

# SQL

# Sql Introduction

- Structured Query Language
- It allows people to access and work with databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986,

# Versions of SQL(Oracle database version)

1

- Oracle 8i , 9i
- Where i stands for Internet
- Starting 1999 and support for XML

2

- Oracle 10g,11g
- Where g stands for Grid Computing
- Starting 2003 and standard servers

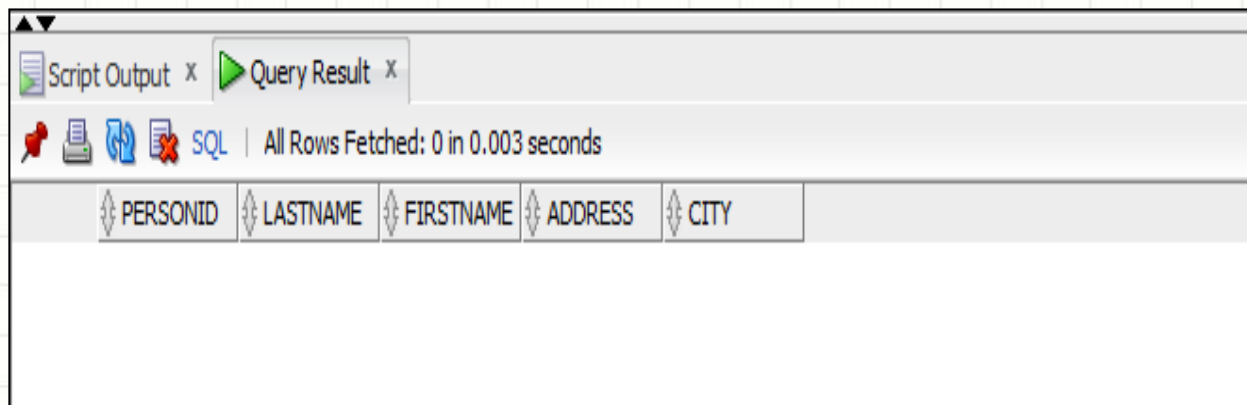
3

- Oracle 12c
- Where c stands for Cloud
- Creation of pluggable databases in a multitenant container database

# Purpose of SQL

- SQL is used to access information's or manage information's from the table, By executing queries against database.
- It is used to view information's in a database
- It is used to retrieve data from a database
- It is used to insert information in a database
- It is used to update records in a database
- It is used delete records from a database
- It is used to create new databases
- It is used to create new tables in a database
- It is used create stored procedures in a database
- SQL can set permissions on tables, procedures, and views

- **TO CREATE A TABLE**
- **SYNTAX**
- **CREATE TABLE *table\_name* (*column's datatypes*);**
- CREATE TABLE Persons (
  - PersonID int,
  - LastName varchar(255),
  - FirstName varchar(255),
  - Address varchar(255),
  - City varchar(255);



- **TO ADD COLOUMNS IN A TABLE**
- **SYNTAX**
- **ALTER TABLE *table\_name* (column's datatypes);**
- ALTER TABLE Persons  
ADD Email varchar(255);

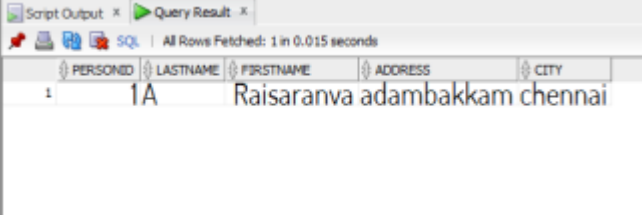
Script Output x Query Result x									
SQL   All Rows Fetched: 5 in 0.002 seconds									
PERSONID	LASTNAME	FIRSTNAME	ADDRESS	CITY	EMAIL	SALARY	SINCREMENT	BGRP	DOB
1	1A	Raisaranva	Adambakkam	chennai	rai@gmail...	23000	10	O+	2309
2	1V	Vengat	karumandapam	trichv	venkv@g...	23000	10	B+	12041
3	2V	Vengat	karumandapam	trichv	venkv@g...	23000	10	B+	12041
4	3S	Ashok	Adambakkam	chennai	ashok@g...	23000	10	O+	16021
5	4S	Gaia	Adambakkam	chennai	gaia@gm...	23000	10	O+	2509



- **INSERT VALES IN TABLE**
- **SYNTAX**
- **INSERT INTO *table\_name* (*column's1*)  
VALUES (*value's*);**
- **INSERT INTO Persons ( PersonID,LastName,  
FirstName,Address,City)  
VALUES ('0001','A','Rajsaranya','adambakkam','chennai');**

```
SQL> INSERT INTO Persons ( PersonID,LastName, FirstName,Address,City)
2 VALUES ('0001','A','Rajsaranya','adambakkam','chennai');
```

1 row inserted.




