

TUTORIAL - 3

1. Create a table

SQL QUERY Code

```
CREATE TABLE EMPLOYEES_A (  
    EMPLOYEE_ID NUMBER PRIMARY KEY,  
    FIRST_NAME VARCHAR2(50),  
    LAST_NAME VARCHAR2(50),  
    DEPARTMENT VARCHAR2(50),  
    SALARY NUMBER,  
    HIRE_DATE DATE  
);
```

```
INSERT INTO EMPLOYEES_A VALUES (1, 'PETER', 'WRANGLE', 'CE', 100000, '1/16/2023')  
INSERT INTO EMPLOYEES_A VALUES (2, 'JOHN', 'DOE', 'HR', 50000, '1/15/2020')  
INSERT INTO EMPLOYEES_A VALUES (3, 'Jane', 'Smith', 'IT', 60000, '5/20/2019')  
INSERT INTO EMPLOYEES_A VALUES (4, 'Bob', 'Johnson', 'Sales', 55000, '02-10-2021')  
INSERT INTO EMPLOYEES_A VALUES (5, 'Alice', 'Williams', 'Marketing', 48000, '04-05-2022')  
INSERT INTO EMPLOYEES_A VALUES (6, 'Charlie', 'Brown', 'IT', 65000, '11/30/2018')
```

Output Screenshot:

QUESTIONS :-

1. Add a new column EMAIL of type VARCHAR2(100) to store employees' email addresses.

QUERY CODE : ALTER TABLE EMPLOYEES_A ADD (EMAIL VARCHAR2(100));

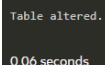


Table altered.
0.06 seconds

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Database Management System

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE	EMAIL
2	JOHN	DOE	HR	50000	1/15/2020	-
3	Jane	Smith	IT	60000	5/20/2019	-
6	Charlie	Brown	IT	65000	11/30/2018	-
4	Bob	Johnson	Sales	55000	2/10/2021	-
5	Alice	Williams	Marketing	48000	4/5/2022	-
1	PETER	WRANGLE	CE	100000	1/16/2023	-

2. Rename the DEPARTMENT column to DEPT_NAME.

QUERY CODE : ALTER TABLE EMPLOYEES_A RENAME COLUMN DEPARTMENT TO DEPT_NAME

```
Table altered.

0.06 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	HIRE_DATE	EMAIL
2	JOHN	DOE	HR	50000	1/15/2020	-
3	Jane	Smith	IT	60000	5/20/2019	-
6	Charlie	Brown	IT	65000	11/30/2018	-
4	Bob	Johnson	Sales	55000	2/10/2021	-
5	Alice	Williams	Marketing	48000	4/5/2022	-
1	PETER	WRANGLE	CE	100000	1/16/2023	-

3. Drop the HIRE_DATE column from the table.

QUERY CODE : ALTER TABLE EMPLOYEES_A DROP COLUMN HIRE_DATE

```
Table altered.

0.06 seconds
```

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EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	EMAIL
2	JOHN	DOE	HR	50000	-
3	Jane	Smith	IT	60000	-
6	Charlie	Brown	IT	65000	-
4	Bob	Johnson	Sales	55000	-
5	Alice	Williams	Marketing	48000	-
1	PETER	WRANGLE	CE	100000	-

4. Add a new column BONUS of type NUMBER(8,2) to store employee bonuses.

QUERY CODE : ALTER TABLE EMPLOYEES_A ADD (BONUS NUMBER(8,2));

```
Table altered.
0.06 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	EMAIL	BONUS
2	JOHN	DOE	HR	50000	-	-
3	Jane	Smith	IT	60000	-	-
6	Charlie	Brown	IT	65000	-	-
4	Bob	Johnson	Sales	55000	-	-
5	Alice	Williams	Marketing	48000	-	-
1	PETER	WRANGLE	CE	100000	-	-

5. Change the data type of the FIRST_NAME column to VARCHAR2(150).

QUERY CODE : ALTER TABLE EMPLOYEES_A MODIFY (FIRST_NAME VARCHAR2(150));

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Table altered.

0.05 seconds



EMPLOYEES_A

Columns

Data

Indexes

Constraints

Grants

Statistics

Triggers

Dependencies

DDL

Sample Queries

Download

Refresh



A=

```
1 CREATE TABLE "EMPLOYEES_A"
2 (
3   "EMPLOYEE_ID" NUMBER,
4   "FIRST_NAME" VARCHAR2(150),
5   "LAST_NAME" VARCHAR2(50),
6   "DEPT_NAME" VARCHAR2(50),
7   "SALARY" NUMBER,
8   "EMAIL" VARCHAR2(100),
9   "BONUS" NUMBER(8,2),
10  PRIMARY KEY ("EMPLOYEE_ID")
11  USING INDEX ENABLE
12 ) ;
```

