**Date functions:**

select Employee\_Name,DOB from HR\_Database

select Employee\_Name,DOB, DATENAME(WEEKDAY,DOB) as [Weekday] from HR\_Database where DATENAME(WEEKDAY,DOB) = 'Wednesday'

select Employee\_Name,DOB, DATENAME(MONTH,DOB) as [Weekday] from HR\_Database where DATENAME(MONTH,DOB) = 'August'

select Employee\_Name,DOB from HR\_Database where datepart(year,DOB) = 1973

select Employee\_Name,DOB, cast(DATEADD(day,30, DOB) as date) as [30\_days\_after] from HR\_Database

select Employee\_Name,DOB,[30\_days\_after], DATEDIFF(day,DOB, [30\_days\_after]) as date\_difference from ( select Employee\_Name,DOB, cast(DATEADD(day,30, DOB) as date) as [30\_days\_after] from HR\_Database ) t

-------------------------------------------------------------------------------------

**Group by function**

select position, sex, [State\_Code], count([EmpID]) as Employee\_count, count([State\_Code]) as people\_from\_State from [HR\_Database] group by position, sex, [State\_Code] order by position

**Pivot Operation with Group by function**

select Position, sum(YES) as YES, sum(NO) as NO from (

select position, Yes, No from [HR\_Database]

pivot ( count(HispanicLatino)

for HispanicLatino in (Yes, No) ) as p ) t Group by Position order by Position

**SQL Index:**

create index IN\_EmpID on [Teaching\_SQL].[dbo].[HR\_Database] ([EmpID] asc)

drop index IN\_EmpID on [Teaching\_SQL].[dbo].[HR\_Database]

delete from [Teaching\_SQL].[dbo].[HR\_Database] where [EmpID] between 1403065721 and 1403065800

**Default constrain in SQL**

insert into [Person\_1] ( [Email\_ID],[Gender\_ID]) values ( 'Arull.co@gmail.com', 1)

alter table [Person\_1] add constraint DF\_NAME

default 'ADD\_Name' for [NAME]

**Index :**

--- Make sure the primary key column has to be created in not null constraint. If not have to change it.

alter table HR\_Database alter column EmpID int not null

**---Add primary key for the desired column**

alter table HR\_Database

add constraint PK\_HR\_DATA\_EMP\_ID

primary key (EmpID)

**--- Creating clustered & NonClustered index for a table**

SELECT [ID]

,[Name]

,[Email\_ID]

,[Gender\_ID]

FROM [Teaching\_SQL].[dbo].[person]

insert into [person] values (10,'Raghu', 'Raghu@gmail.com', 1)

Create CLUSTERED INDEX [CL\_index] on [person] (Gender\_ID asc, Name desc)

drop INDEX [person].[CL\_index]

Create Nonclustered index [NC\_index\_table\_name] on [person]([Email\_ID] asc)

**Dense Rank, Rank, Row\_Number function**

-- Raghu is a cte table--

with Raghu as (

SELECT [Age]

,[Gender]

,[MaritalStatus]

,[MonthlyIncome]

,[MonthlyRate]

,[NumCompaniesWorked]

,DENSE\_RANK() over (order by [MonthlyIncome] desc) as D\_Rank

,RANK() over (order by [MonthlyIncome] desc ) as [Rank]

,ROW\_NUMBER() over ( order by Gender) as [Row\_number]

,DENSE\_RANK() over (partition by Age order by [MonthlyIncome] desc) as Same\_age

FROM [Teaching\_SQL].[dbo].[HR\_Salary\_data]

--order by DENSE\_RANK() over (order by Age desc) asc

)

delete from Raghu where Same\_age > 1

**Bulk insert in SQL:**

create table HR\_Salary\_data

(

Age nvarchar(50),

Attrition nvarchar(50),

BusinessTravel nvarchar(50),

DailyRate nvarchar(50),

Department nvarchar(50),

DistanceFromHome nvarchar(50),

Education nvarchar(50),

EducationField nvarchar(50),

EmployeeCount nvarchar(50),

EmployeeNumber nvarchar(50),

EnvironmentSatisfaction nvarchar(50),

Gender nvarchar(50),

HourlyRate nvarchar(50),

JobInvolvement nvarchar(50),

JobLevel nvarchar(50),

JobRole nvarchar(50),

JobSatisfaction nvarchar(50),

MaritalStatus nvarchar(50),

MonthlyIncome nvarchar(50),

MonthlyRate nvarchar(50),

NumCompaniesWorked nvarchar(50),

Over18 nvarchar(50),

OverTime nvarchar(50),

PercentSalaryHike nvarchar(50),

PerformanceRating nvarchar(50),

RelationshipSatisfaction nvarchar(50),

StandardHours nvarchar(50),

StockOptionLevel nvarchar(50),

TotalWorkingYears nvarchar(50),

TrainingTimesLastYear nvarchar(50),

WorkLifeBalance nvarchar(50),

YearsAtCompany nvarchar(50),

YearsInCurrentRole nvarchar(50),

YearsSinceLastPromotion nvarchar(50),

YearsWithCurrManager nvarchar(50),

)

go

BULK INSERT HR\_Salary\_data

FROM 'C:\Arul\SQL Learnings\HR\_Salary.txt'

WITH (FIRSTROW = 2,

FIELDTERMINATOR = '\t',

ROWTERMINATOR='\n' );

go