



**Experiment-9: To Implement the concept of views, Indexes, cursors, and triggers.**

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**Semester:** 3rd

**Date of Performance:** 18/11/ 2021

**Subject Name:** - DBMS Lab

**Subject Code:** 20CSP-233

- 1. Aim/Overview of the practical:** To implement the concept of views, Indexes, cursors, and triggers.
- 2. Task to be done:** Implementation of views, Indexes, cursors, and triggers commands of SQL with proper Input queries syntax and the output.
- 3. Theme/Interests definition (For creative domains):-**

## 1. Creating A View:-

**Command:-** Create View

**Purpose:-** To reduce redundant data to the minimum possible, oracle allows the creation of an object called a **view**.

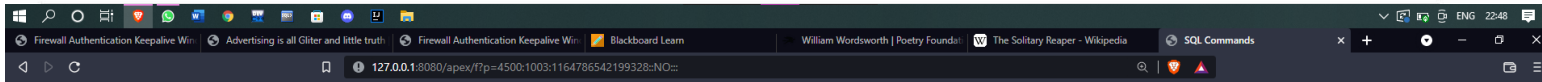
**Syntax:-** CREATE VIEW <view name> AS SELECT <Column Name1>, <Column Name2> FROM <Table Name> WHERE <Column Name> = <Expression List> GROUP BY <Grouping Criteria> HAVING <Predicate>;

**Output:-**View created.



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**ORACLE** Database Express Edition

Home Logout Help

User: SYSTEM

Home > SQL > SQL Commands

☒ Autocommit Display 10

Save

Run

```
CREATE VIEW asap AS SELECT id, name from New2;
```

Results Explain Describe Saved SQL History

View created.

0.01 seconds

Language: en-us

Application Express 2.1.0.00.39  
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## 2. Selecting a Data set from a view:-

**Command:-** Select

**Purpose:-** Once a view has been created, it can be queried exactly like a database table.

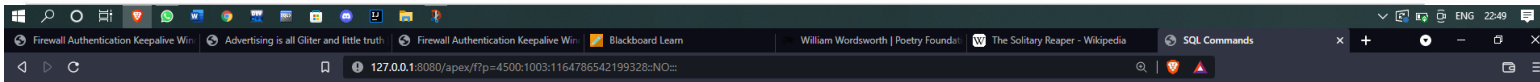
**Syntax:-**

```
SELECT <ColumnName1>,<ColumnName2> FROM <ViewName>;
```

**Example:-**

```
SELECT * FROM VIEW101;
```

**Output:-**



## ORACLE® Database Express Edition

User: SYSTEM

Home Logout Help

Home > SQL > SQL Commands

☒ Autocommit Display 10

Save

Run

```
CREATE VIEW asap AS SELECT id, name from New2;
```

```
SELECT * FROM asap;
```

Results Explain Describe Saved SQL History

ID	NAME
4576	Neha
4628	Archi
4544	Amayra
4585	Ananya

4 rows returned in 0.00 seconds

[CSV Export](#)

