**ANSI SQL (American National standard institute)**

* **Microsoft:** Transact SQL
* RDBMS (tools)🡪Access, SQLServer
* DDL 🡪 Structure
* Create table
* Create function,
* Create view
* Alter
* Drop
* Select into
* DML🡪 Data
* Insert
* Update
* Delete
* merge
* DCL🡪permission
* Grant
* Deny
* Revoke
* DQL🡪display
* Select
* Joins
* Union
* Subquery
* Grouping
* Aggregation function
* TCL🡪DB consistency
* Begin Transaction
* Commit
* Rollback
* **Oracle**: PL SQL
* **IBM**: IBM PI-SQL
* **MySQL**: Open source
* **SQL** is the language used to interact with databases.
* **SQL Server** is a database management system that stores, manages, and retrieves data.
* **SQL Server Management Studio** (SSMS) is a tool for managing SQL Server instances and.

**Let’s do it practically 😊**

**Database**: it’s a page on hard disk

What is the tool that will help me to create the database 🡪 management studio

* **Open any place you want**

Create new folder with name database on it

* **Copy the path of that folder 🡪 because I want to save all the database**
* **Click on the Database 🡪 create new database 🡪 give it name**

**The database has 2 fille 🡪 mdf and log file**

**Mdf**🡪 all our database and the relationship will be here

**Log**🡪 actions and transaction that happened to database for example someone insert one row, this file will register this action “fatma insert row in table x and this is the insertion that happen ….” it’s like archive file

* **Write the path of the folder that you created on the path section**
* **Check the place you create the database**

All the previous step to create the new database

**But what if we want to bring our database?**

* **Right click on the database** 🡪**task**🡪**backup** 🡪 **remove the default path** 🡪 **add** 🡪 **select the file** 🡪 **write the name of the database** 🡪 **name.bak**
* **To restore the database, go again to the database click and chose restore** 🡪 **from device** 🡪 **choose the database** 🡪 **add**🡪 **ok**

**Is it okay to do copy and paste ?**

No! why 🡪 service

Let’s try on excel and CMD 🡪 sqlcmd -s “.” -d “ITI” GO select …. etc

* **Create table** 🡪 **new table** 🡪 **right click to PK** 🡪 **if you forgot to add PK click design**
* **If composite PK click ctrl to highlight**
* **Ctrl + s to save the table**

اذا نسينا مثلا كولوم ونريد نضيفه، م مسموح لأنه انت تغير في الستركتشر تبع الجدول، بس بما انه نحن نتعلم لازم نفعل الخاصية الي تخلينا نغلط ونجرب 😊

**Tool🡪 options 🡪designer 🡪 remove the prevent saving change**

* **For the FK** 🡪 **click on DB diagram** 🡪**new diagram** 🡪**select all table**
* **Drag PK to FK**
* **This is not ERD this is** 🡪**DB diagram**
* **To add data** 🡪 **click edit**

طبعا لازم اعرف اكتب الكود تبع انشاء الجداول لأنه بحتاج بعدين اكتبهم باستخدام الجافا الحين انا م معي الابلكيشن ف عشان كدا افتح

**New query** 🡪 clint🡪 وهذا شخص ثاني معنا مطور في الشركة

يكتب كوري عشان يتعامل مع الداتابيس

* **Select \* from Emp**

لكن قبلها لازم

* **Use [name of the DB]**