6. Rename the table EMPLOYEES_E to EMPLOYEES_INFO.

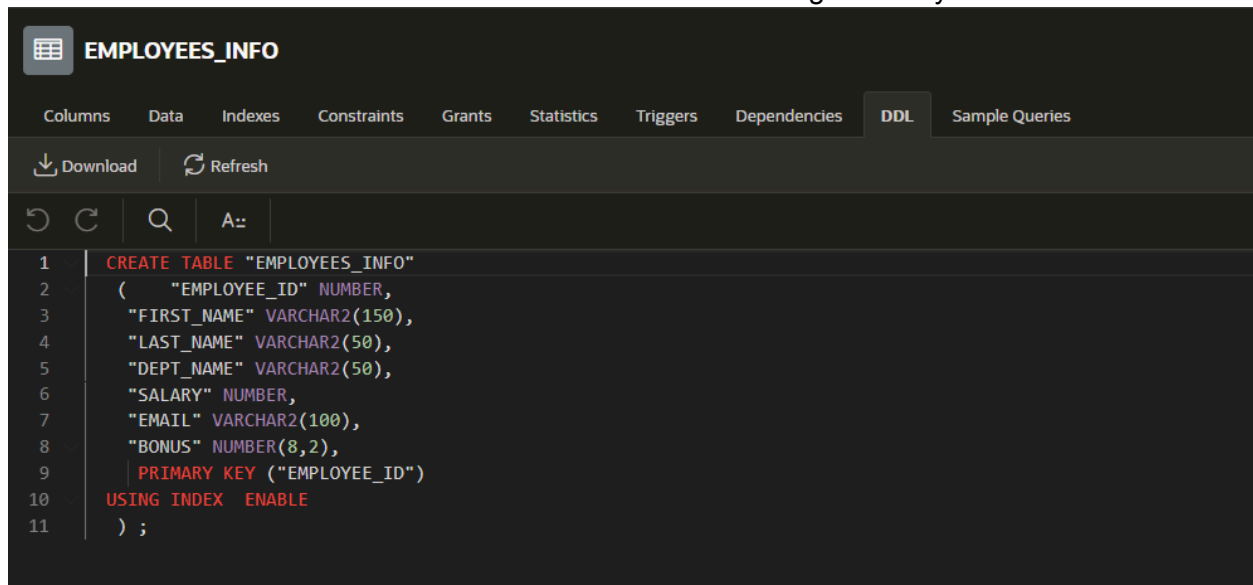
QUERY CODE : ALTER TABLE EMPLOYEES_A RENAME TO EMPLOYEES_INFO;

Table altered.

0.05 seconds

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```

1 CREATE TABLE "EMPLOYEES_INFO"
2 (
3   "EMPLOYEE_ID" NUMBER,
4   "FIRST_NAME" VARCHAR2(150),
5   "LAST_NAME" VARCHAR2(50),
6   "DEPT_NAME" VARCHAR2(50),
7   "SALARY" NUMBER,
8   "EMAIL" VARCHAR2(100),
9   "BONUS" NUMBER(8,2),
10  PRIMARY KEY ("EMPLOYEE_ID")
11  USING INDEX ENABLE
12 );
  
```

7. Add a new column JOINING_YEAR of type NUMBER(4) to store the employee's joining year.

QUERY CODE : ALTER TABLE EMPLOYEES_INFO ADD (JOINING_YEAR NUMBER(4));



```

Table altered.

0.07 seconds
  
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	EMAIL	BONUS	JOINING_YEAR
2	JOHN	DOE	HR	50000	-	-	-
3	Jane	Smith	IT	60000	-	-	-
6	Charlie	Brown	IT	65000	-	-	-
4	Bob	Johnson	Sales	55000	-	-	-
5	Alice	Williams	Marketing	48000	-	-	-
1	PETER	WRANGLE	CE	100000	-	-	-

8. Drop the BONUS column from the table.

QUERY CODE : ALTER TABLE EMPLOYEES_INFO DROP COLUMN BONUS

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```
Table altered.
0.05 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	EMAIL	JOINING_YEAR
2	JOHN	DOE	HR	50000	-	-
3	Jane	Smith	IT	60000	-	-
6	Charlie	Brown	IT	65000	-	-
4	Bob	Johnson	Sales	55000	-	-
5	Alice	Williams	Marketing	48000	-	-
1	PETER	WRANGLE	CE	100000	-	-

9. Add a new column ADDRESS of type VARCHAR2(255) to store employee addresses.

QUERY CODE : ALTER TABLE EMPLOYEES_INFO ADD (ADDRESS VARCHAR2(255));

```
Table altered.
0.06 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPT_NAME	SALARY	EMAIL	JOINING_YEAR	ADDRESS
2	JOHN	DOE	HR	50000	-	-	-
3	Jane	Smith	IT	60000	-	-	-
6	Charlie	Brown	IT	65000	-	-	-
4	Bob	Johnson	Sales	55000	-	-	-
5	Alice	Williams	Marketing	48000	-	-	-
1	PETER	WRANGLE	CE	100000	-	-	-

10. Increase the salary of all employees in the IT department by 10%.

QUERY CODE : UPDATE EMPLOYEES_A SET SALARY = SALARY + (SALARY*0.1)
WHERE DEPARTMENT = 'IT'

