

CSA 0563 – DBMS

Creating a table by using CREATE

```
CREATE TABLE STUDENT2
(
name VARCHAR(10),
std_id NUMBER(10),
age NUMBER(2),
course VARCHAR(10),
date_of_registration DATE
);
```

Inserting values into table by Using INSERT keyword

```
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES ('ELIAZAR',192311162,19,'DBMS',TO_DATE('10-07-2024','DD-MM-YYYY'));
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES ('CHANIKYA',192311164,18,'DBMS',TO_DATE('10-06-2024','DD-MM-YYYY'));
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES('CHANIKYA',192311164,18,'DBMS',TO_DATE('10-06-2024','DD-MM-YYYY'));
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES('PRAKASH',192311165,19,'JAVA',TO_DATE('10-06-2024','DD-MM-YYYY'));
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES('POLI',192311166,19,'JAVA',TO_DATE('11-07-2024','DD-MM-YYYY'));
INSERT INTO STUDENT2 (name,std_id,age,course,date_of_registration)
VALUES('VICKY',192311161,20,'DBMS',TO_DATE('10-07-2024','DD-MM-YYYY'));
```

Displaying the table values by using SELECT

```
SELECT *
FROM STUDENT2;
```

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION
ELIAZAR	192311162	19	DBMS	10-Jul-2024
POLI	192311166	19	JAVA	11-Jul-2024
PRAKASH	192311165	19	JAVA	10-Jun-2024
RAJA	192311163	19	JAVA	10-Jul-2024
CHANIKYA	192311164	18	DBMS	10-Jun-2024
VICKY	192311161	20	DBMS	10-Jul-2024

Applying condition WHERE

```
SELECT name ,course,date_of_registration
FROM STUDENT2
WHERE std_id = 192311162;
```

NAME	COURSE	DATE_OF_REGISTRATION
ELIAZAR	DBMS	10-Jul-2024

Adding another column to a table by using ALTER and ADD

```
ALTER TABLE STUDENT2
```

ADD marks FLOAT;

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION	MARKS	SIGN
balu	192311162	19	DBMS	10-Jul-2024	-	-
POLI	192311166	19	JAVA	11-Jul-2024	-	-
PRAKASH	192311165	19	JAVA	10-Jun-2024	-	-
RAJA	192311163	19	JAVA	10-Jul-2024	-	-
CHANIKYA	192311164	18	DBMS	10-Jun-2024	-	-
VICKY	192311161	20	DBMS	10-Jul-2024	-	-

Deleting column name by using ALTER and DROP

ALTER TABLE STUDENT2

DROP (sign);

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION	MARKS
balu	192311162	19	DBMS	10-Jul-2024	-
POLI	192311166	19	JAVA	11-Jul-2024	-
PRAKASH	192311165	19	JAVA	10-Jun-2024	-
RAJA	192311163	19	JAVA	10-Jul-2024	-
CHANIKYA	192311164	18	DBMS	10-Jun-2024	-
VICKY	192311161	20	DBMS	10-Jul-2024	-

Updating the specified row in a table by using UPDATE,SET

UPDATE STUDENT2

SET name='balu'

WHERE std_id=192311162;

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION	MARKS
balu	192311162	19	DBMS	10-Jul-2024	-
POLI	192311166	19	JAVA	11-Jul-2024	-
PRAKASH	192311165	19	JAVA	10-Jun-2024	-
RAJA	192311163	19	JAVA	10-Jul-2024	-
CHANIKYA	192311164	18	DBMS	10-Jun-2024	-
VICKY	192311161	20	DBMS	10-Jul-2024	-

Deleting specifed row in a table by using DELETE keyword

DELETE FROM STUDENT2

WHERE name='PRAKASH'

SELECT * FROM STUDENT2

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION	MARKS
balu	192311162	19	DBMS	10-Jul-2024	-
POLI	192311166	19	JAVA	11-Jul-2024	-
RAJA	192311163	19	JAVA	10-Jul-2024	-
CHANIKYA	192311164	18	DBMS	10-Jun-2024	-
VICKY	192311161	20	DBMS	10-Jul-2024	-