Language: en-us

Application Express 2.1.0.00.39  
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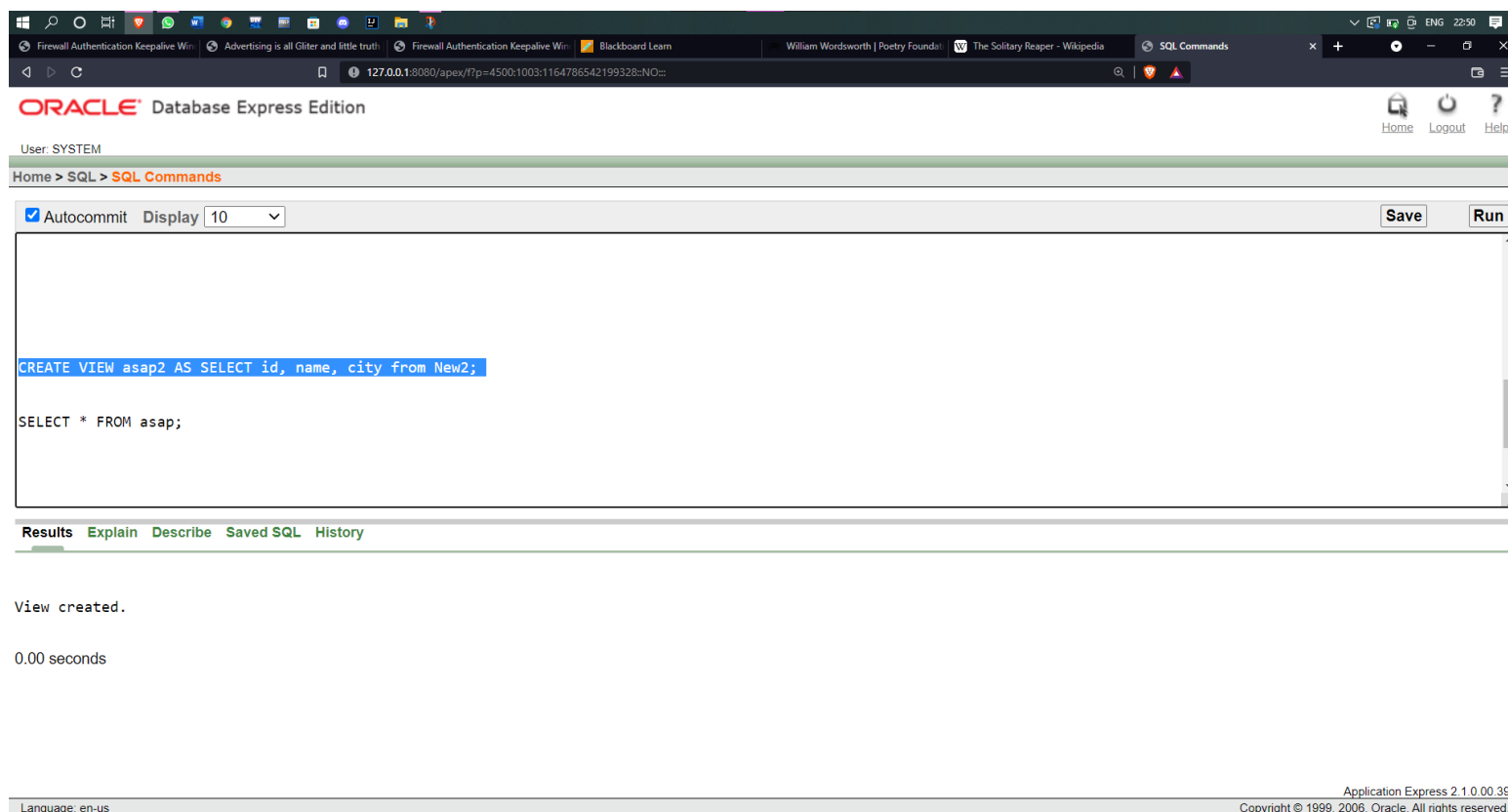
### 3. Renaming the columns of a View:-

**Command:-** Create view

**Purpose:-** The columns of the view can take on different names from the table columns, if required.

**Syntax:-** CREATE VIEW <view name> AS SELECT <Column Name1> <"New Column Name1">,  
<Column Name2><"New Column Name2"> FROM <TableName>

**Output:-**

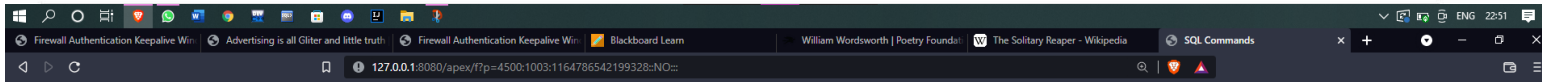


The screenshot shows the Oracle Database Express Edition interface. The top bar indicates the user is SYSTEM. The main window is titled "SQL Commands" and contains the following SQL code:

```
CREATE VIEW asap2 AS SELECT id, name, city from New2;  
  
SELECT * FROM asap;
```

Below the code editor, the "Results" tab is selected, showing the message "View created." and the execution time "0.00 seconds". The bottom status bar shows "Language: en-us" and "Copyright © 1999, 2006, Oracle. All rights reserved."

View created.