The screenshot shows a 'Query Result' window with a table containing one row of data. The table has five columns: PERSONID, LASTNAME, FIRSTNAME, ADDRESS, and CITY. The row contains the values 1, A, Raisaranva, adambakkam, and chennai.

PERSONID	LASTNAME	FIRSTNAME	ADDRESS	CITY
1	A	Raisaranva	adambakkam	chennai

- **TO VIEW ENTIRE TABLE**
- **SYNTAX**
- **SELECT \* FROM Tablename;**
- **SELECT \* FROM Persons;**

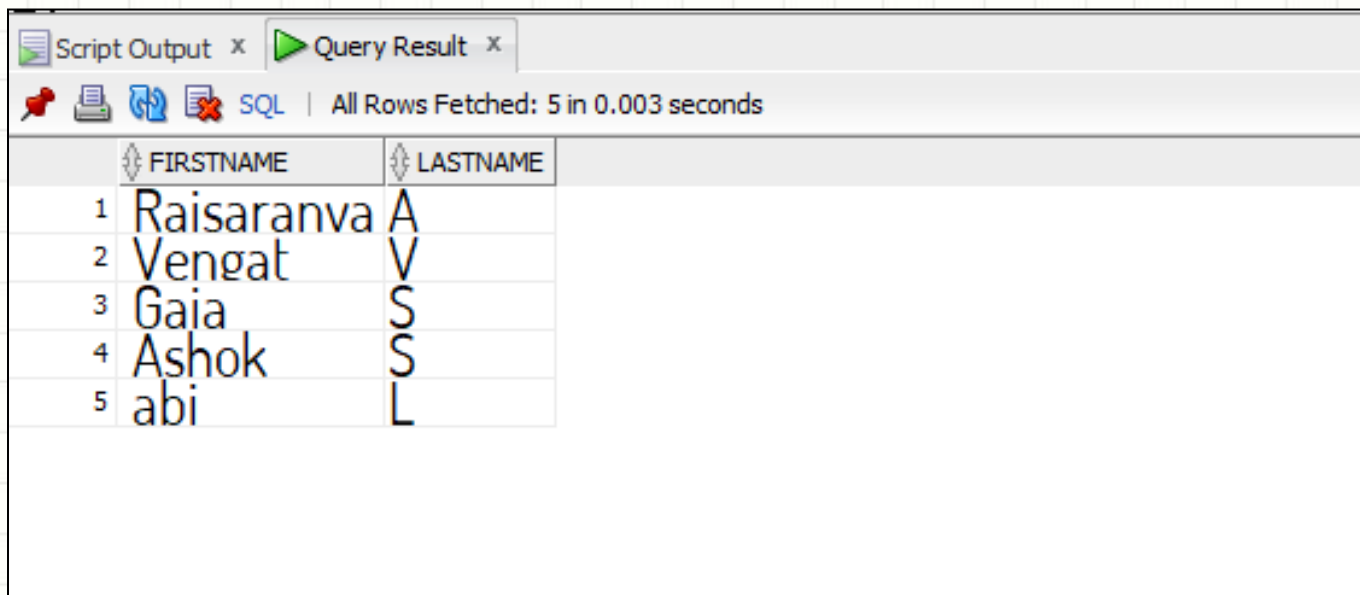
Script Output x Query Result x

 All Rows Fetched: 5 in 0.005 seconds

	PERSONID	LASTNAME	FIRSTNAME	ADDRESS	CITY
1	1A	Raisaranva	adambakkam	chennai	
2	2V	Vengat	karumandapam	trichy	
3	3S	Gaia	haridwarmagalam	kumakonam	
4	4S	Ashok	kattur	taniavur	
5	5L	abi	chengalbattu	chennai	