Deleting all the rows in a table by using TRUNCATE keyword

TRUNCATE TABLE STUDENT2;

SELECT * FROM STUDENT2;

no data found

Selecting only some columns in the table by using SELECT

```
SELECT emp_id,first_name,salary
FROM Employee;
```

EMP_ID	FIRST_NAME	SALARY
1	david	50000
2	agasteen	60000
3	vinay	100000
4	john	70000
5	samuel	80000

ARITHMETIC OPERATORS :

(+,-,*,/)

```
SELECT emp_id, salary+3000
FROM Employee;
```

EMP_ID	BONUS
1	53000
2	63000
3	103000
4	73000
5	83000

CONCATENATE two column name as one name by using AS :

```
SELECT first_name || last_name AS Emp_name
FROM Employee;
```

Emp_name
davidrufus
agasteenraju
vinaykumar
johnwilson
samuelfrnfus

5 rows returned in 0.00 seconds [Download](#)

DESCRIBE Keyword

desc keyword

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
EMPLOYEE	EMP_ID	VARCHAR2	10	-	-	-	✓	-	-
	LAST_NAME	VARCHAR2	10	-	-	-	✓	-	-
	FIRST_NAME	VARCHAR2	10	-	-	-	✓	-	-
	SALARY	FLOAT	126	126	-	-	✓	-	-
	PHN_NO	NUMBER	-	10	0	-	✓	-	-

Using WHERE clause

```
SELECT first_name,last_name,salary
FROM Employee
WHERE salary > 50000.0;
```

FIRST_NAME	LAST_NAME	SALARY
agasteen	raju	60000
vinay	kumar	100000
john	wilson	70000
samuel	rufus	80000

Using BETWEEN and AND operator

```
SELECT first_name,last_name ,salary
FROM Employee
WHERE salary BETWEEN 35000.0 AND 75000.0;
```

FIRST_NAME	LAST_NAME	SALARY
david	rufus	50000
agasteen	raju	60000
john	wilson	70000

By using IN operator

```
SELECT first_name,last_name,salary
FROM Employee
WHERE emp_id IN (2,5);
```

FIRST_NAME	LAST_NAME	SALARY
david	rufus	50000
agasteen	raju	60000
john	wilson	70000

By using NOT IN operator

```
SELECT first_name,last_name,salary
FROM Employee
WHERE emp_id NOT IN (2,5);
```

FIRST_NAME	LAST_NAME	SALARY
david	rufus	50000
vinay	kumar	100000
john	wilson	70000

By using LIKE operator

```
SELECT first_name,last_name,salary
FROM Employee
WHERE last_name LIKE 'r%';
```

EMP_ID	FIRST_NAME	LAST_NAME
1	david	rufus
2	agasteen	raju
5	samuel	rufus

By using OR operator

```
SELECT emp_id,first_name
FROM Employee
WHERE emp_id='1' OR emp_id = '5';
```

EMP_ID	FIRST_NAME
1	david
5	samuel

Arranging or ordering the table in ASCENDING and DESCENDING ORDER by using ORDER BY

```
SELECT emp_id,first_name,last_name
FROM Employee
ORDER BY emp_id DESC;
```

EMP_ID	FIRST_NAME	LAST_NAME
5	samuel	rufus
4	john	wilson
3	vinay	kumar
2	agasteen	raju
1	david	rufus

```
SELECT emp_id,first_name,last_name
FROM employee
ORDER BY last_name ;
```

EMP_ID	FIRST_NAME	LAST_NAME
3	vinay	kumar
2	agasteen	raju
5	samuel	rufus
1	david	rufus
4	john	wilson

GROUP FUNCTIONS :

MAX :

```
SELECT MAX(salary)
FROM Employee;
```

MAX(SALARY)
100000

MIN:

```
SELECT MIN(salary)
FROM Employee;
```

MIN(SALARY)
50000

AVERAGE :

```
SELECT AVG(salary)
FROM Employee;
```

AVG(SALARY)
72000

SUM :

```
SELECT SUM(salary)
FROM Employee;
```

SUM(SALARY)
360000

More than one GROUP function :

```
SELECT MAX(Salary),MIN(Salary),MIN(emp_id)
FROM Employee
WHERE last_name='raju';
```