```
2 row(s) updated.
0.01 seconds
```

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EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Sales	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	CE	100000	1/16/2023
6	Charlie	Brown	IT	71500	11/30/2018

11. Set the DEPARTMENT of employee ID 4 to 'Marketing'.

QUERY CODE : UPDATE EMPLOYEES_A SET DEPARTMENT = 'Marketing' WHERE EMPLOYEE_ID = 4;

```
1 row(s) updated.
0.00 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	CE	100000	1/16/2023
6	Charlie	Brown	IT	71500	11/30/2018
3	Jane	Smith	IT	66000	5/20/2019

12. Update the LAST_NAME of employee ID 3 from 'Smith' to 'Johnson'.

QUERY CODE : UPDATE EMPLOYEES_A SET LAST_NAME = 'Johnson' WHERE EMPLOYEE_ID = 3 AND LAST_NAME = 'Smith'

```
1 row(s) updated.
0.00 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	CE	100000	1/16/2023
6	Charlie	Brown	IT	71500	11/30/2018
3	Jane	Johnson	IT	66000	5/20/2019

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13. Reduce the salary of employees hired before 01-JAN-2020 by 5%.

QUERY CODE : UPDATE EMPLOYEES_A SET SALARY = SALARY * 0.95 WHERE HIRE_DATE < '01/01/2020'

2 row(s) updated.

0.01 seconds

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	CE	100000	1/16/2023
6	Charlie	Brown	IT	67925	11/30/2018
3	Jane	Johnson	IT	62700	5/20/2019

14. Set the FIRST_NAME of employee ID 6 to uppercase.

QUERY CODE : UPDATE EMPLOYEES_A SET FIRST_NAME = UPPER(FIRST_NAME) WHERE EMPLOYEE_ID = 6

1 row(s) updated.

0.00 seconds

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	CE	100000	1/16/2023
6	CHARLIE	Brown	IT	67925	11/30/2018
3	Jane	Johnson	IT	62700	5/20/2019

15. Update the DEPARTMENT of employees earning more than 60000 to 'Management'.

QUERY CODE : UPDATE EMPLOYEES_A SET DEPARTMENT = 'Management' WHERE salary > 60000

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```
3 row(s) updated.
0.01 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	JOHN	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	Management	100000	1/16/2023
6	CHARLIE	Brown	Management	67925	11/30/2018
3	Jane	Johnson	Management	62700	5/20/2019

16. Increase the salary of employees in the 'Sales' department by 7%.

QUERY CODE : UPDATE EMPLOYEES_A SET SALARY = SALARY + (SALARY * 0.07)
WHERE DEPARTMENT = 'Sales'

```
0 row(s) updated.
0.01 seconds
```

17. Update the FIRST_NAME of employee ID 2 to 'Jonathan'.

QUERY CODE : UPDATE EMPLOYEES_A SET FIRST_NAME = 'Jonathan' WHERE
EMPLOYEE_ID = 2

```
3 row(s) updated.
0.01 seconds
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	Jonathan	DOE	HR	50000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	Management	100000	1/16/2023
6	CHARLIE	Brown	Management	67925	11/30/2018
3	Jane	Johnson	Management	62700	5/20/2019

18. Set the salary of employees in the 'HR' department to 55000.

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QUERY CODE : UPDATE EMPLOYEES_A SET SALARY = 55000 WHERE
DEPARTMENT = 'HR'

3 row(s) updated.

0.01 seconds

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	Jonathan	DOE	HR	55000	1/15/2020
4	Bob	Johnson	Marketing	55000	2/10/2021
5	Alice	Williams	Marketing	48000	4/5/2022
1	PETER	WRANGLE	Management	100000	1/16/2023
6	CHARLIE	Brown	Management	67925	11/30/2018
3	Jane	Johnson	Management	62700	5/20/2019

19. Update all employees' salaries by adding a BONUS of 5000 if they exist in the table.

QUERY CODE : UPDATE EMPLOYEES_A SET SALARY = SALARY + 5000

6 row(s) updated.

0.01 seconds

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT	SALARY	HIRE_DATE
2	Jonathan	DOE	HR	60000	1/15/2020
4	Bob	Johnson	Marketing	60000	2/10/2021
5	Alice	Williams	Marketing	53000	4/5/2022
1	PETER	WRANGLE	Management	105000	1/16/2023
6	CHARLIE	Brown	Management	72925	11/30/2018
3	Jane	Johnson	Management	67700	5/20/2019