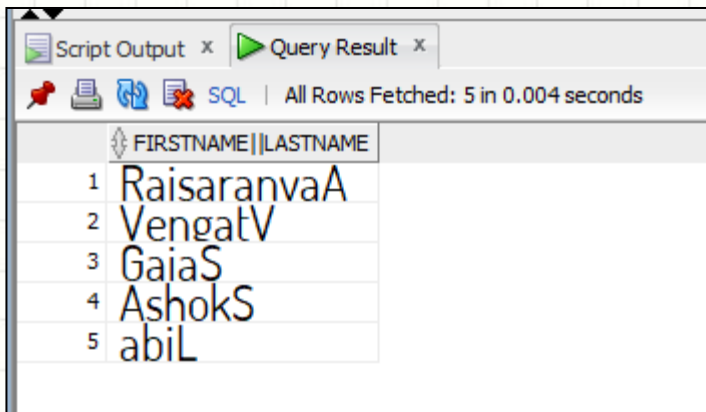
- **TO VIEW PARTICULAR COLOUNM AND ITS VALUES OF THE TABLE**
- **SYNTAX**
- **SELECT Coloumn name FROM Table name;**
- **SELECT FirstName ,LastName FROM Persons;**



The screenshot shows a SQL query result window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying a table with two columns: 'FIRSTNAME' and 'LASTNAME'. The table contains 5 rows of data. The status bar indicates 'All Rows Fetched: 5 in 0.003 seconds'.

	FIRSTNAME	LASTNAME
1	Raisaranva	A
2	Vengat	V
3	Gaia	S
4	Ashok	S
5	abi	L

- **TO PERFORM CONCATENATION USING PIPELINE IN THE TABLE**
- **SYNTAX**
- **SELECT Coloumn name1 || Coloumn name 2  
FROM Table name;**
- **SELECT FirstName || LastName From Persons;**



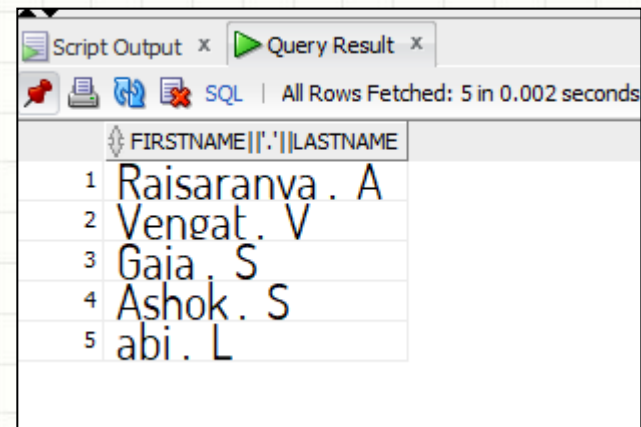
The screenshot shows a database query result window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying a table with the header 'FIRSTNAME||LASTNAME'. The table contains five rows of data, numbered 1 to 5. The data is as follows:

	FIRSTNAME  LASTNAME
1	RaisaranvaA
2	VengatV
3	GaiaS
4	AshokS
5	abiL

- **TO PERFORM CONCATENATION USING PIPELINE IN THE TABLE WITH SPACES**
- **SYNTAX**
- **SELECT Coloumn name1 || ' ' || Coloumn name 2  
FROM Table name;**
- **SELECT FirstName || ' ' || LastName From  
Persons;**

	FIRSTNAME  ' '  LASTNAME
1	Raisaranva A
2	Vengat V
3	Gaia S
4	Ashok S
5	abi L

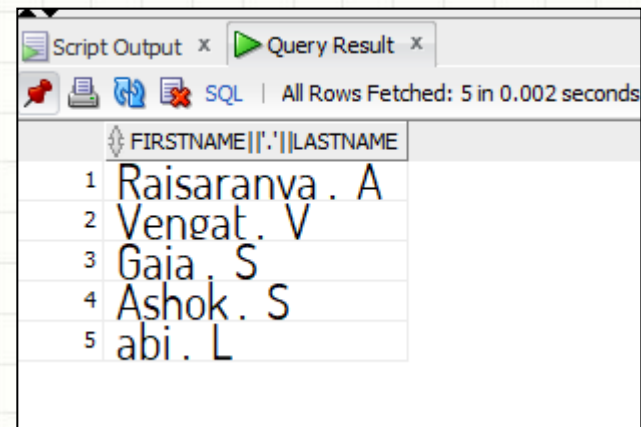
- **TO PERFORM CONCATENATION IN THE TABLE WITH SPACES**
- **SYNTAX**
- **SELECT Column name1 ||**  
**' anything to be printed ' || Column name 2 FROM**  
**Table name;**
- **SELECT FirstName || ' . ' || LastName From**  
**Persons;**