## ORACLE Database Express Edition

Home Logout Help

User: SYSTEM

Home > SQL > SQL Commands

☒ Autocommit Display 10

Save Run

```
CREATE VIEW asap2 AS SELECT id, name, city from New2;
```

```
SELECT * FROM asap2;
```

Results Explain Describe Saved SQL History

ID	NAME	CITY
4576	Neha	Patna
4628	Archi	Lucknow
4544	Amayra	Sec
4585	Ananya	Gangtok

4 rows returned in 0.00 seconds

[CSV Export](#)



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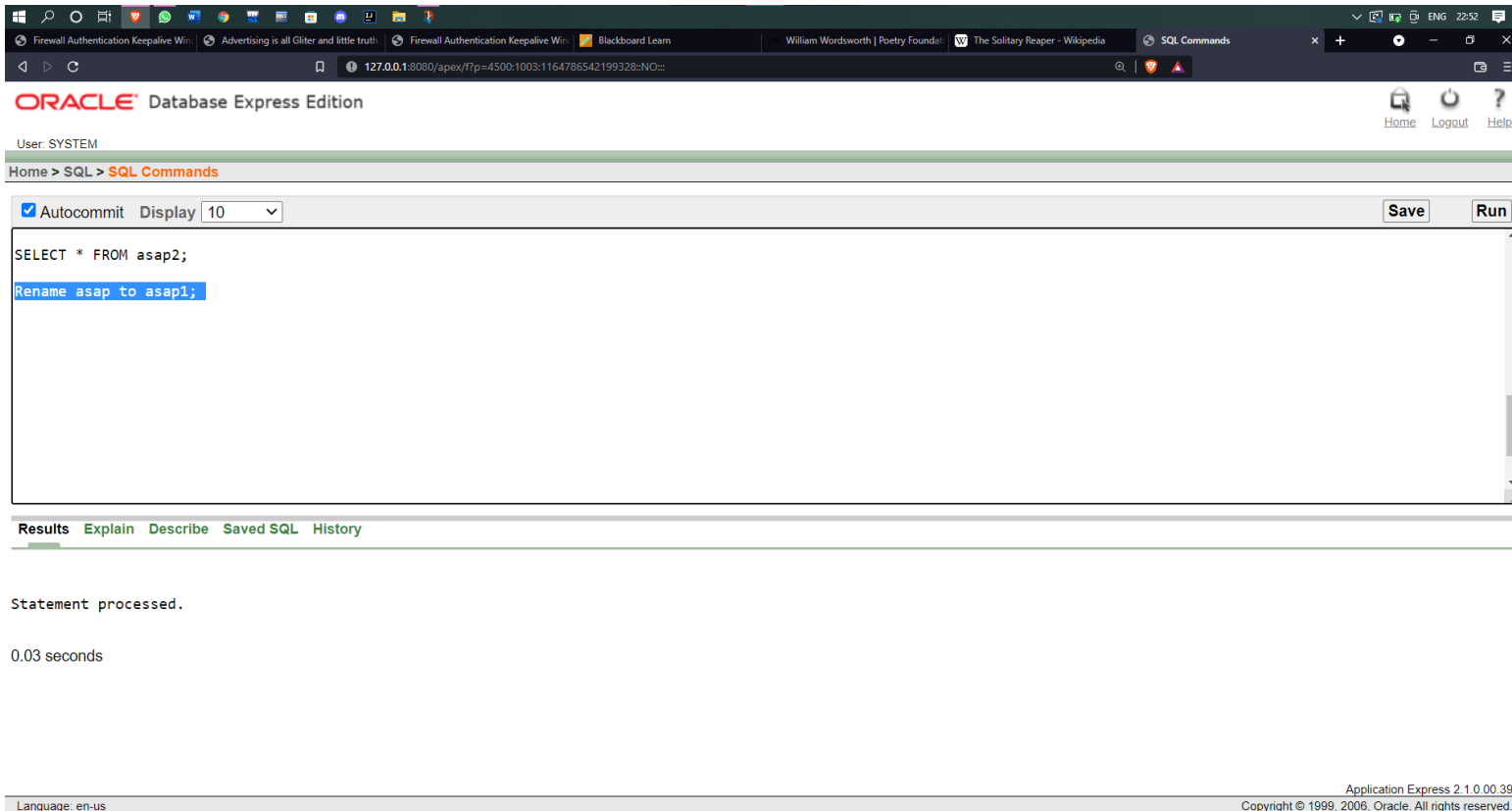


#### 4. RENAMING THE VIEW:-

**Syntax:-**

**Example:-** RENAME VIEW101 TO IOT\_VIEW

**Output:-** Statement processed.



The screenshot shows the Oracle Database Express Edition interface. The browser address bar indicates the connection URL: 127.0.0.1:8080/apex/f?p=4500:1003:1164786542199328::NO::. The page title is "ORACLE Database Express Edition". The user is logged in as "SYSTEM". The breadcrumb navigation shows "Home > SQL > SQL Commands". The "Autocommit" checkbox is checked, and the "Display" dropdown is set to "10". The SQL command area contains the following text:

```
SELECT * FROM asap2;  
Rename asap to asap1;
```

Below the command area, there are tabs for "Results", "Explain", "Describe", "Saved SQL", and "History". The "Results" tab is selected, and it displays the message "Statement processed." followed by "0.03 seconds". At the bottom of the page, the footer text reads: "Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved."