MAX(SALARY)	MIN(SALARY)	MIN(EMP_ID)
60000	60000	2

VARIANCE :

```
SELECT ROUND(VARIANCE(salary),2)
FROM Employee;
```

ROUND(VARIANCE(SALARY),2)
370000000

STANDARD DEVIATION :

```
SELECT ROUND(STDDEV(salary),2)
FROM Employee;
```

ROUND(STDDEV(SALARY),2)
19235.38

COUNT :

```
SELECT COUNT(emp_id)
FROM Employee;
```

COUNT(EMP_ID)
5

COUNT(*)

```
SELECT COUNT(*)
FROM Employee
WHERE emp_id > 2;
```

COUNT(*)
3

```
DISTINCT
SELECT DISTINCT last_name
FROM Employee;
```

LAST_NAME	
kumar	
raju	
rufus	
wilson	
LAST_NAME	FIRST_NAME
raju	agasteen
kumar	vinay
rufus	samuel
wilson	john
rufus	david

```
SELECT COUNT(DISTINCT salary)
FROM Employee;
```

COUNT(DISTINCTSALARY)
5

```
SELECT AVG(NVL(salary,0))
FROM Employee;
```

AVG(NVL(SALARY,0))
72000

DATE CONVERSIONS :

```
SELECT TO_CHAR(date_of_registration 'Month dd, YYYY')
FROM STUDENT3;
```

TO_CHAR DATE_OF_REGISTRATION,'MONTHDD,YYYY'
July 10, 2024
June 11, 2024
August 10, 2024
December 12, 2024
August 09, 2024
September 10, 2024

```
SELECT TO_CHAR(date_of_registration, 'fmMonthddth, YYYY')
FROM STUDENT3;
```

TO_CHAR DATE_OF_REGISTRATION,'FMMONTHDDTH,YYYY'
July10th, 2024
June11th, 2024
August10th, 2024
December12th, 2024
August9th, 2024
September10th, 2024

SELECT TO_CHAR(date_of_registration, 'fmDayddthMon, YYYY')
FROM STUDENT3;

TO_CHAR(DATE_OF_REGISTRATION,'FMDAYDDTHMON,YYYY')
Wednesday10thJul,2024
Tuesday11thJun,2024
Saturday10thAug,2024
Thursday12thDec,2024
Friday9thAug,2024
Tuesday10thSep,2024
6 rows returned in 0.01 seconds Download

SELECT TO_CHAR(date_of_registration, 'fmDayddthspMon, YYYY')
FROM STUDENT3;

TO_CHAR(DATE_OF_REGISTRATION,'FMDAYDDTHSPMON,YYYY')
WednesdaytenthJul, 2024
TuesdayeleventhJun, 2024
SaturdaytenthAug, 2024
ThursdaytwelfthDec, 2024
FridayninthAug, 2024
TuesdaytenthSep, 2024
6 rows returned in 0.00 seconds Download

SELECT TO_CHAR(date_of_registration, 'fmDay, ddthsp "of" Month, Year')
FROM STUDENT3;

TO_CHAR(DATE_OF_REGISTRATION,'FMDAY,DDTHSP"OF"MONTH,YEAR')
Wednesday, tenthof July, Twenty Twenty-Four
Tuesday, eleventhof June, Twenty Twenty-Four
Saturday, tenthof August, Twenty Twenty-Four
Thursday, twelfthof December, Twenty Twenty-Four
Friday, ninthof August, Twenty Twenty-Four
Tuesday, tenthof September, Twenty Twenty-Four
6 rows returned in 0.01 seconds Download

SELECT TO_CHAR(SYSDATE, 'hh:mm')
FROM dual;

TO_CHAR(SYSDATE,'HH:MM')
12:08
1 rows returned in 0.00 seconds Download

SELECT TO_CHAR(SYSDATE, 'hh:mmpm')
FROM dual;