The screenshot shows a database query result window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying a table with one column titled 'FIRSTNAME||'.' '||LASTNAME'. The table contains five rows of data, numbered 1 to 5 in the first column. The data in the second column is the concatenation of the first name, a period, and the last name.

	FIRSTNAME  '.' '  LASTNAME
1	Raisaranva . A
2	Vengat . V
3	Gaja . S
4	Ashok . S
5	abi . L

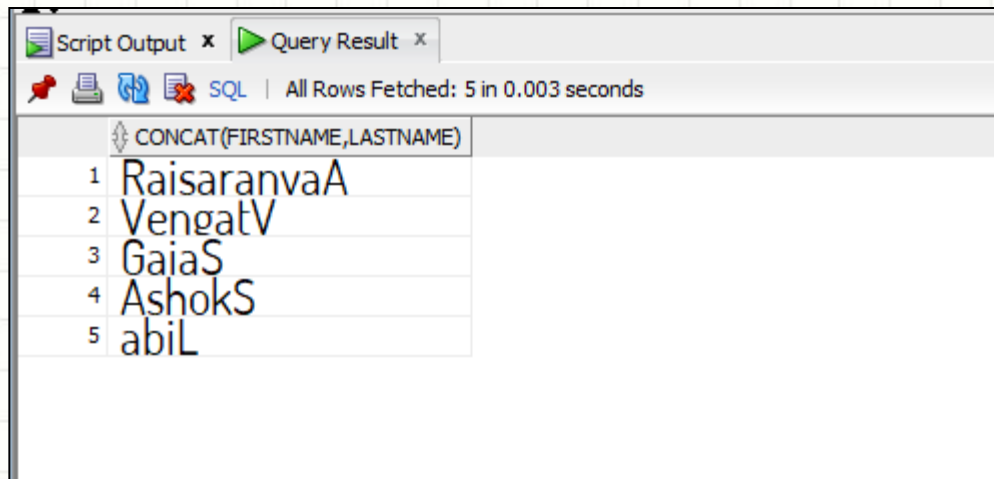
- **TO PERFORM CONCATENATION IN THE TABLE WITH SPACES**
- **SYNTAX**
- **SELECT Coloumn name1 ||**  
**' anything to be printed ' || Coloumn name 2 FROM**  
**Table name;**
- **SELECT FirstName || ' . ' || LastName From**  
**Persons;**



The screenshot shows a database query result window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying a table with one column titled 'FIRSTNAME||'.' '||LASTNAME'. The table contains five rows of data, numbered 1 to 5 in the first column. The data in the second column represents the concatenation of the first and last names from a 'Persons' table, separated by a period and a space.

	FIRSTNAME  '.' '  LASTNAME
1	Raisaranva . A
2	Vengat . V
3	Gaja . S
4	Ashok . S
5	abi . L

- **TO CONCAT COLOUMNS IN THE TABLE**
- **SYNTAX**
- **SELECT CONCAT(Column name , column name)  
from table name;**
- **SELECT Concat(FirstName,LastName) FROM  
Persons;**




The screenshot shows a database application window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying the results of an SQL query. The query is 'SELECT CONCAT(FIRSTNAME, LASTNAME) FROM PERSONS'. The results are shown in a table with 5 rows. The first row is 'RaisaranvaA', the second is 'VengatV', the third is 'GaiaS', the fourth is 'AshokS', and the fifth is 'abiL'. The status bar at the top of the window indicates 'All Rows Fetched: 5 in 0.003 seconds'.

