, last_name, job_id, department_id from employees table whoes job_id starts with 'S'.
- Additionally select job_title and min-max salary amount.
- Add department_name to that query.
- Lastly concat first_name and last_name with space as full_name alias and list with other selected columns.

SQL:

```
WITH MY_EMPLOYEES AS (SELECT FIRST_NAME,LAST_NAME,JOB_ID,DEPARTMENT_ID
FROM HR.EMPLOYEES WHERE FIRST_NAME LIKE 'S%'),
JOB_MAX_MIN AS (SELECT JOB_ID, JOB_TITLE, MIN_SALARY, MAX_SALARY FROM HR. JOBS),
DEP_DETAIL AS (SELECT DEPARTMENT_ID, DEPARTMENT_NAME FROM HR.DEPARTMENTS)
SELECT
e.first_name,
e.last_name,
e.job_id,
e.department_id,
j.job_title,
j.min_salary,
j.max_salary,
d.department_name,
e.first_name | | ' ' | | e.last_name AS full_name
FROM MY_EMPLOYEES e
JOIN JOB_MAX_MIN j ON e.job_id = j.job_id
JOIN DEP_DETAIL d ON e.department_id = d.department_id;
```

Screenshot:



Exercise SOL03-EX-05:

Definiton : Search for COMMIT and ROLLBACK keywords and explain them.
The "COMMIT" statement is used to permanently save the changes made in a transaction to the database permanently.
The "ROLLBACK" statement is used to undo the changes made in a transaction and return the database to previous state before the transaction began.
SQL:
COMMIT
ROLLBACK
Screenshot:
Commit complete.
Rollback complete.