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Welcome to the  
World of  
Steady  
**GROWTH**



We helped 6000+ Professionals to live in their BA Career

# SQL Online Awareness Session



Welcome All,

SQL Online awareness Session will commence between 11:00 AM to 11:10 AM.

Request participants to keep self Zoom account on **Mute\*** during the session.

**Q&A's** will be addressed at the end of the session.

Thank You,  
Team COEPD

# SQL Introduction

## What is SQL?

SQL stands for Structured Query Language. SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987. It's a language and not a Database.

## Why is SQL used and is it relatable to Business Analyst?

SQL is used to communicate with a database. According to ANSI (American National Standards Institute), it is the standard language for relational database management systems. SQL statements are used to perform tasks such as update data on a database, or retrieve data from a database.

BA or Business Analyst mostly won't have to work on it. However, in some scenarios where BA is working for any Banking or Finance domain, then BA might work on it. Here BA won't use any sort of coding method but SQL is used by BA to only view and or extract the tabular structure in order to check if the work or application is tracking correct input as per the need of the clients. It is a programming language that is designed to facilitate retrieving specific information from Databases.

## SQL Facts

SQL is practiced on SSMS demo or dummy application. This application gives the new aspirants or any learner an edge to get familiar with SQL app.

**SSMS** – SQL Server Machine Learning System.

Here under SQL, one can extract multiple reports for review and validation purpose, which may include IT, Finance Domain, Banking Domain, Retail Domain and many more.



## SQL Facts

### What is a Database or DB?

An organized collection of data, generally stored and accessed from a computer or system [ Like Hard Disc]

### What is the purpose of DB?

It is to organize the data and make it available in convenient forms for view and or analyze purpose.  
.E.g. Naukri App/website .

### What types of DB's are available or known?

**DBMS** – Database Management System  
and

**RDBMS** – Relational Database Management System

# SQL Fundamentals

Fundamental Functions Of Database or Parts of Date Base are:

## CRUD

### Analyst

- C – Create
- R – Read [ BA will have access or Authority\* ]
- U – Update
- D – Delete

## Business



# Features Of DBMS and RDBMS

## DBMS

DBMS applications store data as "File".

In DBMS, data is generally store in either a hierarchical form or a navigational form

DBMS uses file system to store data, so there will be no relation between the tables.

DBMS is meant to be for small organization and deal with small data. It supports single user at a time.

Examples of DBMS as file system like xml etc.

## RDBMS

RDBMS applications store data in a tabular form

In RDBMS, the tables have an identifier called primary key and the data values are stored in the form of tables.

Data values stored in the form of tables, so a relationship between these data values will be stored in the form of tabs as well.

RDBMS is designed to handle large amount of data . It supports mutiple user.