TO_CHAR(SYSDATE,'HH:MMPM')
12:08pm
1 rows returned in 0.00 seconds Download

SELECT TO_CHAR(SYSDATE, 'hh:mm:sspm')
FROM dual;

TO_CHAR(SYSDATE,'HH:MM:SSPM')
12:08:38pm
1 rows returned in 0.01 seconds Download

SELECT TO_CHAR(salary, '\$99,999') AS "Salary"
FROM Employee;

Salary
\$50,000
\$60,000
#####
\$70,000
\$80,000

```
SELECT TO_DATE('May10,1989', 'fxMonDD,YYYY') AS "Convert"
FROM DUAL;
```

Convert
10-May-1989
1 rows returned in 0.00 seconds Download

```
SELECT TO_DATE('July312004', 'fxMonthDDYYYY') AS "Date"
FROM DUAL;
```

Date
31-Jul-2004
1 rows returned in 0.01 seconds Download

COPYING THE TABLE FROM ANOTHER TABLE :

```
CREATE TABLE copy_STUDENT3
AS (SELECT * FROM STUDENT3);
```

```
DESC copy_STUDENT3;
```

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COPY_STUDENT3	NAME	VARCHAR2	100	-	-	-	✓	-	-
	STD_ID	NUMBER	22	-	-	-	✓	-	-
	AGE	NUMBER	22	-	-	-	✓	-	-
	COURSE	VARCHAR2	100	-	-	-	✓	-	-
	DATE_OF_REGISTRATION	DATE	7	-	-	-	✓	-	-

```
SELECT *
FROM copy_STUDENT3;
```

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION
vicky	192311163	18	DSA	10-Jul-2024
agasteen	192311165	19	PYTHON	11-Jun-2024
eliyazar	192311162	19	DBMS	10-Aug-2024
vicky	192311167	19	DBMS	12-Dec-2024
sukumar	192311164	15	JAVA	09-Aug-2024
raja	192311166	17	CPP	10-Sep-2024

INSERTING THE VALUES INTO THAT COPIED TABLES :

```
INSERT INTO copy_STUDENT3(name,std_id,age,course,date_of_registration)VALUES ('balu',192311167,20,'JAVA',TO_DATE('12-12-2024','DD-MM-YYYY'));
```

```
SELECT *
FROM copy_STUDENT3;
```

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION
vicky	192311163	18	DSA	10-Jul-2024
agasteen	192311165	19	PYTHON	11-Jun-2024
eliyazar	192311162	19	DBMS	10-Aug-2024
vicky	192311167	19	DBMS	12-Dec-2024
sukumar	192311164	15	JAVA	09-Aug-2024
raja	192311166	17	CPP	10-Sep-2024
balu	192311167	20	JAVA	12-Dec-2024

INSERTING NULL VALUES INTO TABLE :

```
INSERT INTO copy_STUDENT3(name,std_id,age,course,date_of_registration)VALUES ('solmon',192311168,21,"",TO_DATE('12-10-2024','DD-MM-YYYY'));
```

```
SELECT *
FROM copy_STUDENT3;
```


NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION
vicky	192311163	18	DSA	10-Jul-2024
agasteen	192311165	19	PYTHON	11-Jun-2024
eliyazar	192311162	19	DBMS	10-Aug-2024
vicky	192311167	19	DBMS	12-Dec-2024
sukumar	192311164	15	JAVA	09-Aug-2024
raja	192311166	17	CPP	10-Sep-2024
solmon	192311168	21	-	12-Oct-2024
balu	192311167	20	JAVA	12-Dec-2024

INSERTING SPECIAL VALUES INTO TABLE:

INSERT INTO copy_STUDENT3(name,std_id,age,course,date_of_registration)VALUES (USER,192311169,21,'C',SYSDATE);

SELECT *
FROM copy_STUDENT3
WHERE std_id=192311169;

NAME	STD_ID	AGE	COURSE	DATE_OF_REGISTRATION
APEX_PUBLIC_USER	192311169	21	C	04-Aug-2024

1 rows returned in 0.01 seconds [Download](#)