

--unique --Constraint --> nonclustered

```
create table test22
(
    id int primary key,
    name varchar(20),
    age int unique
)
```

```
create table test22
```

```
(
```

```
    id int primary key,
```

```
    name varchar(20),
```

```
    age int unique
```

```
)
```

```
create unique index i4
```

```
on student()
```

```
    id int primary key,  
    name varchar(20),  
    age int unique
```

```
)
```

```
create unique index i4  
on student(st_age)
```

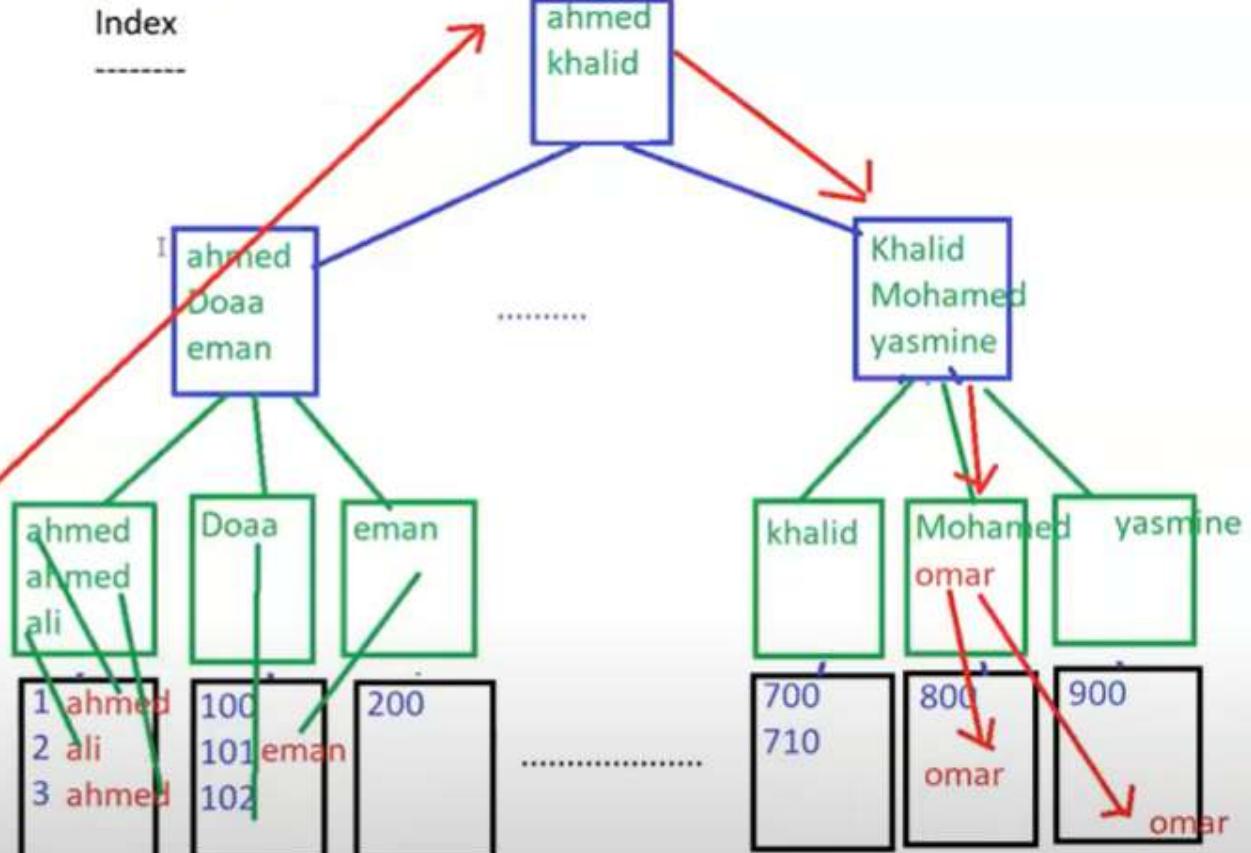
PK
Sorted
Clustered Index

NonClustered Index (Sname)

Sid	Sname	age
1	ahmed	21
2	ali	23
4	eman	24
7	omar	25

Select *
from student
where name='omar'

Index



Activate Windows
Go to Settings to activate Windows

```
create unique index i4  
on student(st_age)
```

```
--SQL Server Profiler  
--SQL Server Tuning Advisor
```

```
select * from student where st_age=20
```

```
create nonclustered index myindex2  
on student(st_Lname)
```

```
select *  
from student  
where st_id=100
```

--PK

--Constraint

--> Clustered index

```
select * from student where st_age=20
```

```
--  
Create table exam
```

```
(  
    eid int,  
    edate date,  
    numofQ int  
)
```

```
>Create table exam
```

```
(  
    eid int,  
    edate date,  
    numofQ int  
)
```

```
drop table exam
```

```
)  
drop table exam
```

```
--Local table    --session based tables
```

```
--global table   --shared tables
```

```
--Local table      --session based tables
create table exam
(
    eid int,
    edate date,
    numofQ int
)
```

```
Create table #exam
```

```
eid int,
```

```
edate date,
```

```
numofQ int
```

```
--global table
B Create table ##exam
(
    eid int,
    edate date,
    numofQ int
)I
```

```
--global table --shared tables
Create table ##exam
(
    eid int,
    edate date,
    numofQ int
)
```

```
numofQ int
```

```
)
```

```
--table variable
```

```
declare @t table(x int)
```

```
numofQ int
```

```
)
```

```
--table variable
```

```
declare @t table(x int)
```

```
insert into @t values(1)
```

```
select * from @t
```

```
- Create table ##exam
```

```
    eid int,  
    edate date,  
    numofQ int
```

```
--table variable
```

--rollup and cube

```
use test
```

```
create table sales
```

```
(  
    ProductID int,  
    SalesmanName varchar(10),  
    Quantity int  
)
```

```
truncate table sales
```

```
insert into sales
```

```
values (1, 'ahmed', 10),  
       (1, 'khalid', 20),  
       (1, 'ali', 45),  
       (2, 'ahmed', 15),  
       (2, 'khalid', 30)
```

```
--rollup and cube
```

```
use test
```

```
create table sales
```

```
(  
    ProductID int,  
    SalesmanName varchar(10),  
    Quantity int  
)
```

```
truncate table sales
```

```
insert into sales
```

```
values (1,'ahmed',10),  
        (1,'khalid',20),  
        (1,'ali',45),  
        (2,'ahmed',15),  
        (2,'khalid',30)
```

```
(2, 'ahmed', 55),  
(2, 'khalid', 40),  
(2, 'ali', 70),  
(3, 'ahmed', 30),  
(4, 'ali', 90),  
(3, 'khalid', 30),  
(4, 'khalid', 90)
```

```
select ProductID, SalesmanName, quantity
```

```
(2, 'ali', 70),  
(3, 'ahmed', 30),  
(4, 'ali', 90),  
(3, 'khalid', 30),  
(4, 'khalid', 90)
```

```
select ProductID, SalesmanName, quantity  
from sales
```

```
group by rollup(ProductID)
) as newtable

select ProductID as X,sum(quantity) as "Quantities"
from sales
group by rollup(ProductID)

select SalesmanName as Name,sum(quantity) as Qty
from sales
```

```
select ProductID as X,sum(quantity) as "Quantities"  
      from sales  
      group by ProductID
```

```
select SalesmanName as Name,sum(quantity) as Qty
```

```
- select ProductID as X,sum(quantity) as "Quantities"
      from sales
      group by ProductID
union all
select 0,sum(quantity)
      from sales
```

```
select ProductID as X,sum(quantity) as "Quantities"
      from sales
      group by rollup(ProductID)

select SalesmanName as Name,sum(quantity) as Qty
      from sales
      group by rollup(SalesmanName)

--order by ProductID,SalesmanName
```

```
select ProductID as X,sum(quantity) as "Quantities"
      from sales
    group by rollup(ProductID)

select SalesmanName as Name,sum(quantity) as Qty
      from sales
    group by rollup(SalesmanName)

--order by ProductID,SalesmanName
```

Connect +

.(SQL Server 13.0.1742.0 - DESKTOP-VF5OP25\Ram)

Databases
System Databases
Database Snapshots
AdventureWorks2012
AdventureWorksDW2012
Company_SD
DB1
ITI
Database Diagrams
Tables
System Tables
FileTables
External Tables
dbo.Child
dbo.Course
dbo.Department
dbo.Dept
dbo.emp
dbo.grades
dbo.Ins_Course
dbo.Instructor
dbo.mytesting
dbo.parent
dbo.Stud_Course
dbo.Student
dbo.students
dbo.tab3
dbo.tab4
dbo.table2
dbo.table3
dbo.test
dbo.test22

```
select ProductID,SalesmanName,sum(quantity) as "Quantities"
from sales
group by ProductID,SalesmanName

select ProductID,SalesmanName,sum(quantity) as "Quantities"
from sales
group by rollup(ProductID,SalesmanName)
```

Results Messages

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	1	NULL	210
5	2	ahmed	70
6	2	ali	90
7	2	khalid	70
8	2	NULL	230
9	3	ahmed	60
10	3	khalid	30
11	3	NULL	90
12	4	ali	170
13	4	khalid	90

Query executed successfully (local) (13.0 RTM) DESKTOP-VF5OP25\Ram (55) ITI 00:00:00 15 rows

```
FROM sales
group by rollup(ProductID,SalesmanName)

select SalesmanName,ProductID,sum(quantity) as "Quantities"
from sales
group by rollup(SalesmanName,ProductID)
```

200 %

Results Messages

	SalesmanName	ProductID	Quantities
1	ahmed	1	35
2	ahmed	2	70
3	ahmed	3	60
4	ahmed	NULL	165
5	ai	1	145
6	ai	2	90
7	ai	4	170
8	ai	NULL	405
9	khalid	1	30
10	khalid	2	70
11	khalid	3	30
12	khalid	4	90
13	khalid	NULL	220
14	NULL	NULL	790

```
from sales
```

```
group by rollup(ProductID, SalesmanName)
```

```
select SalesmanName, ProductID, sum(quantity) as "Quantities"  
from sales  
group by cube(SalesmanName, ProductID)
```

	SalesmanName	ProductID	Quantities
1	ahmed	1	35
2	ali	1	145
3	khalid	1	30
4	NULL	1	210
5	ahmed	2	70
6	ali	2	90
7	khalid	2	70
8	NULL	2	230
9	ahmed	3	60
10	khalid	3	30
11	NULL	3	90
12	ali	4	170
13	khalid	4	90
14	NULL	4	260
15	NULL	NULL	790
16	ahmed	NULL	165
17	ali	NULL	405
18	khalid	NULL	220

```
group by SalesmanName, ProductID  
select SalesmanName, ProductID, sum(quantity) as "Quantities"  
from sales  
group by SalesmanName, ProductID
```

200 %

Results Messages

	SalesmanName	ProductID	Quantities
1	ahmed	1	35
2	ai	1	145
3	khalid	1	30
4	ahmed	2	70
5	ai	2	90
6	khalid	2	70
7	ahmed	3	60
8	khalid	3	30
9	ai	4	170
10	khalid	4	90

Microsoft SQL Server Management Studio

```
- select SalesmanName, ProductID, sum(quantity) as "Quantities"
  from sales
 group by cube(SalesmanName, ProductID)
```