Few examples of RDBMS are mysql,postgre,sqlserver,oracle etc



## SQL Executions

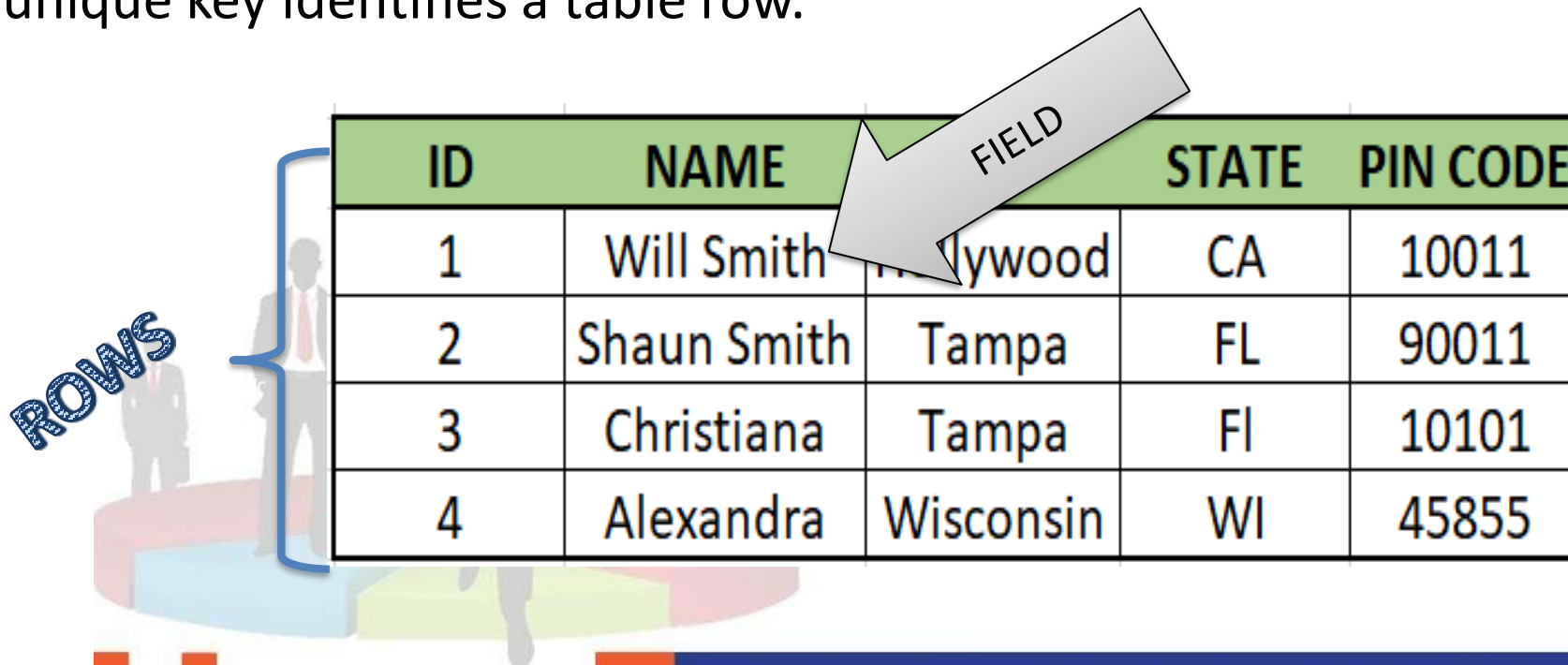
What Can SQL do?

- SQL can execute queries against a database.
- SQL can retrieve data from a database.
- SQL can insert records in a database.
- SQL can update records in a database.
- SQL can delete records from a database.
- SQL can create new databases.
- SQL can create new tables in a database.
- SQL can create stored procedures in a database.
- SQL can create views in a database.
- SQL can set permissions on tables, procedures, and views.

## Tables In SQL

Tables in SQL are termed or called as mentioned below –

- A row is called as **Record**.
- A column is called as **Field**.
- A unique key identifies a table row.



ID	NAME	STATE	PIN CODE
1	Will Smith	CA	10011
2	Shaun Smith	FL	90011
3	Christiana	FL	10101
4	Alexandra	WI	45855

## SQL- Retail Store

exm

SALES				
Sale_ID	ITEM_ID	CUST_ID	Quan	Price
1	1	2	3	90000
2	2	2	1	1500
3	1	1	1	30000

ITEM		
ITEM ID	NAME	DESCRIPTION
1	CAMERA	64MP
2	MEMORY CARD	128GB
3	HEADPHONE	HIGH BASS

*# Tables are related by keys and table keys are used to create relationship with tables. It must be unique and cannot have null values.*

*# Foreign keys are used to connect two tables together.*

*# JOIN Statement*

CUSTOMER				
ID	NAME	STATE	CITY	PIN
1	Will Smith	Hollywood	CA	10011
2	Shaun Smith	Tampa	FL	90011
3	Christiana	Tampa	FL	10011
4	Alexandra	Wisconsin	WI	45855

# SQL Commands

DDL - *Data Definition Language*

DQL - *Data Query Language*

# SQL COMMANDS

DML - *Data Manipulation Language*

DCL - *Data Control Language*



## DDL

**Create** - The CREATE procedure command is used to create a stored procedure. A stored procedure is a prepared SQL code that you can save, so the code can be reused over and over again.

**Alter** - The ALTER TABLE statement is used to add, delete, or modify columns in an existing table. The ALTER TABLE statement is also used to add and drop various constraints on an existing table.

**Drop**- The DROP TABLE statement is used to drop an existing table in a database.

**Rename** - Is used to change the name of an existing database object(like Table, Column) to a new name. Renaming a table does not make it to lose any data is contained within it.

**Truncate** - Removes all rows from a table, but the table structure and its columns, constraints, indexes, and so on remain.

**Comment** - To explain sections of SQL statements, or to prevent execution of SQL statements.

## DQL

**Select** - Is used to select data from a database. The data returned is stored in a result table, called the result-set.

As a BA, we use this feature to search any desired data, if required or asked.