	CONCAT(FIRSTNAME, LASTNAME)
1	RaisaranvaA
2	VengatV
3	GaiaS
4	AshokS
5	abiL



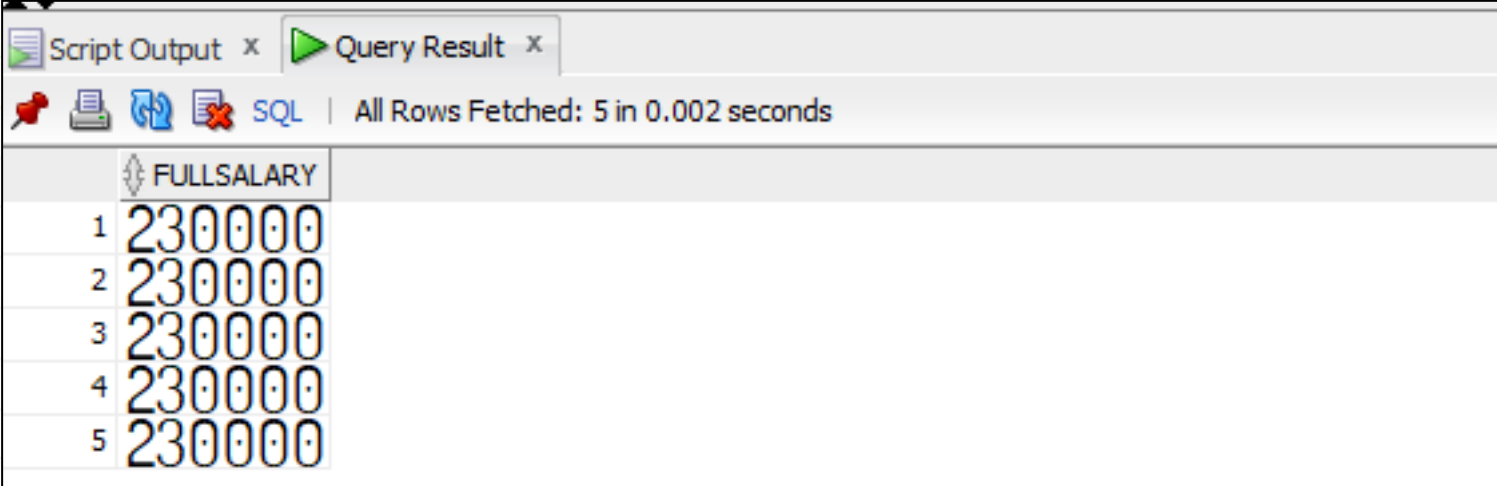
- TO ADD COLOUMNS IN THE TABLE
- SYNTAX
- ALTER TABLE *table\_name*  
ADD *column\_name datatype(value);*
- ALTER TABLE Persons  
ADD Persons\_Salary varchar(data);
- ALTER TABLE Persons  
ADD Persons\_Salary varchar(250);

Script Output x Query Result x Query Result 1 x

 | All Rows Fetched: 5 in 0.004 seconds

	PERSONID	LASTNAME	FIRSTNAME	ADDRESS	CITY	PERSONS_SALARY
1	1A	Raisaranva	adambakkam	chennai	(null)	
2	2V	Vengat	karumandapam	trichv	(null)	
3	3S	Gaia	haridwarmagalam	kumakonam	(null)	
4	4S	Ashok	kattur	taniavur	(null)	
5	5L	abi	chengalbattu	chennai	(null)	

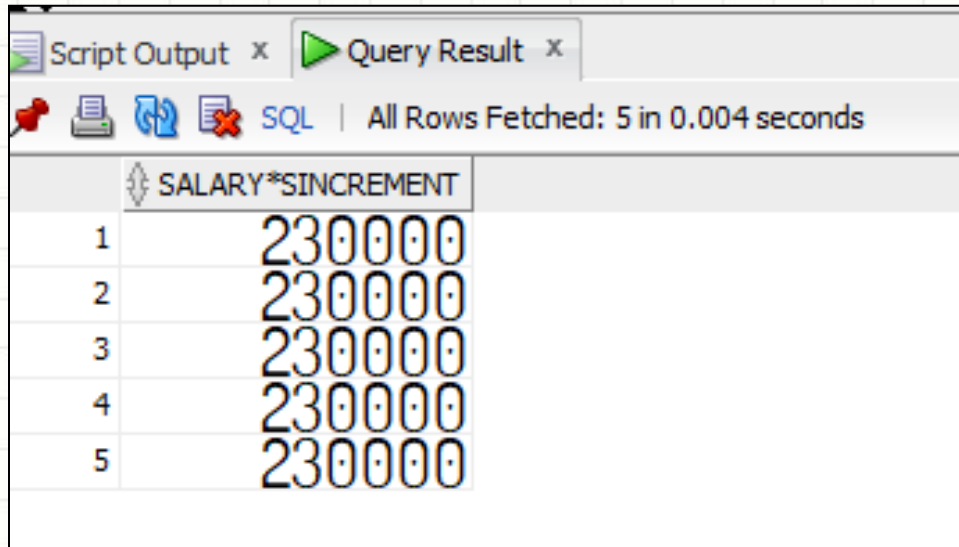
- **TO PERFORM OPERATIONS IN THE TABLE USING ALIAS NAME**
- **SYNTAX**
- **SELECT Coloumn name Operator AS Newcoloumn name FROM Table name;**
- **SELECT Salary \* Sincrement AS fullsalary FROM Persons;**



