Assignment

1. Follow the steps mentioned in previously attached document in Class 1 and install the SQL Server 2019 edition.
2. As mentioned in previous class, kindly download the [***AdvetnureWorks2017***](https://github.com/Microsoft/sql-server-samples/releases/download/adventureworks/AdventureWorks2017.bak) ***&*** [***AdventureWorksDW2017***](https://github.com/Microsoft/sql-server-samples/releases/download/adventureworks/AdventureWorksDW2017.bak)database and restore them for assignment purpose. Please refer class 3 video recording for the same.
3. Create a database <withAnyName>, via GUI and Command Line both? Please see if you are able to check the .mdf and .ldf files at specific location.
4. Create a new table Customer with columns which can define the customer’s properties. As an e.g. you can have customer first name, last name, city, country, gender, phone number, marital status and other columns. Try to use Integer, Decimals, Strings and date data types to be use.
5. Alter the table created in point 4, and add two columns BirthDate and LastUpdated. Make birth date as only “DATE” type and LastUpdated column as “DATETIME”. Insert fw values and check the difference between both of them.
6. For below assignment please use **AdventureWorksDW2017. Below questions should be answered in form of SQL Queries.**
   1. Select the customers from table DimCustomer where customer key start from 11060 and ends with 11168.
   2. Select those customers where MaritialStatus is Married?
   3. Select all those customers where Marital Status is Married and Gender is Female?
   4. Select all customers where names start with ‘S’ and ends with “a”
   5. Select all customers in one go where occupation is Professional & Management?
   6. Select the occupation of customers and find out the total number of cars owned by each category? (this may require the group by operator so kindly google around it a bit and then try on it. We will discuss this in next session)
   7. Select the English education and number of houses owned by each category?
   8. How many single ladies are in our customer who have the children to take care of?
   9. How many married men whose salary is more than 40000 and number of children is 0?
   10. What is equivalent of Spanish Education records “Estudios de postgrado” and “Estudios universitarios (en curso)” in French and English?
7. Use the Database Adventure Works and solve below queries?
   1. Fetch all records where Job Title is ‘Tool Designer’ and hire date is greater than 2009-01-16 from table HumanResources.Employees?
   2. Fetch all employees records where salaried flag is 0
   3. Fetch all employees records and total leave hours
   4. Fetch all employees where gender is female
   5. Fetch all employees’ records where gender is female or marital status is ‘S’

# Theoretical Concepts (Note: Below assignment is just for student’s own benefit. Its not mandatory to submit Theory assignments.)

* 1. Where database fits in a web application architecture, kindly define the flow of information?
  2. Difference between windows authentication and SQL Server authentication?
  3. Why we need NDF files? What is the usage of File Groups in SQL SERVER?
  4. What kind of information transactions logs stored in the database?
  5. What is the difference between EXIST and IN statement?
  6. How many different types of data types we have in SQL SERVER?