#### 4. Destroying a View:-

**Command:-** Drop

**Example:**



## Output:-

The screenshot shows the Oracle Database Express Edition interface. The browser address bar indicates the URL: 127.0.0.1:8080/apex/f?p=4500:1003:1164786542199328::NO:::SQL Commands. The page title is "ORACLE Database Express Edition". The user is logged in as "SYSTEM". The breadcrumb navigation shows "Home > SQL > SQL Commands". The "Autocommit" checkbox is checked, and the "Display" dropdown is set to "10". The SQL command area contains the following commands: "Rename asap to asap1;" and "Drop view asap2;". The "Save" and "Run" buttons are visible. Below the command area, the "Results" tab is selected, showing the output: "View dropped." and "0.06 seconds". The footer of the application shows "Language: en-us" and "Copyright © 1999, 2006, Oracle. All rights reserved."

B) Indexes:- An index is an ordered list of the contents of a column of a table. Indexes are of three types:

- a) Simple Index
- b) Composite Index
- c) Unique Index

**1. Creating a Simple Index:-** An index created on a single column of a table is called a Simple index.

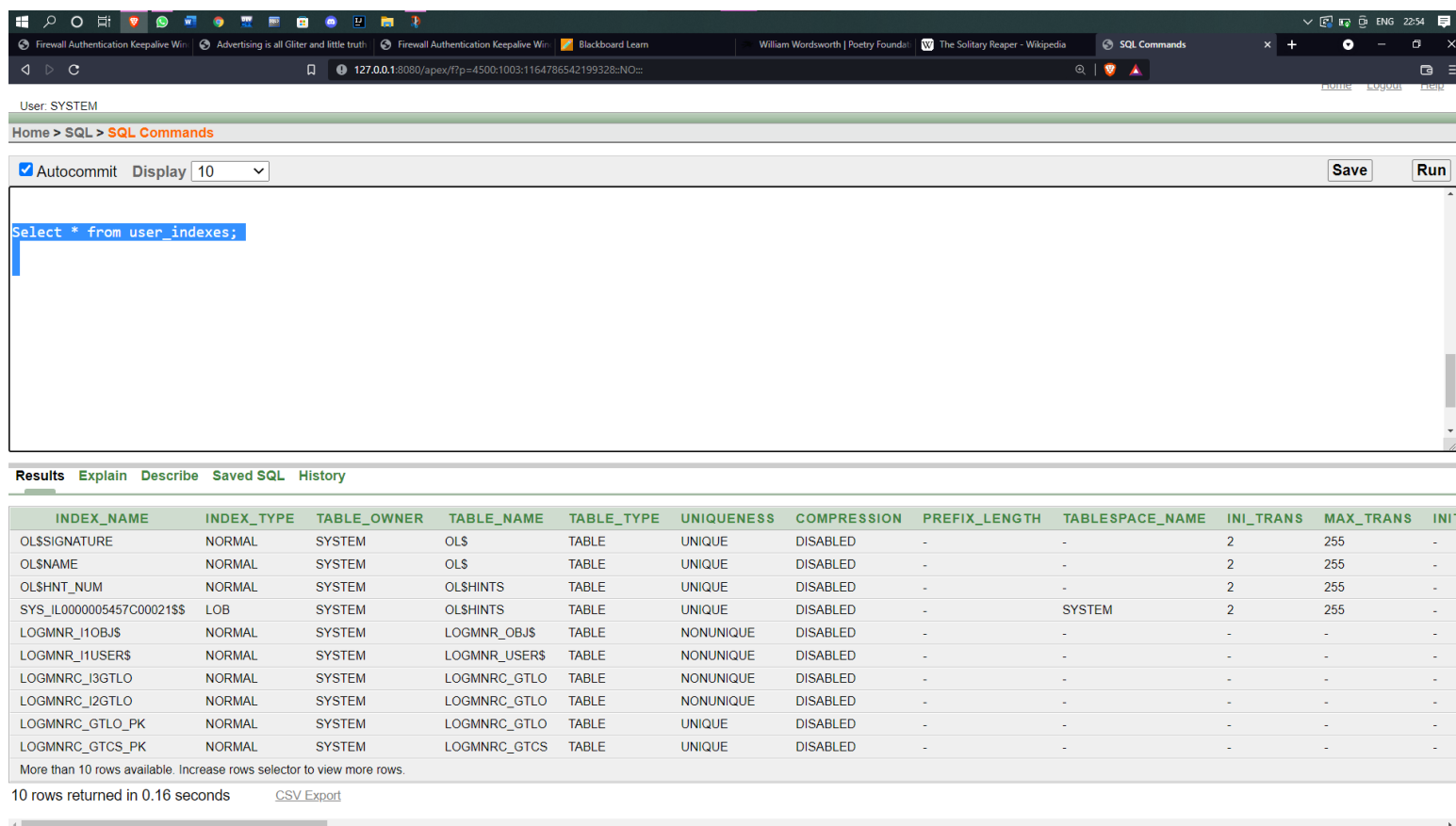
**Command:-** Create

**Purpose:-** An index created on a single column of a table is called a Simple index.

**Syntax:-**

CREATE INDEX <Index Name> ON <Table Name> (<Column Name>);

**Output :-**(a) Index created



The screenshot shows the SQL Developer interface with the following details:

- SQL Command:** `Select * from user_indexes;`
- Results:** A table listing database indexes.

INDEX_NAME	INDEX_TYPE	TABLE_OWNER	TABLE_NAME	TABLE_TYPE	UNIQUENESS	COMPRESSION	PREFIX_LENGTH	TABLESPACE_NAME	INI_TRANS	MAX_TRANS	INITIALS
OL\$SIGNATURE	NORMAL	SYSTEM	OL\$	TABLE	UNIQUE	DISABLED	-	-	2	255	-
OL\$NAME	NORMAL	SYSTEM	OL\$	TABLE	UNIQUE	DISABLED	-	-	2	255	-