The screenshot shows a SQL query result window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying a table with one column named 'FULLSALARY'. The table contains five rows, all with the value '230000'. The status bar indicates 'All Rows Fetched: 5 in 0.002 seconds'.

	FULLSALARY
1	230000
2	230000
3	230000
4	230000
5	230000

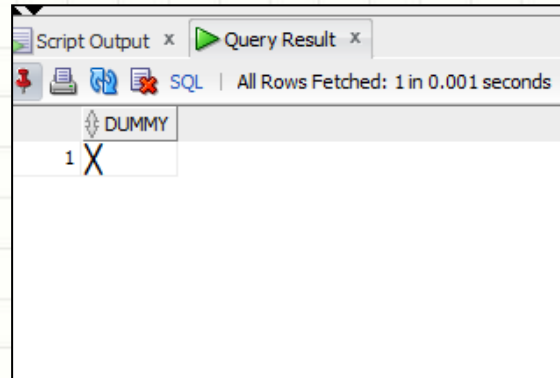
- **TO PERFORM OPERATIONS IN THE TABLE**
- **SYNTAX**
- **SELECT Coloumn name Operator FROM Table name;**
- **SELECT Salary \* Sincrement FROM Persons;**



The screenshot shows a SQL query result window with a tab labeled 'Query Result'. The window displays the results of a query: 'SELECT Salary \* Sincrement FROM Persons;'. The results are shown in a table with 5 rows. The column header is 'SALARY\*SINCREMENT'. The values for all five rows are '230000'.

	SALARY*SINCREMENT
1	230000
2	230000
3	230000
4	230000
5	230000

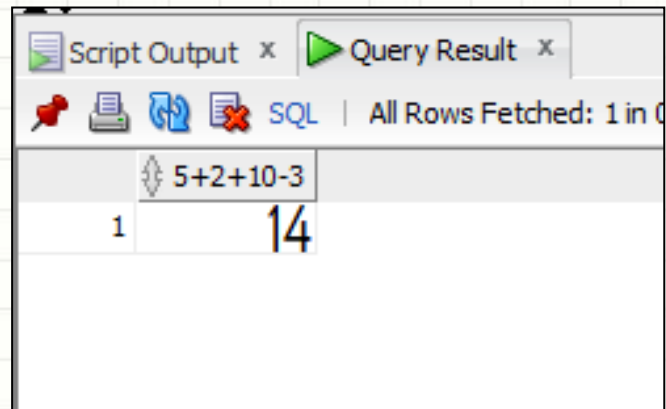
- **TO DUAL TABLE AND OPERATION**
- **SYNTAX**
- **SELECT \* from dual;**



The screenshot shows a SQL Developer window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying the text 'All Rows Fetched: 1 in 0.001 seconds'. Below this, a table with one column named 'DUMMY' is shown. The table contains a single row with the value 'X'.

DUMMY
X

- **SELECT perform action from dual;**
- **SELECT 5+2+10-3 from dual;**



The screenshot shows a SQL Developer window with two tabs: 'Script Output' and 'Query Result'. The 'Query Result' tab is active, displaying the text 'All Rows Fetched: 1 in 0.001 seconds'. Below this, a table with one column named '5+2+10-3' is shown. The table contains a single row with the value '14'.

5+2+10-3
14