200 %

Results Messages

	SalesmanName	ProductID	Quantities
1	ahmed	1	35
2	ali	1	145
3	khalid	1	30
4	NULL	1	210
5	ahmed	2	70
6	ali	2	90
7	khalid	2	70
8	NULL	2	230
9	ahmed	3	60
10	khalid	3	30
11	NULL	3	90
12	ali	4	170
13	khalid	4	90
14	NULL	4	260
15	NULL	NULL	790
16	ahmed	NULL	165
17	ali	NULL	405
18	khalid	NULL	220

```
select ProductID, SalesmanName, sum(quantity) as "Quantities"
from sales
group by rollup(ProductID, SalesmanName)
```

```
select SalesmanName, ProductID, sum(quantity) as "Quantities"
```

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	1	NULL	210
5	2	ahmed	70
6	2	ali	90
7	2	khalid	70
8	2	NULL	230
9	3	ahmed	60
10	3	khalid	30
11	3	NULL	90
12	4	ali	170
13	4	khalid	90
14	4	NULL	260
15	NULL	NULL	790

```
select ProductID, SalesmanName, sum(quantity) as "Quantities"
from sales
group by rollup(ProductID, SalesmanName)
```

```
select SalesmanName, ProductID, sum(quantity) as "Quantities"
```

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	1	NULL	210
5	2	ahmed	70
6	2	ali	90
7	2	khalid	70
8	2	NULL	230
9	3	ahmed	60
10	3	khalid	30
11	3	NULL	90
12	4	ali	170
13	4	khalid	90
14	4	NULL	260
15	NULL	NULL	790

```
--Pivot and Unpivot  
--if u have the result  
select ProductID,SalesmanName  
from sales  
group by SalesmanName
```

```
SELECT *
```

200 % 41

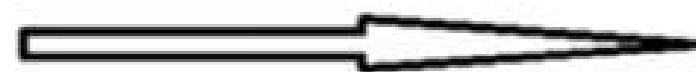
Results Messages

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	2	ahmed	70
5	2	ali	90
6	2	khalid	70
7	3	ahmed	60
8	3	khalid	30
9	4	ali	170
10	4	khalid	90

Clipboard Image Tools Brushes Shapes Size Colours Edit with Paint 3D Product alert



Tools



Pid	ahmed	ali	khalid
1	35	145	30
2	70	90	70
3	---	---	--
4	---	----	----

```
from sales
group by SalesmanName, ProductID

SELECT *
FROM sales
PIVOT (SUM(Quantity) FOR SalesmanName IN ([Ahmed],[Khalid])) as PVT

select * from newtable
```

200 %

Results Messages

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	2	ahmed	70
5	2	ali	90
6	2	khalid	70
7	3	ahmed	60
8	3	khalid	30
9	4	ali	170
10	4	khalid	90

```
select ProductID,SalesmanName,sum(quantity) as "Quantities"
from sales
group by SalesmanName,ProductID

SELECT *
FROM sales
PIVOT (SUM(Quantity) FOR SalesmanName IN ([Ahmed],[Khalid])) as PVT
```

200 % 4

Results Messages

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	2	ahmed	70
5	2	ali	90
6	2	khalid	70
7	3	ahmed	60
8	3	khalid	30
9	4	ali	170
10	4	khalid	90

```
select ProductID, SalesmanName, sum(quantity) as "Quantities"
from sales
group by SalesmanName, ProductID
```

```
SELECT *
FROM sales
PIVOT (SUM(Quantity) FOR SalesmanName IN ([Ahmed],[Khalid],[ali])) as PVT
```

200 %

Results Messages

	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khalid	30
4	2	ahmed	70
5	2	ali	90
6	2	khalid	70
7	3	ahmed	60
8	3	khalid	30
9	4	ali	170

	ProductID	Ahmed	Khalid	ali
1	1	35	30	145
2	2	70	70	90
3	3	60	30	NULL
4	4	NULL	50	170

```
from sales
group by grouping sets(ProductID,SalesmanName)
order by SalesmanName
```

-----Pivot and Unpivot OLAP

--if u have the result of the previous query

```
select ProductID,SalesmanName,sum(quantity) as "Quantities"
```

Results Messages

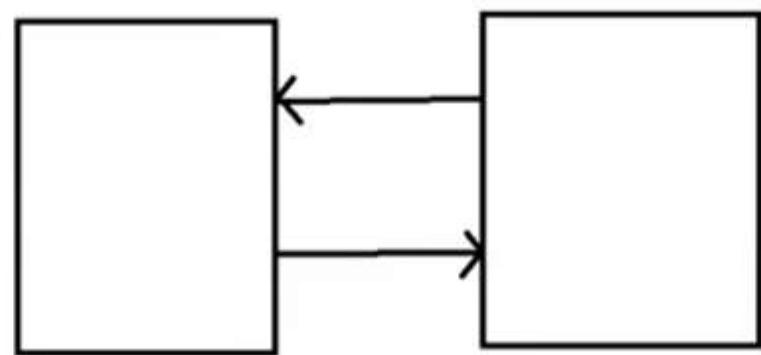
	ProductID	SalesmanName	Quantities
1	1	ahmed	35
2	1	ali	145
3	1	khald	30
4	2	ahmed	70
5	2	ali	90
6	2	khald	70
7	3	ahmed	60
8	3	khald	30
9	4	ali	170

	ProductID	Ahmed	Khald	ali
1	1	35	30	145
2	2	70	70	90
3	3	60	30	NULL
4	4	NULL	90	170

View

View

- > is a select Statement
- >Specify user View of data
- >hide DB Objects
- >Limit access of data
- >Simplify Construction of complex queries
- >has no Parameter
- >has no DML queries inside its body
- >standard view can be considered as Virtual table
- Only index view can increase Performance



Types of views:

- Standard View
- Partitioned View
- Indexed View

View

- > is a select Statement
- >Specify user View of data
- >hide DB Objects
- >Limit access of data
- >Simplify Construction of complex queries
- >has no Parameter
- >has no DML queries inside its body
- >standard view can be considered as Virtual table
- Only index view can increase Performance

Types of views:

- Standard View
- Partitioned View
- Indexed View

View

Standard view

Select *
from Vcairo

```
Create view Vcairo  
as  
select id,name,address  
from student  
where address='cairo'
```

```
Create view Valex  
as  
select id,name  
from student  
where address='alex'
```

Vcairo
Valex

DB

Query
resultset

layer
view

Application

View

- > is a select Statement
 - >Specify user View of data
 - >hide DB Objects
 - >Limit access of data
 - >**Simplify Construction of complex queries**
 - >has no Parameter
 - >has no DML queries inside its body
 - >**standard view can be considered as Virtual table**
- Only index view can increase Performance

Types of views:

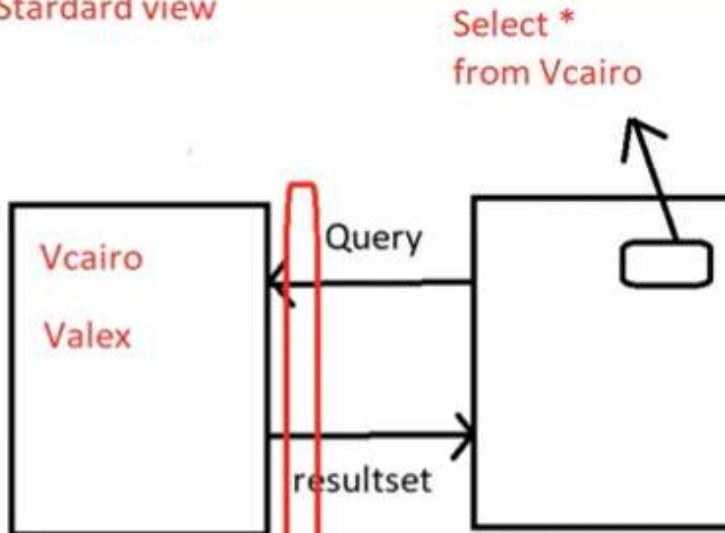
- Standard View
- Partitioned View
- Indexed View

View

Create view VStuds

```
as  
select *  
from Mans_Server.itl.dbo.students  
union all
```

Standard view



Select *
from Vcairo

Application

DB

layer
view

Activate Windows

View

- > is a select Statement
- >Specify user View of data
- >hide DB Objects
- >Limit access of data
- >**Simplify Construction of complex queries**
- >has no Parameter
- >has no DML queries inside its body
- >**standard view can be considered as Virtual table**

--Only index view can increase Performance

Types of views:

- Standard View
- Partitioned View
- Indexed View

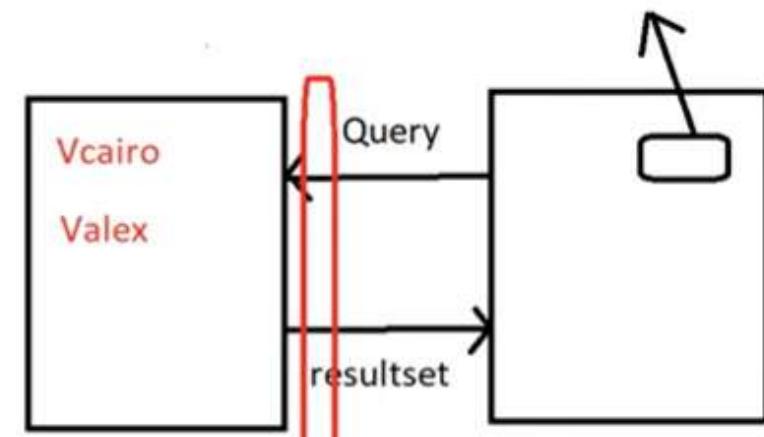
View

Create view VStuds

```
as  
select *  
from Mans_Server.itl.dbo.students  
union all
```

Standard view

Select *
from Vcairo



Application

Activate Windows
Genuine Software License Identifier: F8C9-4A8E-8D9B-4A8E-8D9B-4A8E-8D9B-4A8E-8D9B-4A8E

View

- > is a select Statement
- >Specify user View of data
- >hide DB Objects
- >Limit access of data
- >**Simplify Construction of complex queries**
- >has no Parameter
- >has no DML queries inside its body
- >**standard view can be considered as Virtual table**
- >**Only index view can increase Performance**

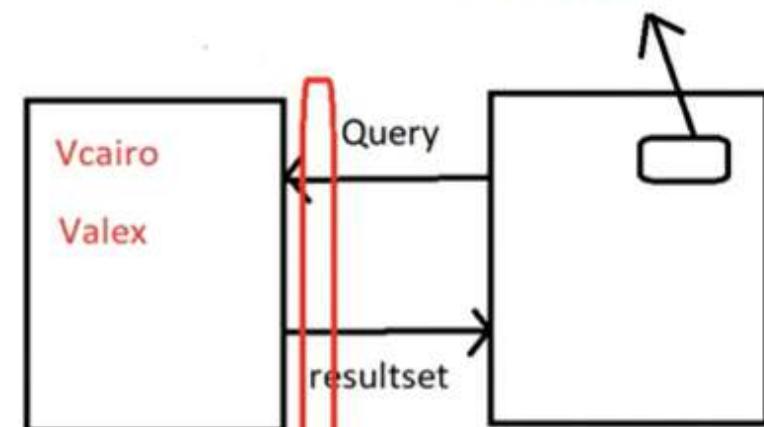
Types of views:

