

LAB # 1:

DATA DEFINITION LANGUAGE (DDL) COMMANDS

Objective (aim) of the experiment

To practice and implement data definition language commands like Create, Alter, Drop, Truncate.

Scoring Rubrics for Lab 1:

S#	Task	Weightage	Obtained	Signature and Date
1	Creating a database	20 %		
2	Creating a table	40 %		
3	Altering a table (by inserting a column after a table has been created)	30 %		
4	Dropping a column from a table	30 %		
Total marks obtained in this lab		100%	%	

Equipment

used

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

Tasks To Perform

The SQL CREATE DATABASE Statement

The CREATE DATABASE statement is used to create a database. SQL CREATE DATABASE Syntax

```
CREATE DATABASE dbname;
```

SQL CREATE DATABASE

Example

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The following SQL statement creates a database called "my_db".

```
CREATE DATABASE my_db;
```

Database tables can be added with the CREATE TABLE statement.

The SQL CREATE TABLE Statement

The CREATE TABLE statement is used to create a table in a database.

Tables are organized into rows and columns; and each table must have a name.

SQL CREATE TABLE Syntax

```
CREATE TABLE table_name
```

```
(  
  column_name1  
  data_type(size),  
  column_name2 data_type(size),  
  column_name3 data_type(size),  
  ...  
)
```

The *column_name* parameters specify the names of the columns of the table.

The *data_type* parameter specifies what type of data the column can hold (e.g. varchar, integer, decimal, date, etc.).

The *size* parameter specifies the maximum length of the column of the table.

SQL CREATE TABLE Example

Now we want to create a table called "Persons" that contains five columns:

PersonID, LastName, FirstName, Address, and City.

We use the following CREATE TABLE

statement: Example

```
CREATE TABLE Persons
```

```
(  
  PersonID int,  
  LastName  
  varchar(255),  
  FirstName  
  varchar(255), Address  
  varchar(255), City  
  varchar(255
```

The PersonID column is of type int and will hold an integer.

The LastName, FirstName, Address, and City columns are of type varchar and will hold characters, and the maximum length for these fields is 255 characters.

The empty "Persons" table will now look like this:

PersonID	LastName	FirstName	Address	City

Tip: The empty table can be filled with data with the INSERT INTO statement.

The ALTER TABLE Statement

The ALTER TABLE statement is used to add, delete, or modify columns in an existing table. SQL ALTER TABLE Syntax

To add a column in a table, use the following syntax:

```
ALTER TABLE table_name
```

```
ADD column_name datatype
```

To delete a column in a table, use the following syntax (notice that some database systems don't allow deleting a column):

```
ALTER TABLE table_name
```

```
DROP COLUMN column_name
```

To change the data type of a column in a table, use the following syntax:

```
ALTER TABLE table_name
```

```
ALTER COLUMN column_name datatype
```

SQL ALTER TABLE Example

Look at the "Persons" table:

P_Id	LastName	FirstName	Address	City
1	Hansen	Ola	Timoteivn 10	Sandnes
2	Svendson	Tove	Borgvn 23	Sandnes
3	Pettersen	Kari	Storgt 20	Stavanger

Now we want to add a column named "DateOfBirth" in the "Persons" table.

We use the following SQL statement:

```
ALTER TABLE Persons
```

```
ADD DateOfBirth date
```

Notice that the new column, "DateOfBirth", is of type date and is going to hold a date.

The data type specifies what type of data the column can hold. For a complete reference of all the data types available in MS Access, MySQL, and SQL Server, go to our complete Data Types reference.

The "Persons" table will now look like this:

P_Id	LastName	FirstName	Address	City	DateOfBirth
1	Hansen	Ola	Timoteivn 10	Sandnes	
2	Svendson	Tove	Borgvn 23	Sandnes	
3	Pettersen	Kari	Storgt 20	Stavanger	

Change Data Type Example

Now we want to change the data type of the column named "DateOfBirth" in the "Persons" table.

We use the following SQL statement:

```
ALTER TABLE Persons
```

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ALTER COLUMN *DateOfBirth* year

Notice that the "DateOfBirth" column is now of type year and is going to hold a year in a two- digit or four-digit format.

DROP COLUMN Example

Next, we want to delete the column named "DateOfBirth" in the "Persons"

table. We use the following SQL statement:

ALTER TABLE *Persons*

DROP COLUMN *DateOfBirth*

The "Persons" table will now look like

P_Id	LastName	FirstName	Address	City
1	Hansen	Ola	Timoteivn 10	Sandnes
2	Svendson	Tove	Borgvn 23	Sandnes
3	Pettersen	Kari	Storgt 20	Stavanger

EXPECTED DELIVERABLE

A spool file showing all executions of the above queries.