## DML

**Insert** - Adds one or more records to any single table in a relational database.

**Update** - Is used to modify the existing records in a table.

**Delete** - Is used to delete existing records in a table.

**Merge** - Is used to make changes in one table based on values matched from another. It can be used to combine insert, update, and delete operations into one statement.

**Call** - The CALL aka EXPLAIN PLAN statements are supported in PL/SQL only when executed dynamically.

**Explain Plan** - To determine the execution plan Oracle Database follows to execute a specified SQL statement. This statement inserts a row describing each step of the execution plan into a specified table.

**Lock Table** - To prevent deadlocks and concurrent data changes and modifications to maintain consistency and atomicity of transactions on database tables.

## DCL

**Grant** - *To prevent deadlocks and concurrent data changes and modifications to maintain consistency and atomicity of transactions on database tables.*

**Revoke** - *To remove the privileges on user accounts for access to a database object. It revokes permission granted to a user on a database object and also revokes the access rights assigned to users. Here, the revoke command removes every privilege initially granted to the user.*





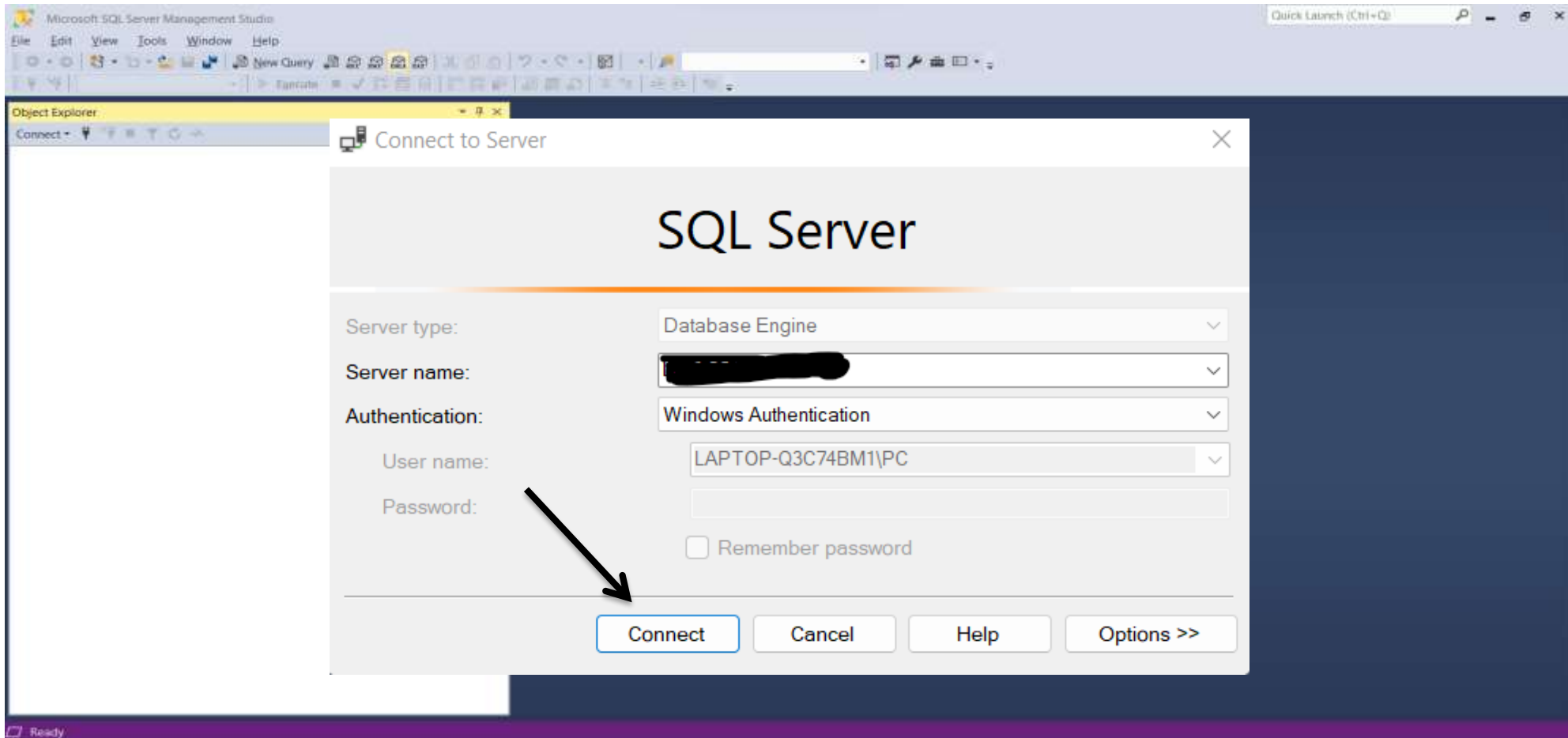
## SQL Screen

# Microsoft SQL Server Management Studio

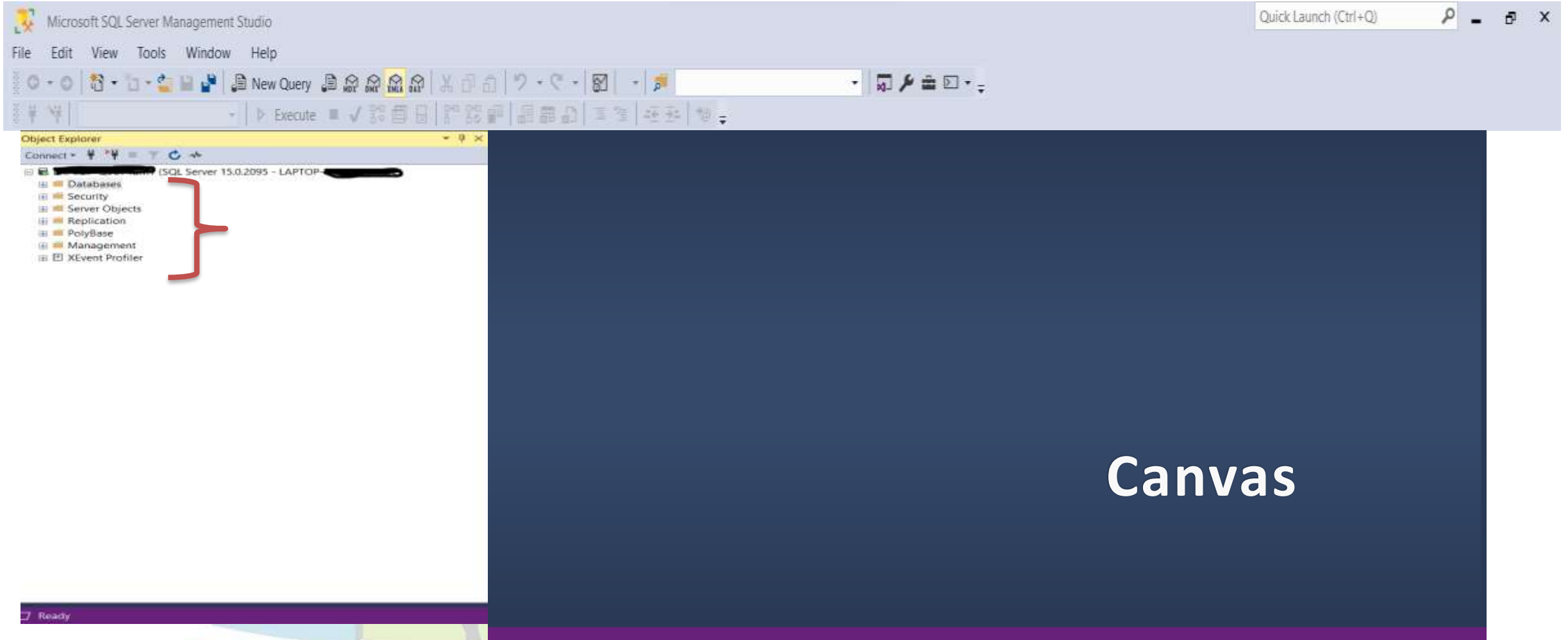
v19.0 Preview 3

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## SQL Database Work Screen

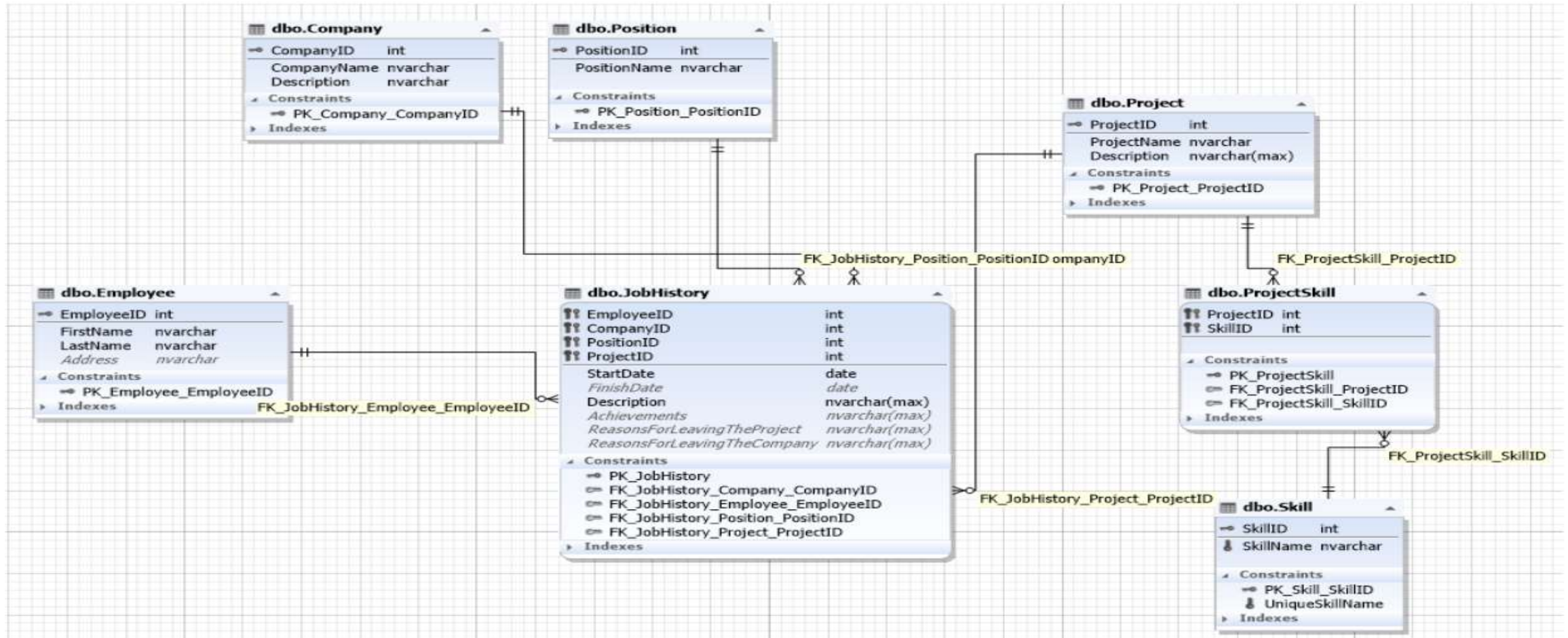


## SQL Database Screen 2



The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. The title bar reads "Microsoft SQL Server Management Studio" and includes a "Quick Launch (Ctrl+Q)" search box. The menu bar contains "File", "Edit", "View", "Tools", "Window", and "Help". The toolbar includes icons for "New Query", "Execute", and other database management functions. The Object Explorer on the left shows a tree view for "SQL Server 15.0.2095 - LAPTOP" with folders for "Databases", "Security", "Server