- Standard View
- Partitioned View
- Indexed View

View

Standard view

Select *
from Vcairo



```
Create view VStuds  
as  
select *  
from Mans_Server.itl.dbo.students  
union all  
Select *  
From SohagServer.itl2.HR.studs
```

```
declare @t table(x int)
insert into @t values(1)
select * from @t
```

--views

```
Create view Vstud
```

```
as
```

```
Select *
```

Select *

from student

Create view Vstuds

as

Select *

from student

```
select * from Vstuds
```

```
create view Vcairo
```

```
as
```

```
Select st_id,st_fname,st_address  
from Student  
where st_address='cairo'
```

```
create view Vcairo
```

```
as
```

```
Select st_id,st_fname,st_address  
from Student  
where st_address='cairo'
```

```
select * from vcairo
```

```
select st_fname from vcairo    I
```

```
alter view Vcairo(sid,sname,sadd)
as
Select st_id,st_fname,st_address
from Student
where st_address='cairo'
```

```
select * from vcairo
```

```
select st_fname from vcairo
```

```
select * from vcairo
```

```
select sname from vcairo
```

```
alter view Valex(sid,sname,sadd)
```

```
as
```

```
Select st_id,st_fname,st_address  
from Student  
where st_address='alex'
```

```
select sname from vcairo
```

```
create view Valex(sid,sname,sadd)
```

```
as
```

```
Select st_id,st_fname,st_address  
from Student  
where st_address='alex'
```

```
select * from valex
```

```
select * from valex
```

```
create view Vall
```

```
as
```

```
select * from vcairo
```

```
union all
```

```
select * from valex
```

```
alter schema hr transfer vall
```

```
create view Vjoin
```

```
as
```

```
select st_id,st_fname,d.dept_id,dept_name  
from student S inner join department d  
on d.dept_id=s.dept_id
```

```
select * from vjoin
```

ALTER SCHEMA III TRIGGER VAL

```
alter view Vjoin(sid,sname,did,dname)
as
select st_id,st_fname,d.dept_id,dept_name
from student S inner join department d
on d.dept_id=s.dept_id
```

select * from vjoin

select sname,dname from vjoin

```
select * from vjoin  
select sname, dname from vjoin
```

```
create view vgrades  
as  
select sname, dname, grade  
from vjoin v inner join Stud_Course sc  
on v.sid=sc.St_Id
```

```
select |
```

```
SELECT Sname, fname, mname FROM STUDENT
```

create view vgrades

as

```
select sname, dname, grade
```

```
from vjoin v inner join Stud_Course sc  
on v.sid=sc.St_Id
```

select * from grades

```
sp_helptext 'vjoin'
```

```
alter view Vjoin(sid,sname,did,dname)
with encryption
as
select st_id,st_fname,d.dept_id,dept_name
from student S inner join department d
    on d.dept_id=s.dept_id
```

```
I
select * from vjoin
```

```
select sname,dname from vjoin
```

```
[-] select * from grades
```

```
sp_helptext 'vjoin'
```

```
[-] --DML
```

```
-----View One
```

```
[-] insert into vcairo
```

```
values(321, 'ali', 'cairo') I
```

```
alter view Vcairo(sid,sname,sadd)
as
Select st_id,st_fname,st_address
from Student
where st_address='cairo'
```

```
insert into vcairo
values(321,'ali','cairo')
```

--Multi tabl

--DML

-----View One table

```
alter view Vcairo(sid,sname,sadd)
```

```
as
```

```
    Select st_id,st_fname,st_address  
    from Student  
    where st_address='cairo'
```

```
insert into vcairo
```

```
values(321,'ali','cairo')
```

--DML

-----View One table

```
alter view Vcairo(sid,sname,sadd)
as
Select st_id,st_fname,st_address
from Student
where st_address='cairo'
```

```
insert into vcairo
values(321,'ali','cairo')
```

```
alter view Vcairo(sid,sname,sadd)
as
    Select st_id,st_fname,st_address
    from Student
    where st_address='cairo'

insert into vcairo
values(321,'ali','cairo')

select * from vcairo
```

--Multi tables

```
alter view Vjoin(sid,sname,did,dname)
with encryption
as
select st_id,st_fname,d.dept_id,dept_name
from student S inner join department d
on d.dept_id=s.dept_id
```

--Delete XXXXXXXXXXXXXXXX

--insert update

insert into

```
on d.dept_id=s.dept_id
```

```
--Delete XXXXXXXXXXXXXXXX
```

```
--insert update
```

```
insert into vjoin
```

```
values(21, 'nada', 700, 'Cloud')
```

```
insert into vjoin(sid, sname)
```

```
values(21, 'nada')
```

--Delete XXXXXXXXXXXXXXXXX

--insert update

insert into vjoin

values(21, 'nada', 700, 'Cloud')

insert into vjoin(sid, sname)

values(21, 'nada')

--indexed view

I

```
--indexed view
```

```
create view vdata  
with schemabinding  
as
```

```
select ins_name,salary  
from dbo.Instructor  
where dept_id=10
```

I

```
alter
```

```
create view vdata
with schemabinding
as
    select ins_name,salary
    from dbo.Instructor
    where dept_id=10

alter table instructor alter column ins_degree varchar(50)
alter table instructor alter column ins_name varchar(100)
```

```
where dept_id=10  
  
alter table instructor alter column ins_degree varchar(50)  
alter table instructor alter column ins_name varchar(100)
```

--index
--temp tables
--pivot
--view
--merge

```
- alter view Vcairo(sid,sname,sadd)
as
  Select st_id,st_fname,st_address
  from Student
  where st_address='cairo'
  with check option
```

```
- insert into vcairo
  values(321,'ali','cairo')
```

```
- insert into vcairo
```

```
alter view Vcairo(sid,sname,sadd)
```

```
as
```

```
    Select st_id,st_fname,st_address  
    from Student  
    where st_address='cairo'  
    with check option
```

```
I
```

```
insert into vcairo
```

```
values(3210,'ali','cairo')
```

```
insert into vcairo
```

```
Merge into LastTrasaction as T  
    subquery  
using (Daily Transaction) as S
```

On T.id = S.did

when Matched and S.dval>T.myvalues then //1

```
    update  
        Set T.myvalue=S.dval
```

When Not Matched by target then //10

```
    insert  
        values(S.did,S.dname,s.dval)
```

when not Matched by Source then //3,4
Delete;

LastTransaction

Taret

id	name	myvalue
1	ahmed	4000 9000
2	ali	2000
3	omar	6000
4	eman	7000
10	nada	3000

DailyTransaction

Source

did	dname	dval
1	ahmed	9000
2	ali	1000
10	nada	3000



Activate Windows

```
alter view Vcairo(sid,sname,sadd)
as
Select st_id,st_fname,st_address
from Student
where st_address='cairo'
with check option
```

```
insert into vcairo
values(3210,'ali','cairo')
```

```
insert into vcairo
```

Merge into LastTrasaction as T
using (Daily Transaction) as S

On T.id = S.did

when Matched and S.dval>T.myvalues then //1

update
Set T.myvalue=S.dval

When Not Matched by target then

insert
values(S.did,S.dname,s.dval)

when not Matched by Source then
Delete;

//1

//10

//3,4

LastTransaction

Taret

id	name	myvalue
1	ahmed	4000
2	ali	2000
3	omar	6000
4	eman	7000
10	nada	3000

DailyTransaction

Source

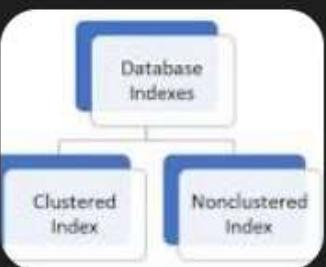
did	dname	dval
1	ahmed	9000
2	ali	1000
10	nada	3000

difference between clustered and nonclustered index

All Images Videos Short videos Forums Web News More ▾

AI Overview

The key difference between clustered and non-clustered indexes lies in how they affect the physical storage of data. A clustered index determines the physical order of data rows in a table, while a non-clustered index creates a separate structure that points to the data rows. This distinction impacts performance characteristics for different types of queries.



Here's a more detailed breakdown:

Clustered Index:

- **Physical Order:** The data rows in the table are physically stored in the order of the clustered index key.
- **One per Table:** Only one clustered index can exist on a table.
- **Primary Key:** Often, the primary key is also the clustered index.
- **Performance:** Efficient for range-based queries and sorting, as data is physically organized for those operations.
- **Example:** A table storing customer information might have a clustered index on CustomerID to quickly retrieve customers by ID or to sort them by ID.

Stored Procedures & Triggers

Query ---> Parsing ---> optimize ----> Query Tree ---> Execution Plan
(syntax) (Metadata)

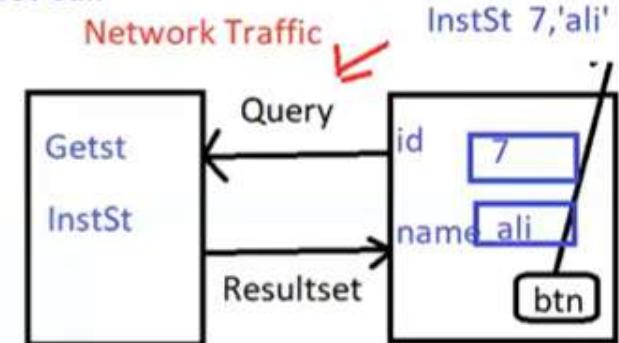
From
where
Select

Memory

Create Procedure GetSt @id int
as
Select *
From Student
where id=@id

Create Proc InstSt @id int,@name varchar(20)
as
insert into student(id,name)
values(@id,@name)

First Call



DB

Application



Stored Procedures & Triggers

Query ---> Parsing ---> optimize
(syntax) (Metadata) -----> Query Tree ---> Execution Plan

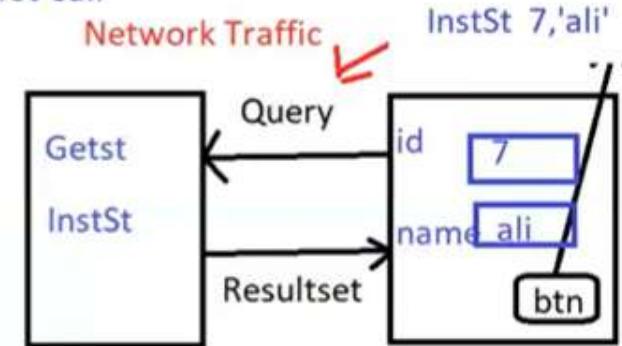
From
where
Select

Memory

Create Procedure GetSt @id int
as
Select *
From Student
where id=@id 4

Create Proc InstSt @id int,@name varchar(20)
as
insert into student(id,name)
values(@id,@name)

