LAB # 6 :

SQL WILDCARDS, IN, BETWEEN, ALIASES, AUTOINCREMENT, LIKE COMMANDS

Objective (aim) of the experiment

To practice and implement SQL Commands (SQL WILDCARDS, IN, BETWEEN, ALIASES, AUTOINCREMENT, and LIKE COMMANDS).

Scoring Rubrics for Lab 6:

S#	Task	Weightage	Obtained	Signature and Date
1	Using the 'In' command correctly	20 %		
2	Using the 'Between' statement correctly	15 %		
3	Making use of 'Aliases' correctly	25 %		
4	Using the 'AutoIncrement' command correctly	15 %		
5	Using the 'SQL Wildcards' in conjunction with the 'Like' command correctly	25%		
	Total marks obtained in this lab	**100%**	**%**	

Equipment used

Sl. No.	Facilities Required	Quantity
1	System	1
2	Operating System	Windows 7
3	DBMS	Sql Server Management Studio 2012

TASKS

SQL Wildcard Characters

A wildcard character can be used to substitute for any other character(s) in a string. In SQL, wildcard characters are used with the SQL LIKE operator.

SQL wildcards are used to search for data within a table.

With SQL, the wildcards are:

Wildcard	Description
%	A substitute for zero or more characters
_	A substitute for a single character
[*charlist*]	Sets and ranges of characters to match
[^*charlist*] or [!*charlist*]	Matches only a character NOT specified within the brackets

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

Demo Database

In this tutorial we will use the well-known Northwind sample database. Below is a selection from the "Customers" table:

Using the SQL % Wildcard

The following SQL statement selects all customers with a City starting with

"ber": Example

```
SELECT * FROM

Customers WHERE

City LIKE 'ber%';
```

The following SQL statement selects all customers with a City containing the

pattern "es": Example

```
SELECT * FROM

Customers WHERE

City LIKE '%es%';
```

Using the SQL _ Wildcard

The following SQL statement selects all customers with a City starting with any character, followed by "erlin":

Example

```
SELECT * FROM

Customers WHERE

City LIKE '_erlin';
```

The following SQL statement selects all customers with a City starting with "L", followed by any character, followed by "n", followed by any character, followed by "on":

Example

```
SELECT * FROM

Customers WHERE

City LIKE 'L_n_on';
```


Using the SQL [charlist] Wildcard

The following SQL statement selects all customers with a City starting with "b", "s",

or "p": Example

SELECT * FROM

Customers WHERE

City LIKE '[bsp]%';

The following SQL statement selects all customers with a City starting with "a", "b",

or "c": Example

SELECT * FROM

Customers WHERE

City LIKE '[a-c]%';

The following SQL statement selects all customers with a City NOT starting with "b", "s", or "p":

Example

SELECT * FROM

Customers WHERE

City LIKE '[!bsp]%';

Or

SELECT * FROM

Customers WHERE City

NOT LIKE '[bsp]%';

SELECT *column_name(s)*

FROM *table_name*

WHERE *column_name* LIKE *pattern*;

SQL LIKE Syntax

Demo Database

In this tutorial we will use the well-known Northwind sample

database. Below is a selection from the "Customers" table:

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
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5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

SQL LIKE Operator Examples

The following SQL statement selects all customers with a City starting with the

letter "s": Example

SELECT * FROM

Customers WHERE

City LIKE 's%';

Tip: The "%" sign is used to define wildcards (missing letters) both before and after the pattern. You will learn more about wildcards in the next chapter.

The following SQL statement selects all customers with a City ending with the letter "s":

Example

SELECT * FROM

Customers WHERE

City LIKE '%s';

The following SQL statement selects all customers with a Country containing the pattern "land":

Example

SELECT * FROM

Customers WHERE

Country LIKE '%land%';

Using the NOT keyword allows you to select records that does NOT match the pattern.

The following SQL statement selects all customers with a Country NOT containing the pattern "land":

Example

SELECT * FROM Customers

WHERE Country NOT LIKE

'%land%'; The IN Operator

The IN operator allows you to specify multiple values in a WHERE

```
SELECT column_name(s)
FROM table_name
WHERE column_name IN (value1,value2,...);
```

Demo Database

In this tutorial we will use the well-known Northwind sample

database. Below is a selection from the "Customers" table:

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
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IN Operator Example

The following SQL statement selects all customers with a City of "Paris" or "London": Example

```
SELECT * FROM Customers
WHERE City IN
('Paris','London');
```

The BETWEEN operator is used to select values within a range. The SQL BETWEEN Operator

The BETWEEN operator selects values within a range. The values can be numbers, text, or dates.

SQL BETWEEN Syntax

```
SELECT column_name(s)
FROM table_name
WHERE column_name BETWEEN value1 AND value2;
```

Demo Database

In this tutorial we will use the well-known Northwind sample database. Below is a selection from the "Products" table:

ProductID	ProductName	SupplierID	CategoryID	Unit	Price
1	Chais	1	1	10 boxes x 20 bags	18
2	Chang	1	1	24 - 12 oz bottles	19
3	Aniseed Syrup	1	2	12 - 550 ml bottles	10
4	Chef Anton's Cajun Seasoning	1	2	48 - 6 oz jars	22
5	Chef Anton's Gumbo Mix	1	2	36 boxes	21.35

BETWEEN Operator Example

The following SQL statement selects all products with a price BETWEEN 10 and 20: Example

```
SELECT * FROM Products
```

WHERE Price BETWEEN 10 AND 20;

NOT BETWEEN Operator Example

To display the products outside the range of the previous example, use NOT

BETWEEN: Example

SELECT * FROM Products

WHERE Price NOT BETWEEN 10 AND 20;

BETWEEN Operator with IN Example

The following SQL statement selects all products with a price BETWEEN 10 and 20, but products with a CategoryID of 1,2, or 3 should not be displayed:

Example

SELECT * FROM Products

WHERE (Price BETWEEN 10

AND 20) AND NOT CategoryID

IN (1,2,3);

BETWEEN Operator with Text Value Example

The following SQL statement selects all products with a ProductName beginning with any of the letter BETWEEN 'C' and 'M':

Example

SELECT * FROM Products WHERE ProductName BETWEEN

'C' AND 'M'; NOT BETWEEN Operator with Text Value Example

The following SQL statement selects all products with a ProductName beginning with any of the letter NOT BETWEEN 'C' and 'M':

Example

SELECT * FROM Products