Objects", "Replication", "PolyBase", "Management", and "XEvent Profiler". A red bracket highlights the "Databases" folder. The main workspace is a dark blue area with the word "Canvas" written in white. The status bar at the bottom left shows "Ready".

# SQL- DB/Schema





## SQL-Some Important Commands

Syntax

- `SELECT * FROM table_name;`
  - `SELECT CustomerName, City FROM Customers;`
- `DELETE FROM table_name WHERE condition;`
  - `DELETE FROM Customers WHERE CustomerName='Alfreds Futterkiste';`
- `CREATE DATABASE databasename;`
  - `CREATE DATABASE testDB;`
- `DROP DATABASE databasename;`
  - `DROP DATABASE testDB;`
- `TRUNCATE(number, decimals)`
  - `SELECT TRUNCATE(345.156, 0);`
- `INSERT(string, position, number, string2)`
  - `SELECT INSERT("CoepdnurtureBA.com", 1, 9, "Example");`
- GRANT Commands in SQL
  - `GRANT privilege_name  
ON object_name  
TO {user_name | PUBLIC | role_name}  
[WITH GRANT OPTION];`
- Revoke Command in SQL
  - `REVOKE privilege_name  
ON object_name  
FROM {user_name | PUBLIC | role_name}`

# Thank You All For Participating