First Call



DB

Application

Stored Procedures & Triggers

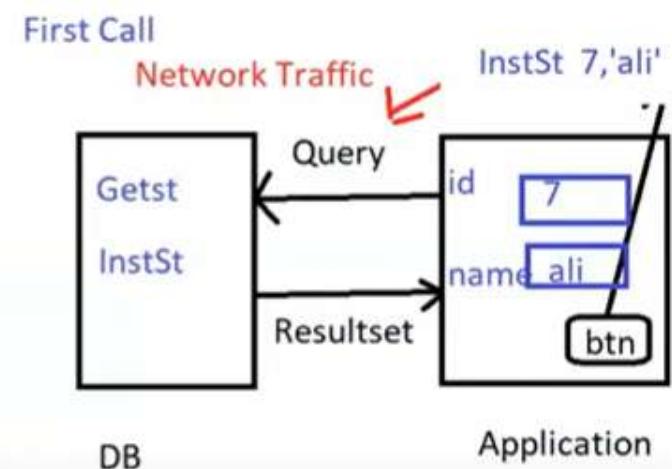
Query ---> Parsing ---> optimize ----> Query Tree ---> Execution Plan
(syntax) (Metadata)

From
where
Select

Memory

Create Procedure GetSt @id int
as
Select *
From Student
where id=@id 4

Create Proc InstSt @id int,@name varchar(20)
as
if not exists(select id from student where id=@id)
insert into student(id,name)
values(@id,@name)
else
select 'Duplicate ID'



Stored Procedures & Triggers

Query ---> Parsing ---> optimize ---> Query Tree ---> Execution Plan
(syntax) (Metadata)

From
where
Select

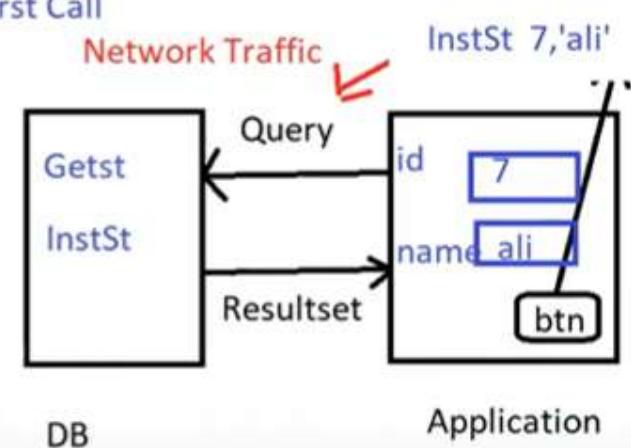
Memory

Create Procedure GetSt @id int
as
Select *
From Student
where id=@id 4

Create Proc InstSt @id int,@name varchar(20)
as
if not exists(select id from student where id=@id)
insert into student(id,name)
values(@id,@name)
else
select 'Duplicate ID'

First Call

Network Traffic



-- 3 types of SP

-- 1 built in SP

`sp_bindrule`

`sp_unbindrule`

`sp_helpconstraint`

`sp_rename`

`sp_addtype`

-- User Defined SP

--2) User Defined SP

```
Select *
from student
```

```
create proc Getst
```

```
as
```

```
select *
from Student
```

```
Getst
```

```
execute Getst
```

```
create proc GetStbyAddress @add varchar(20)
```

```
as
```

```
select st_id,st_fname,st_address
```

```
from Student
```

```
where st_address=@add
```

```
create proc GetStbyAddress @add varchar(20)
as
    select st_id,st_fname,st_address
    from Student
    where st_address=@add
```

```
GetStbyAddress 'alex'
```

```
from Student  
where st_address=@add
```

GetStbyAddress 'alex'

```
delete from Student where st_id=1
```

```
- insert into Student(st_id,st_fname)  
values(663,'ali')
```

```
-insert into Student(st_id,st_fname)
values(663,'ali')

create proc InstSt @id int,@name varchar(20)
as
    insert into Student(st_id,st_fname)
values(@id,@name)
```

```
values(663,'ali')
```

```
create proc InstSt @id int,@name varchar(20)  
as
```

```
    insert into Student(st_id,st_fname)  
    values(@id,@name)
```

```
InstSt 44,'ali'
```

```
alter proc InstSt @id int ,@name varchar(20)
as
begin try
    insert into Student(st_id,st_fname)
    values(@id,@name)
end try
begin catch
    Select 'Error'
end catch
```

InstSt 44, 'ali'

- create proc Sumdata @x int,@y int
as
- Select @x+@y

- Sumdata 3,9 ---calling parameter by position

- Sumdata @y=9,@x=4 -- calling param by Name

```
alter proc Sumdata @x int=100,@y int=100
as
    Select @x+@y

Sumdata 3,9      ---calling parameter by position
Sumdata @y=9,@x=4      -- calling parameter by Name
Sumdata 3
Sumdata
--3)Trigger
```

Sumdata

```
create proc GetStbyAge @age1 int,@age2 int
AS
select st_id,st_fname
from Student
where st_age between @age1 and @age2
```

AS

```
select st_id,st_fname  
from Student  
where st_age between @age1 and @age2
```

```
insert into tab4  
execute GetstbyAge 23,28
```

```
insert into tab4(st_id,st_fname)
execute GetstbyAge 23,28
```

```
declare @t table(x int,y varchar(20))
insert into @t
execute GetstbyAge 23,28
select count(*) from @t
```

```
>Create Proc Getdata @id int  
as  
    declare @age int  
        Select @age=st_age  
        from Student  
        where st_id=@id  
    return @age
```

```
declare
```

```
>Create Proc Getdata @id int  
as  
    declare @age int  
        Select @age=st_age  
        from Student  
        where st_id=@id  
    return @age
```

```
declare
```

```
|- Create Proc Getdata @id int  
as  
    declare @age int  
        Select @age=st_age  
        from Student  
        where st_id=@id  
    return @age
```

```
|  
|  
|  
|  
|  
|  
|  
|  
|  
|  
|  
|  
|  
  
declare @x int  
Set @x=execute Getdata 3  
select @x
```

```
declare @x int
execute Getdata 3,@x output
select @x

alter Proc Getdata @id int,@age int output,@name varchar(20) output
as
begin
    Select @age=st_age,@name=st_fname
    from Student
    where st_id=@id
end

declare @x int
execute Getdata 3,@x output
select @x
```

```
- alter Proc Getdata @id int,@age int output,@name varchar(20) output
as
  Select @age=st_age,@name=st_fname
  from Student
  where st_id=@id

declare @x int,@y varchar(20)
execute Getdata 3,@x output,@y output
select @x,@y
```

```
select age-st_id, name-st_name  
from Student  
where st_id=@age
```

```
declare @x int=6,@y varchar(20)  
execute Getmydata @x output,@y output  
select @x,@y
```

```
create proc getalldata @col varchar(20),@tab varchar(20)  
as  
Select @col from @tab
```

```
-----  
select @x,@y  
  
create proc getalldata @col varchar(20),@tab varchar(20)  
as  
    execute('Select '+@col+' from '+@tab)  
  
getalldata 'ins_name','instructor'
```

```
-----  
alter Proc Getmydata @age int output,@name varchar(20) output  
with encryption  
as  
    Select @age=st_age,@name=st_fname  
    from Student  
    where st_id=@age  
    |  
    sp_helptext 'getmydata'  
  
declare @x int=6,@y varchar(20)  
execute Getmydata @x output,@y output  
select @x,@y
```

```
declare @x int,@y varchar(20)
execute Getdata 6,@x output,@y output
select @x,@y
-----
alter Proc Getmydata @age int output,@name varchar(20) output
with encryption
as
    Select @age=st_age,@name=st_fname
    from Student
    where st_id=@age

sp_helptext 'getmydata'
```

```
getalldata 'ins_name', 'instructor'
```

```
--3)Trigger
```

```
--Can't call
```

```
--can't Send parameter
```

```
--triggers on Table
```

```
--insert update delete
```

```
insert into Student(st_id,st_fname)  
values(777,'ali')
```

```
create
```

```
insert into Student(st_id,st_fname)  
values(777,'ali')
```

```
create trigger t1  
on student  
after insert  
as  
select "welcome to ITI"
```

```
create trigger t2  
on student  
for update  
as
```

```
select getdate()
```

```
update Student  
set st_age+=1
```

```
create trigger
```

```
update Student  
    set st_age+=1
```

```
create trigger t3  
on student  
instead of delete  
as  
    select 'Not allowed for user= '+user_name()
```

```
delete from Student where st_id=779
```

```
delete from Student where st_id=779
```

```
create trigger t4
on department
instead of insert,update,delete
as
    select 'not allowed'
```

```
update Department
Set dept_name='Cloud'
where Dept_Id=40
```

```
alter trigger sales.t7
on sales.student
after update
as
if update(name)
    select 'hi'

update sales.student
set name='ahmed'
where id=7
```

```
on department  
instead of insert,update,delete  
as
```

```
select 'not allowed'
```

```
update Department  
Set dept_name='Cloud'  
where Dept_Id=5000
```

```
drop trigger t4
```

```
alter table department disable trigger t4
```

```
on department  
instead of insert,update,delete  
as
```

```
select 'not allowed'
```

```
update Department  
    Set dept_name='Cloud'  
where Dept_Id=5000
```

```
drop trigger t4
```

```
alter table department disable trigger t4
```

```
alter trigger sales.t7
on sales.student
after update
as
    if update(name)
        select 'hi'

update sales.student
set name='ahmed'
where id=7
```

```
alter trigger sales.t7
on sales.student
after update
as
if update(name)
    select 'hi'

update sales.student
set name='ahmed'
where id=7
```

```
alter trigger sales.t7  
on sales.student  
after update  
as  
if update(name)  
select 'hi'  
  
update sales.student  
set name='ahmed'  
where id=7
```

Would you like to update this login?

magi

 Show password

Update

Don't Update



Outlook

User name:

magi

Password:

Sign in

Outlook

Type here to search Entire Mailbox

Mail Options Sign out

New Message Move Delete Junk

Mail Calendar Contacts Deleted Items (1224) Drafts (11) **Inbox (69)** Junk E-mail Sent Items Click to view all folders Manage Folders...

From Subject Received Size

Hany Safwat Lab... Fw: Qena Training Manager Vacanc... 11/29/2020 12:36 PM 319 KB

ITI_Public_Relat... communication unit announcement 11/29/2020 11:01 AM 493 KB

Communication Un... 11/29/2020 9:42 AM 147 KB

TAKAFUL 11/26/2020 1:32 PM 14 KB

ITI-AdminAffar 11/26/2020 9:52 AM 11 KB

Esmal Mohammed ... 11/25/2020 9:00 AM 20 KB

Basma Hussein Re: FW: Capacity Building progra... 11/24/2020 1:31 AM 68 KB

Hany Safwat Lab... Fw: Capacity Building program 11/23/2020 5:39 PM 2 MB

Hr_Training ITI@4 Foundation 11/23/2020 1:01 PM 98 KB

Hr_Training ITI@4 Foundation 11/23/2020 12:41 PM 37 KB

Quarantine@ants... Quarantine Summary: [3 message(s)... 11/23/2020 7:00 AM 36 KB

Quarantine@ants... ITI-sdm:1688 Monthly evaluation 11/22/2020 4:17 PM 17 KB

Quarantine@ants... ITI-sdm:1687 November Hours 11/22/2020 3:51 PM 17 KB

ITI_Public_Relat... Untitled Message 11/22/2020 2:02 PM 8 KB

Quarantine@ants... ITI-sdm:1686 Fwd: Soft Skills sc... 11/22/2020 12:11 PM 16 KB

Public Relation 11/21/2020 3:26 PM 11 KB

ITI_Public_Relat... تتعديل عزيز 11/21/2020 2:04 PM 16 KB

Public Relation 11/21/2020 12:02 PM 13 KB

ITI_Public_Relat... 11/21/2020 2:51 AM 15 KB

ITI_Public_Relat... 11/21/2020 1:38 AM 12 KB

SQL Day9 014859

T

Activate Windows

Go to Settings to activate Windows.