OL\$HNT_NUM	NORMAL	SYSTEM	OL\$HINTS	TABLE	UNIQUE	DISABLED	-	-	2	255	-
SYS_IL0000005457C00021\$\$	LOB	SYSTEM	OL\$HINTS	TABLE	UNIQUE	DISABLED	-	SYSTEM	2	255	-
LOGMNR_I1OBJ\$	NORMAL	SYSTEM	LOGMNR_OBJ\$	TABLE	NONUNIQUE	DISABLED	-	-	-	-	-
LOGMNR_I1USERS	NORMAL	SYSTEM	LOGMNR_USERS	TABLE	NONUNIQUE	DISABLED	-	-	-	-	-
LOGMNR_I3GTLO	NORMAL	SYSTEM	LOGMNR_GTLO	TABLE	NONUNIQUE	DISABLED	-	-	-	-	-
LOGMNR_I2GTLO	NORMAL	SYSTEM	LOGMNR_GTLO	TABLE	NONUNIQUE	DISABLED	-	-	-	-	-
LOGMNR_GTLO_PK	NORMAL	SYSTEM	LOGMNR_GTLO	TABLE	UNIQUE	DISABLED	-	-	-	-	-
LOGMNR_GTCS_PK	NORMAL	SYSTEM	LOGMNR_GTCS	TABLE	UNIQUE	DISABLED	-	-	-	-	-

More than 10 rows available. Increase rows selector to view more rows.

10 rows returned in 0.16 seconds [CSV Export](#)



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**Command:-** Create

**Purpose:-** An index created more than one columns of a table is called a Composite inde

**Syntax:-** CREATE INDEX <Index Name> ON <TableName>(<ColumnName1>, <ColumnName2>);

**Example:**

CREATE index Std\_No101 on student101(id);

**Output:-** Index created.



**Example 2:**

CREATE index STDs\_NO101 on student101(rollno, branch);



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Home > SQL > SQL Commands

☒ Autocommit Display 10

Save

Run

```
Create index Std_n0101 on student(id);  
Create index STDs_N0101 on student(name,id);
```

Results Explain Describe Saved SQL History

Index created.

0.00 seconds

Language: en

Application Express 2.1.0.0.3  
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### 3. Creating Unique Index:-

A unique index can also be created on one or more columns.

If an index is created on a single column, it is called a Simple unique Index.

If an unique index is created on more than one column, it is called a Composite unique index.