Connected to Microsoft Exchange

```
update sales.student  
    set name='ahmed'  
where id=7
```

```
create trigger t5  
on course  
after update  
as  
    select * from inserted  
    select * from deleted
```

```
create trigger t5
on course
after update
as
    select * from inserted
    select * from deleted
```



```
update course
    set crs_name='Cloud', crs_duration=45
where crs_id=100
```

```
-update course  
    set crs_name='Cloud',crs_duration=45  
where crs_id=100
```

```
-create trigger t7  
on student  
instead of delete  
as  
    select st_fname from deleted
```

```
delete from Student  
where st_
```

The screenshot shows a database interface with a command history and a dropdown menu.

Messages: FIRST_VALUE, HOST_ID, HOST_NAME, LAST_VALUE, St_Address, St_Age, St_Fname, St_Id, St_Lname

Command (s): St_

Dropdown Menu: The dropdown menu is open over the command input field. It contains the following items:

- St_
- FIRST_VALUE
- HOST_ID
- HOST_NAME
- LAST_VALUE
- St_Address
- St_Age
- St_Fname
- St_Id
- St_Lname

```
create trigger t8
on course
after update
as
    select crs_name from deleted

update course
    set crs_name='Cloud',crs_duration=45
where crs_id=200
```

```
- update course
    set crs_name='html5',crs_duration=40,top_id=1
where crs_id=900
```

```
- update course
    set crs_name='oop',@x=crs_name
where crs_id=100
```

I

```
- create trigger t7
on student
```

```
update course  
    set crs_name='Cloud',crs_duration=45  
where crs_id=300
```

```
create trigger t9  
on course  
after delete  
as  
if format(getdate(), 'dddd')='friday'  
begin  
    select|
```

```
create trigger t9
on course
after delete
as
if format(getdate(), 'ddd')='friday'
begin
    select 'not delete'
    -- rollback
    insert into course
    select * from deleted
end
```

```
create trigger t9
on course
after delete
as
if format(getdate(), 'dddd')='friday'
begin
    select 'not delete'
    --rollback
    insert into course
    select * from deleted
end
```

```
        end

create trigger t9
on course
instead of delete
as
if format(getdate(), 'dddd')!="friday"
begin
    delete from course where crs_id =(select crs_id from deleted)
end
```

```
create trigger t9
on course
after delete
as
    if format(getdate(), 'dddd')='friday'
        begin
            select 'not delete'
            --rollback
            insert into course
            select * from deleted
        end
```

```
create trigger t10
on topic
instead of update
as
if update(top_id)
begin
declare @new int,@old int
select @old=top_id from deleted
select @new=top_id from inserted
insert into history
values(suser_name(),getdate(),@old,@new)
end
```

```
        delete from course where crs_id =(select crs_id from deleted)
    end
```

```
create table history
```

```
(  
    _User varchar(20),  
    _date date,  
    _oldid int,  
    _Newid int  
)
```

```
create trigger t10  
on topic
```

```
- create trigger t10
on topic
instead of update
as
    if update(top_id)
        begin
            declare @new int,@old int
            select @old=top_id from deleted
            select @new=top_id from inserted
            insert into history
            values(suser_name(),getdate(),@old,@new)
        end
```

```
as
```

```
if update(top_id)
begin
declare @new int,@old int
select @old=top_id from deleted
select @new=top_id from inserted
insert into history
values(suser_name(),getdate(),@old,@new)
end
```

```
--output I
```

```
delete from student
```

student

Student

students

Messages

```
declare @new int,@old int  
select @old=top_id from deleted  
select @new=top_id from inserted  
insert into history  
values(suser_name(),getdate(),@old,@new)  
end
```

--output

```
delete from student  
output getdate(),deleted.st_fname  
where st_id=44
```

```
delete from student  
output getdate(),deleted.st_fname  
where st_id=21
```

```
- delete from student  
output getdate(), deleted.st_fname  
where st_id=21
```

```
- update Student  
    set st_fname='ali'  
output suser_name(), inserted.st_age  
where st_id=1
```

```
- update Student  
    set st_fname='ali'  
output suser_name(), inserted.st_age into history  
where st_id=1
```

```
set st_tname='ali'  
output suser_name(),inserted.st_age  
where st_id=1
```

```
update Student  
    set st_fname='ali'  
output suser_name(),inserted.st_age  into history  
where st_id=1
```

```
insert into student(st_id,st_fname)  
output 'welcome to iti'  
values(444,'ali')
```

```
insert into student(st_id,st_fname)
output 'welcome to iti'
values(444,'ali')
```

```
-----  
select *
from Student
for XML raw
```

```
4 <row St_Id="1" St_Fname="ali" St_Lname="Hassan" " St_Address="Cairo" St_Age="26" Dept_+  
5 <row St_Id="2" St_Fname="Amr" St_Lname="Magdy" " St_Address="Cairo" St_Age="27" Dept_-  
6 <row St_Id="3" St_Fname="Mona" St_Lname="Saleh" " St_Address="Cairo" St_Age="28" Dept.  
7 <row St_Id="4" St_Fname="Ahmed" St_Lname="Mohamed" " St_Address="Alex" St_Age="30" Dept.  
8 <row St_Id="5" St_Lname="Mohamed" " St_Address="Alex" St_Age="30" Dept_Id="10" St_super:  
9 <row St_Id="6" St_Fname="Heba" St_Lname="Farouk" " St_Address="Mansoura" St_Age="31" D  
10 <row St_Id="7" St_Fname="ali" St_Lname="Hussien" " St_Address="Cairo" St_Age="31" Dept_+  
11 <row St_Id="8" St_Fname="Mohamed" St_Lname="Fars" " St_Address="Alex" St_Age="34" De  
12 <row St_Id="9" St_Fname="Saly" St_Lname="Ahmed" " St_Address="Mansoura" St_Age="30" D  
13 <row St_Id="10" St_Address="Alex" St_Age="30" Dept_Id="30" St_super="9" />  
14 <row St_Id="11" St_Fname="Marwa" St_Lname="Ahmed" " St_Address="Cairo" St_Age="30" De  
15 <row St_Id="12" St_Fname="Noha" St_Lname="Omar" " St_Address="Cairo" St_Age="27" Dep  
16 <row St_Id="13" St_Fname="Said" St_Age="36" Dept_Id="30" St_super="12" />  
17 <row St_Id="14" St_Lname="Saleh" " St_Address="Tanta" St_Age="36" Dept_Id="30" />  
18 <row St_Id="20" St_Fname="omar" St_Address="cairo" />  
19 <row St_Id="321" St_Fname="ali" St_Address="cairo" />  
20 <row St_Id="444" St_Fname="ali" />  
21 <row St_Id="663" St_Fname="ali" />  
22 <row St_Id="666" St_Fname="ali" />  
23 <row St_Id="777" St_Fname="ali" />  
24 <row St_Id="779" St_Fname="ali" />  
25 <row St_Id="3210" St_Fname="ali" St_Address="cairo" />
```

```
insert into student(st_id,st_name)
output 'welcome to iti'
values(444,'ali')
```

```
-----  
select *  
from Student  
for XML raw
```

```
select *  
from Student  
for XML raw('student')
```

```
select *  
from Student  
for XML raw('student')
```

```
select *  
from Student  
for XML raw('student'),elements
```

```
select *  
from Student  
for XML raw('student'),elements,Root('ITI_Studs')
```

```
select * from Student  
for xml raw('Student'),ELEMENTS,ROOT  
  
select * from Student  
for xml raw('Student'),ELEMENTS,ROOT('STUDENTS')
```

--how to show null values in xml

170 %

Results

Messages

XML_F52E2B61-1BA1-11d1-B105-00805F49916B

1

<STUDENTS><Student><Id>1</Id><Name>S. Francisco</Name>

```
--The FOR XML clause has four modes to control XML Format:  
--1)RAW  
--Transforms each row in the result set into an XML element
```

- select * from Student
for xml raw
- select * from Student
for xml raw('Student')
- select * from Student

170 %

Results Messages

XML_F52E2B61-1BA1-11d1-B105-000005F49916B

1 <Student><StudentId>1</StudentId>

```
- select * from Student  
for xml raw('Student'),ELEMENTS,ROOT  
  
- select * from Student  
for xml raw('Student'),ELEMENTS,ROOT('STUDENTS')  
  
--how to show null values in xml  
- select * from Student  
for xml raw('Student'),ELEMENTS xsinil,ROOT('STUDENTS')  
  
--RAW mode queries can include aggregated columns and GROUP BY clauses.
```

Results Messages

XML_F52E2B61-1BA1-11d1-B105-00005F45916B

<STUDENTS><Student><#_id>1</#_id><#_Financial_>

```
select * from Student
for xml raw('Student'),ELEMENTS xsinil,ROOT('STUDENTS')

--RAW mode queries can include aggregated columns and GROUP BY clauses.
select * from Student
order by St_Address
for xml raw('Student'),ELEMENTS,ROOT('STUDENTS')

select St_Address,COUNT(st_id) from Student
group by St_Address
for xml raw('Student'),ELEMENTS,ROOT('STUDENTS')
I

--u can only present data as elemets or attributes
--using For XML Path is the solution for representing mixed "elemets and attributes"
```

170 %

Results Messages

XML_F52E2B51-1BA1-11d1-B105-00805F49916B

1 <STUDENTS>http://www.w3.org/2001/XMLSchema-

```
--Provides a simpler way to mix elements and attributes, and to  
--introduce additional nesting for representing complex properties.  
--Easier than Explicit mode
```

```
select st_id "@StudentID",  
      St_Fname "StudentName/FirstName",  
      St_Lname "StudentName/LastName",  
      St_Address "Address"  
from Student
```

	Results	Messages
XML_F52E2B61-1BA1-11d1-B105-00009F49916B		
1	Student>St.Id>St.Id>St.Fname>St.Fname...	

--4) PATH

--Provides a simpler way to mix elements and attributes, and to
--introduce additional nesting for representing complex properties.
--Easier than Explicit mode

```
select st_id "@StudentID",
       St_Fname "StudentName/FirstName",
       St_Lname "StudentName/LastName",
       St_Address "Address"
  from Student
 for xml path('student')
```

Results Messages

XML_F52E2B61-1BA1-11d1-B105-00805F499168

<student><StudentID>1</StudentID><StudentName>First Name</StudentName>

```
</Student>
</Students>'
```

--2)declare document handle
declare @hdocs int

--3)create memory tree
Exec sp_xml_preparedocument @hdocs output, @docs

--4)process document 'read tree from memory'
--OPENXML Creates Result set from XML Document

SELECT *

FROM OPENXML (@hdocs, '//Student') --levels XPATH Code

WITH (StudentID int '@StudentID',
 Address varchar(10) 'Address',
 StudentFirst varchar(10) 'StudentName/First',

170 %

Results Messages

XML_F52E2B61-1BA1-11d1-B105-00005F49916B

1 <student StudentID='1'><StudentName FirstName=''

```
--3)create memory tree
Exec sp_xml_preparedocument @hdocs output, @docs

--4)process document 'read tree from memory'
--OPENXML Creates Result set from XML Document

SELECT *
FROM OPENXML (@hdocs, '//Student') --levels XPATH Code
WITH (StudentID int '@StudentID',
      Address varchar(10) 'Address',
      StudentFirst varchar(10) 'StudentName/First',
      StudentSECOND varchar(10) 'StudentName/Second'
      )

--5)remove memory tree
Exec sp_xml_removedocument @hdocs
```

--Example

170 %

Results Messages

XML_F52E28C1-1BA1-11d1-B1D5-00005F496198

1

student StudentID='1'><StudentName FirstName=''

```
--3)create memory tree
```

```
Exec sp_xml_preparedocument @hdocs output, @docs
```

```
---4)process document 'read tree from memory'
```

```
--OPENXML Creates Result set from XML Document
```

```
SELECT *
```

```
FROM OPENXML (@hdocs, '//Student') --levels XPATH Code
```

```
WITH (StudentID int '@StudentID',
```

```
Address varchar(10) 'Address',
```

```
StudentFirst varchar(10) 'StudentName/First',
```

```
StudentSECOND varchar(10) 'StudentName/Second'
```

```
--3)create memory tree
Exec sp_xml_preparedocument @hdocs output, @docs

--4)process document 'read tree from memory'
--OPENXML Creates Result set from XML Document

SELECT *
FROM OPENXML (@hdocs, '//Student') --levels XPATH Code
WITH (ID int '@StudentID',
      Addr varchar(10) 'Address',
      SFirst varchar(10) 'StudentName/First',
      StSECOND varchar(10) 'StudentName/Second'
      )

--5)remove memory tree
Exec sp_xml_removedocument @hdocs
-----  
--Example
```

```
SELECT * into ITIStuds
FROM OPENXML (@hdocs, '//Student') --levels XPATH Code
WITH (ID int '@StudentID',
      Addr varchar(10) 'Address',
      SFirst varchar(10) 'StudentName/First',
      StSECOND varchar(10) 'StudentName/Second'
      )
--5)remove memory tree
Exec sp_xml_removedocument @hdocs
```

```
SELECT  
from Student  
for XML raw('student')
```

```
select *  
from Student  
for XML raw('student'),elements
```

```
select *  
from Student  
for XML raw('student'),elements,Root('ITI_Studs')
```

SQL Day10

2020-11-30 07:02 UTC

Recorded by

rnagi

Organized by

rnagi

Channel

General



0:00 / 3:19:50

10 Database Backup & Restores, Mirroring, Jobs, SQL CLR

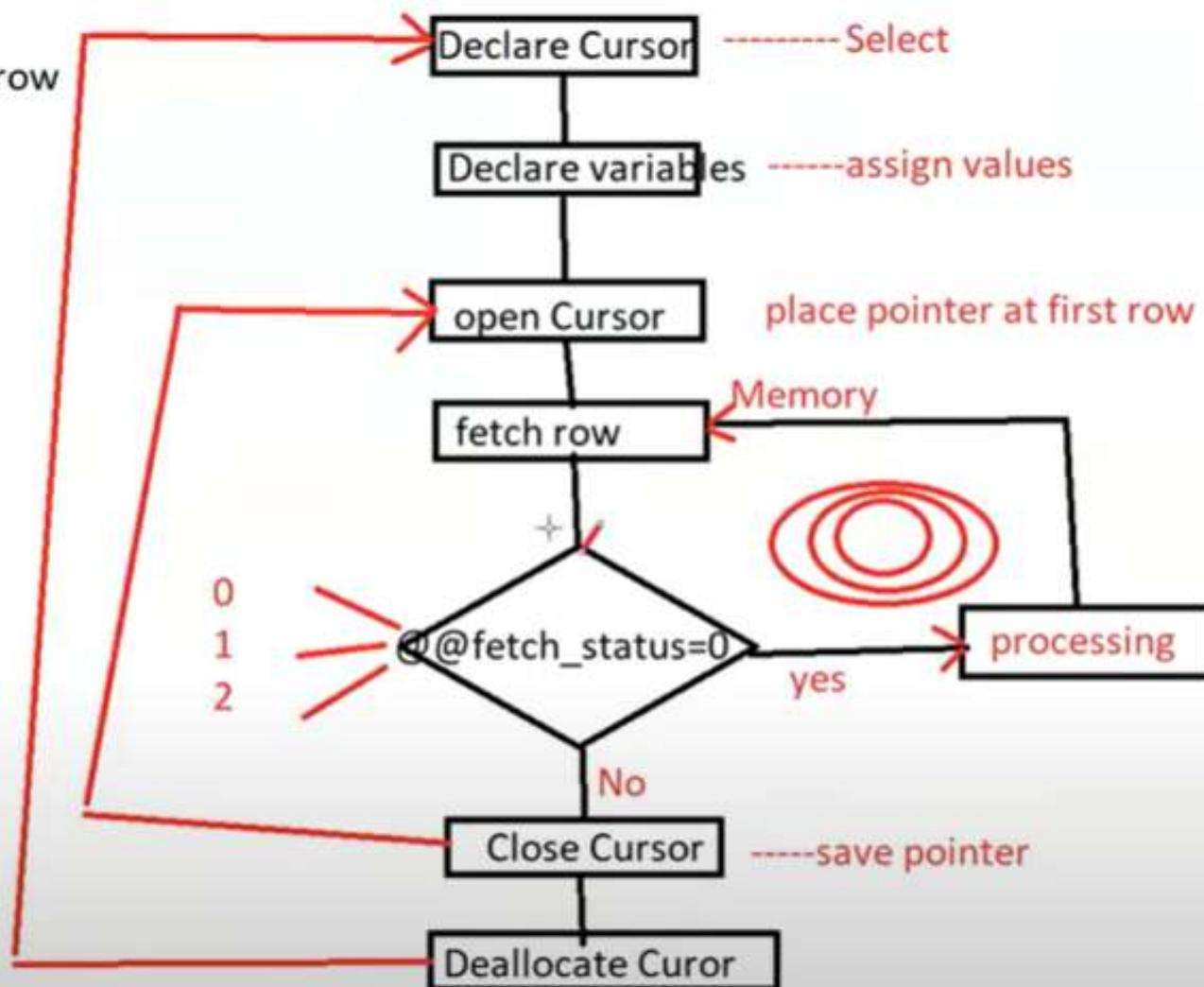
Cursor

how to deal with Resultset row by row

For loop for rows

eid	ename	age
4	ahmed	22
5	ali	27
6	omar	24
7	eman	25

```
Select *\nfrom emp\nwhere age>20
```



```
Select st_id,st_fname  
from Student  
where st_address='cairo'
```

I

```
declare c1 Cursor  
for Select st_id,st_fname  
      from Student  
      where st_address='cairo'  
for read only           --update
```

```
declare c1 Cursor  
for Select st_id,st_fname  
      from Student  
      where st_address='cairo'  
for read only      --update
```

```
declare @id int,@name varchar(20)  
open c1  
fetch c1 into @id,@name
```

4. execute static ->

```
declare @id int,@name varchar(20)
open c1
fetch c1 into @id,@name
while @@FETCH_STATUS=0
begin
    Select @id,@name
    fetch c1 into @id,@name
end ]
```

```
declare c1 Cursor  
for Select st_id,st_fname  
      from Student  
      where st_address='cairo'  
for read only      --update  
  
declare @id int,@name varchar(20)  
open c1  
fetch c1 into @id,@name  
while @@FETCH_STATUS=0  
begin  
      Select @id,@name  
      fetch c1 into @id,@name  
end  
close c1
```

```
from Student  
where st_address='cairo'  
for read only      --update
```

```
declare @id int,@name varchar(20)  
open c1  
fetch c1 into @id,@name  
while @@FETCH_STATUS=0  
begin  
    Select @id,@name  
    fetch c1 into @id,@name  
end  
close c1  
deallocate c1
```

```
begin
    Select @id,@name
    fetch c1 into @id,@name
end
close c1
deallocate c1
```

```
select st_fname
from student
where st_fname is not NULL
```

```
[1]select st_tname  
      from student  
     where st_fname is not NULL  
  
--One Cell [ahmed,Amr,Mona.....]
```

```
[2]declare c1 Cursor  
[3]for select st_fname  
      from student  
     where st_fname is not NULL  
for rea|
```

--One Cell [ahmed,Amr,Mona.....]

```
declare c1 Cursor  
for select st_fname  
      from student  
     where st_fname is not NULL  
for read only
```

```
declare @name varchar(20),@allnames varchar(300)=''
open c1
fetch c1 into @name
while @@FETCH_STATUS=0
begin
    Set @allnames=Concat(@allnames,',',@name)
    fetch c1 into @name
end
Select @allnames
close c1
deallo
```

```
declare c1 Cursor  
for select st_fname  
      from student  
      where st_fname is not NULL  
for read only  
  
declare @name varchar(20),@allnames varchar(300)=''  
open c1  
fetch c1 into @name  
while @@FETCH_STATUS=0  
begin  
    Set @allnames=Concat(@allnames,',',@name)  
    fetch c1 into @name  
end  
Select @allnames  
close c1  
deallocate c1
```

```
declare c1 cursor  
for Select salary  
      from Instructor  
    for update i
```

```
declare
```

```
declare c1 cursor  
for Select salary  
      from Instructor  
for update |  
  
declare @sal int  
open c1  
fetch c1 into @sal  
while @@FETCH_STATUS=0  
begin  
    if @sal>=3000  
        update Instructor  
            set salary=@s|
```

```
end
```

Results

Messages

(No column name)

Ahmed,Ase,Mona,Al,Mawia,Noha

@@	@@SERVNAME
@@	@@SERVICENAME
@@	@@SPID
@@	@sal

```
from Instructor
for update
declare @sal int
open c1
fetch c1 into @sal
while @@FETCH_STATUS=0
begin
    if @sal>=3000
        update Instructor
            set salary=@sal*1.20
    else
        update Instructor
            set salary=@sal*1.10
    fetch c1 into @sal
end
close c1
```

```
declare c1 cursor  
for Select salary  
      from Instructor  
for update  
declare @sal int  
open c1  
fetch c1 into @sal  
while @@FETCH_STATUS=0  
begin  
      if @sal>=3000
```

```
declare c1 Cursor  
for select st_fname  
      from student|  
for read only  
declare  
open c1  
fetch c1 into @name  
while @@FETCH_STATUS=0  
begin  
end  
close c1  
deallocate c1
```

```
if @name= 'amr'
begin
    set @flag=1
end
if @name= 'amr'
begin
    if @flag=1
        begin
            set @counter+=1
            set @flag=0
        end
    end
    fetch c1 into @name
end
select @counter
close c1
deallocate c1
```