**Syntax:-** CREATE UNIQUE INDEX <Index Name> ON <TableName>(<ColumnName>);



The screenshot shows the SQL Developer interface. At the top, the title bar reads 'Home > SQL > SQL Commands'. Below the title bar, there is a toolbar with 'Autocommit' (checked), 'Display' (set to 10), 'Save', and 'Run' buttons. The main text area contains the SQL command: 'Create unique index NEW\_1 on student(name);'. Below the text area, there is a 'Results' tab, which is currently selected. The results pane shows the message 'Index created.' and the execution time '0.00 seconds'. At the bottom of the window, the status bar indicates 'Language: en' and 'Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved.'

**Output:-**Index

## 2. Composite unique index.

**Command:** - Create

**Purpose:** - If an unique index is created on more than one column, it is called a Composite unique index.

**Syntax:-**

CREATE UNIQUE INDEX <Index Name> ON <TableName>(<ColumnName1>, <ColumnName2>);



The screenshot displays the SQL Developer interface. At the top, the breadcrumb navigation shows 'Home > SQL > SQL Commands'. Below this, there is a toolbar with 'Autocommit' (checked), 'Display' (set to 10), and 'Save' and 'Run' buttons. The main text area contains the SQL command: 'Create unique index NEW\_2 on New2(city);'. Below the text area, there are tabs for 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'. The 'Results' tab is active, showing the output: 'Index created,' followed by '0.01 seconds'. At the bottom of the window, the status bar indicates 'Language: en' on the left and 'Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved.' on the right.

**Output:-**Index



#### **4. Dropping Index:-**

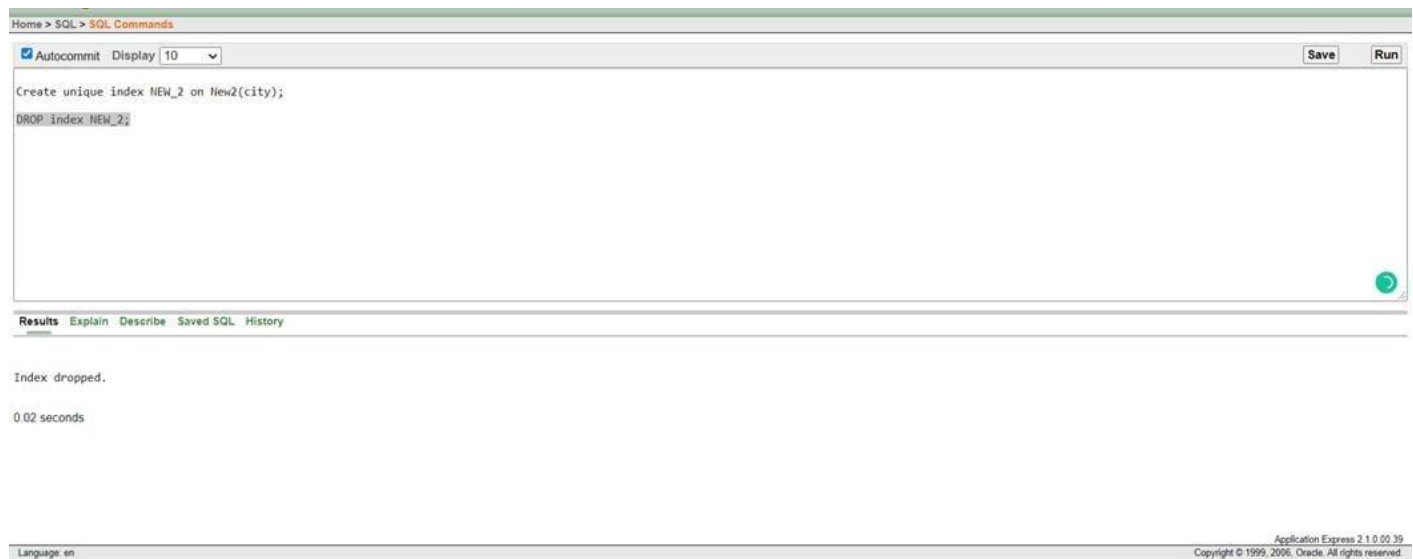
**Command:-** Drop

**Purpose:-** Indexes associated with the tables can be removed by using the DROP INDEX command.

**Syntax:-** DROP INDEX <Index Name>;

**Output:-**

Index Dropped.



#### **5. Result/Output/Writing Summary:**

We observed the different syntax of implementing the concept of views, Indexes.

**Learning outcomes (What I have learnt):**

1. Learned about different SQL commands.
2. Learned about the implementation of the concept of views, Indexes.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			