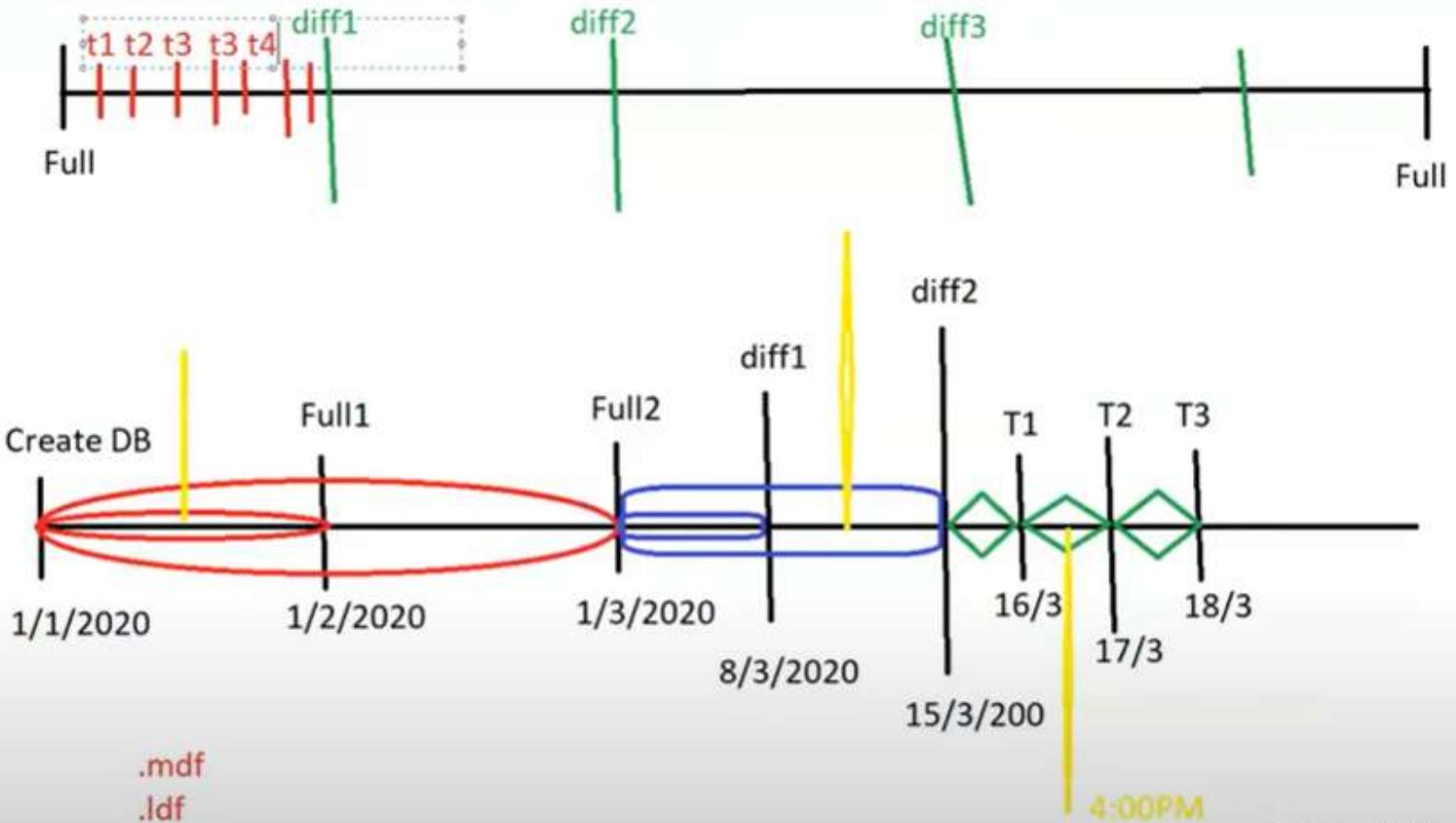
types of backups:

---> Full backup

---> Differential backup

---> Transaction log backup

----Filegroup backup



Activate Windows

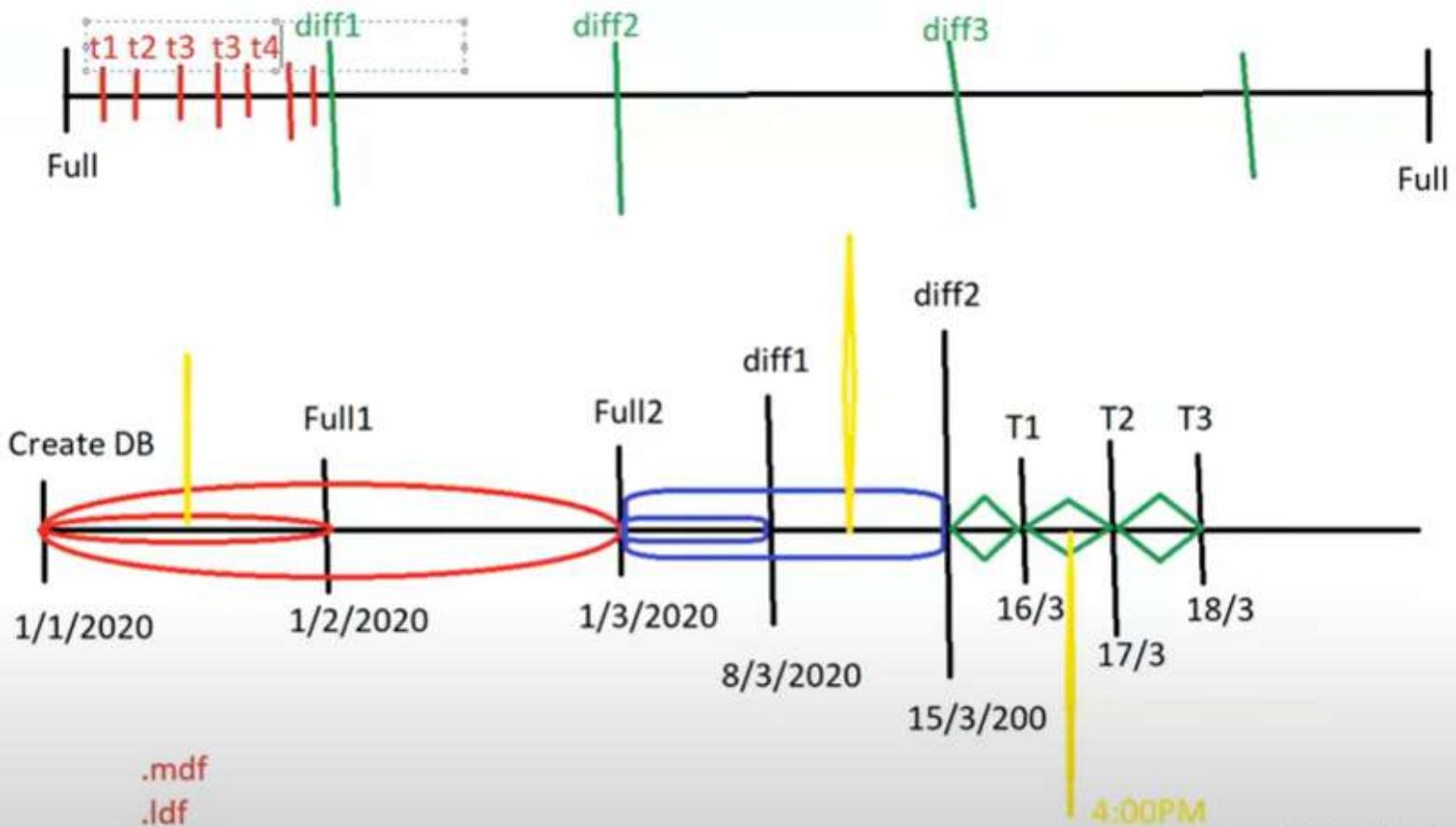
Go to Settings to activate Windows

types of backups:

---> Full backup

---> Differential backup

---> Transaction log backup



Activate Windows

Go to Settings to activate Windows

```
declare c1 Cursor  
for Select st_id,st_fname  
      from Student  
      where st_address='cairo'  
for read only      --update
```

```
declare @id int,@name varchar(20)  
open c1  
fetch c1 into @id,@name  
while @@FETCH_STATUS=0  
begin  
      Select @id,@name  
      fetch c1 into @id,@name  
end
```

Day10.sql - (local)\JTI\DESKTOP-VF50P25\Ram (SS) - Microsoft SQL Server Management Studio

File Backup Timeline: mytest

Ready

Restore to:

Last backup taken

Specific date and time

Date: 30/11/2020

Time: 10:19

Timeline Interval: Day

Legend

- Full Database Backup
- Differential Database Backup
- Transaction Log Backup
- Tail-Log

OK Cancel Help

Timeline... 020 10:20:07

Serial	Server	Database	Position
1	DESKTOP-VF50P25	mytest	1
2	DESKTOP-VF50P25	mytest	2
3	DESKTOP-VF50P25	mytest	3

Sohag2
SohagDB
test2
Security
Server Objects
Replication
PolyBase
AlwaysOn High Availability
Management
Integration Services Catalogs
SQL Server Agent

Connection [DESKTOP-VF50P25\Ram]
New connection properties
Progress Done Verify Backup Media

OK Cancel Help

Output

File Edit View Project Debug Tools Object Explorer Connect Databases System Databases Database Snapshot AdventureWorks20 AdventureWorksDW Company_SD DB1 DB2 ITI MenofyaDB MyNewDB New2 NewDB ReportServer ReportServerTemp sales SD sdasdas Sohag2 SohagDB test2 Security Server Objects Replication PolyBase AlwaysOn High Availability Management Integration Services Catalogs SQL Server Agent

Restore Database - mytest

Ready

Select a page: General Files Options Script Help

Source: Database:

Backup Timeline: mytest

Ready

Restore to:

Last backup taken
 Specific date and time

Date: 30/11/2020 Time: 10:15:xx

Timeline Interval: Day

Legend:

- Full Database Backup
- Differential Database Backup
- Transaction Log Backup
- Tail-Log

OK Cancel Help

Done Verify Backup Media

OK Cancel Help

Database	Point in Time
P25	mytest 1
P25	mytest 2
P25	mytest 3

File Edit View Project Debug To Restore Database - mytest

Ready

Select a page: General, Files, Options

Script Help

Source: Database

Backup Timeline: mytest

Ready

Restore to:

Last backup taken

Specific date and time

Date: 30/11/2020

Time: 10:19

Timeline Interval: Day

Timeline:

	Database	Point in Time
IP25	mytest	1
IP25	mytest	2
IP25	mytest	3

6:00 12:00 18:00 0:00 6:00

Legend:

- Full Database Backup
- Transaction Log Backup
- Differential Database Backup
- Tail-Log

OK Cancel Help

General (ITP.20/21.Q2-Sohag.BI ..) SQL Day10 | Microsoft Teams Verify Backup Media

OK Cancel Help

Object Explorer

Connect . (SQL Server 13.0.1742.0 - DESKTOP-VF)

Databases:

- System Databases
- Database Snapshot
- AdventureWorks20
- AdventureWorksDW
- Company_SD
- DB1
- DB2
- ITI
- MenofyaDB
- MyNewDB
- New2
- NewDB
- ReportServer
- ReportServerTemp
- sales
- SD
- sadasdas
- Sohag2
- SohagDB
- test2
- Security
- Server Objects
- Replication
- PolyBase
- AlwaysOn High Availability
- Management
- Integration Services Catalogs
- SQL Server Agent

File Edit View Project Debug Tools Restore Database - mytest

Ready

Select a page

- General
- Files
- Options

Script Help

Source

Database:

Device: D:\mytest.bak

Database: mytest

Destination

Database: mytest

Restore to: The last backup taken (30 November 2020 10:20:07) Timeline

Restore plan

Backup sets to restore:

Restore	Name	Component	Type	Server	Database	Position
<input checked="" type="checkbox"/>	mytest-Full Database Backup	Database	Full	DESKTOP-VF5OP25	mytest	1
<input checked="" type="checkbox"/>	mytest-Full Database Backup	Database	Differential	DESKTOP-VF5OP25	mytest	2
<input checked="" type="checkbox"/>	mytest-Full Database Backup	Log	Transaction Log	DESKTOP-VF5OP25	mytest	3

Backup Timeline: mytest

Ready

Restore to

Last backup taken

Specific date and time

Date: 30/11/2020

Time: 10:19

Timeline Interval: Day

Legend

Full Database Backup Transaction Log Backup

Object Explorer

Connect

Databases

- System Databases
- Database Snapshots
- AdventureWorks2012
- AdventureWorksDW2012
- Company_SD
- DB1
- DB2
- ITI
- MenofyaDB
- MyNewDB
- New2
- NewDB
- ReportServer
- ReportServerTempDB
- sales
- SD
- sdesdas
- Sohag2
- SohagDB
- test2

Security

Server Objects

Replication

PolyBase

AlwaysOn High Availability

Management

Integration Services Catalogs

SQL Server Agent

Output

Ready

```
declare c1 Cursor  
for Select st_id,st_fname  
      from Student  
      where st_address='cairo'  
for read only      --update  
  
declare @id int,@name varchar(20)  
open c1  
fetch c1 into @id,@name  
while @@FETCH_STATUS=0  
begin  
      Select @id,@name  
      fetch c1 into @id,@name  
end
```

(No column name)	(No column name)	
1	Ahmed	
(No column name)	(No column name)	
2	Aya	
(No column name)	(No column name)	
3	Mona	
(No column name)	(No column name)	

```
        set @counter+=1
        set @flag=0
    end
end
fetch c1 into @name
end
select @counter
close c1
deallocate c1
```

```
-----  
[ ] backup database ITI
to disk='d:\iti_db.bak'
```

New Job

Select a page

- General
- Steps
- Schedules
- Alerts
- Notifications
- Targets



Script



Name:

mybackup_DB

Owner:

DESKTOP-VF50P25\Rami

Category:

[Uncategorized (Local)]

Description:

Enabled

Connection

Server:

Connection:
DESKTOP-VF50P25\Rami

[View connection properties](#)

Progress



Ready

OK

Cancel

New job

Select a page

- General
- Script**
- Schedules
- Alerts
- Notifications
- Targets

Script Help

Job step list:

9.	Name	Type	On Success	On Failure
----	------	------	------------	------------

Connection

Server:

Connection:
DESKTOP-VF5OF25\Ram

[View connection properties](#)

Progress



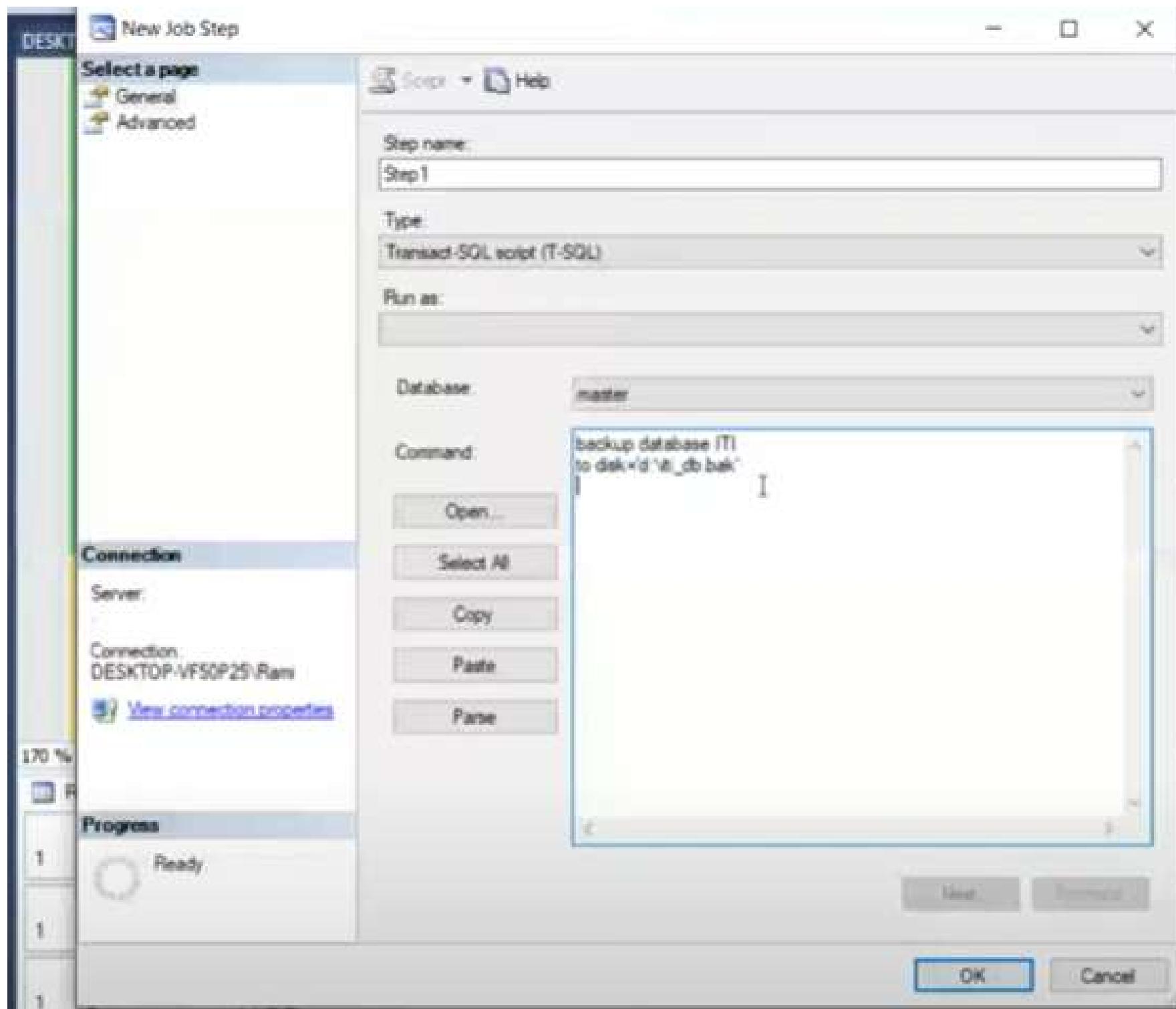
Ready

Move step:



Start step:

New...	Up	Down	Remove
--------	----	------	--------



Day10

New Job Schedule

Name: Sch

Schedule type: Recurring Enabled

Occurrence information:

Date: 30/11/2020 Time: 10:55:33

Frequency:

Occurs: Weekly

Recurs every: 1 week(s) on

Monday Wednesday Friday Saturday
 Tuesday Thursday Sunday

Daily frequency:

Occurs once at: 00:00:00

Occurs every: 1 hours Starting at: 00:00:00 Ending at: 23:59:59

Duration:

Start date: 30/11/2020 End date: 30/11/2020
 No end date

Summary:

Description: Occurs every week on Sunday at 00:00:00. Schedule will be used starting on 30/11/2020.

Query executed successfully. (local) (13.0)

```
delete from T1 where Column_3 between 3 and 8  
  
INSERT T1 VALUES (100,'Row #1');  
  
INSERT T1 (column_2) VALUES ('Row #2');  
GO  
SET IDENTITY_INSERT T1 ON;  
SET IDENTITY_Insert T1 off;  
GO  
INSERT T1 VALUES (100,'Row #1',4);
```

```
INSERT T1 (column_2) VALUES ('Row #2');
GO
SET IDENTITY_INSERT T1 ON;
SET IDENTITY_Insert T1 off;
GO

INSERT INTO T1 (column_3,column_1,column_2) VALUES
(777, 'eman');
```

I

```
SET IDENTITY_Insert T1 off;  
GO
```

```
INSERT INTO T1 (column_3,column_1,column_2) VALUES  
(7,777, 'eman');
```

```
GO
```

```
SELECT column_1, column_2, column_3  
FROM T1;
```

```
to disk='d:\iti_db.bak'
```

```
-----  
CREATE TABLE dbo.T1 ( column_1 int, column_2 VARCHAR(30),  
column_3 int IDENTITY primary key);
```

```
GO
```

```
SELECT * FROM T1
```

```
delete from T1 where Column_3 between 3 and 8
```

```
SELECT * FROM T1
```

```
delete from T1 where Column_3 between 2 and 20
```

```
INSERT T1 VALUES (100,'ahmed');
```

```
INSERT T1 (column_2) VALUES ('Row #2');
```

```
GO
```

```
SET IDENTITY_INSERT T1 ON;
```

```
INSERT INTO mycurrent VALUES('ahmed1')

SELECT @@IDENTITY

SELECT SCOPE_IDENTITY()

SELECT IDENT_CURRENT('MyCurrent')

--note use the same 4 statements in new connection and see what is the results

--how to reset identity
--1)using truncate statement
--2)use insert_identity on then off
--3)use dbcc checkident

dbcc checkident(tableName,RESEED,1) I

DELETE FROM mycurrent

INSERT INTO mycurrent VALUES('ahmed22')

SELECT SCOPE_IDENTITY()

truncate table mycurrent

INSERT INTO mycurrent VALUES('ahmed24')
```

```
SELECT IDENT_CURRENT('ti')
```

```
--types of insert statement
```

```
--simple insert
```

```
--insert constructor
```

```
--insert based on select
```

```
--insert based on execute
```

```
--bulk insert
```

```
SELECT IDENT_CURRENT('t1')
```

```
--types of insert statement
```

```
--simple insert
```

```
--insert constructor
```

```
--insert based on select
```

```
--insert based on execute
```

```
--bulk insert
```

--types of insert statement

--simple insert

--insert constructor

--insert based on select

--insert based on execute

--bulk insert

bulk insert emp

from 'd:\mydata.txt'

with (fieldterminator=',')

Object Explorer

Day10.sql - (local)...-YF50P25.Rami (55) * X

- Connect •
- AdventureWorksDW2012
- Company_SD
- DB1
- DB2
- ITI
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - dbo.Course
 - dbo.Departments
 - dbo.emp
 - dbo.int_Courses
 - dbo.Instructors
 - dbo.Students
 - dbo.Students
 - dbo.Topics
 - Views
 - External Resource
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
- MonofyaDB
- MyNewDB
- mytest
- New2
- NewDB
- ReportServer
- ReportServerTempDB
- sales
- SD

SQL Server Import and Export Wizard

Choose a Data Source

Select the source from which to copy data.

Data source:

Microsoft Excel

Excel connection settings

Excel file path:

[Browse...](#)

Excel version:

Microsoft Excel 97-2003

First row has column names

Help

< Back

Next >

Finish

Cancel

query executed successfully

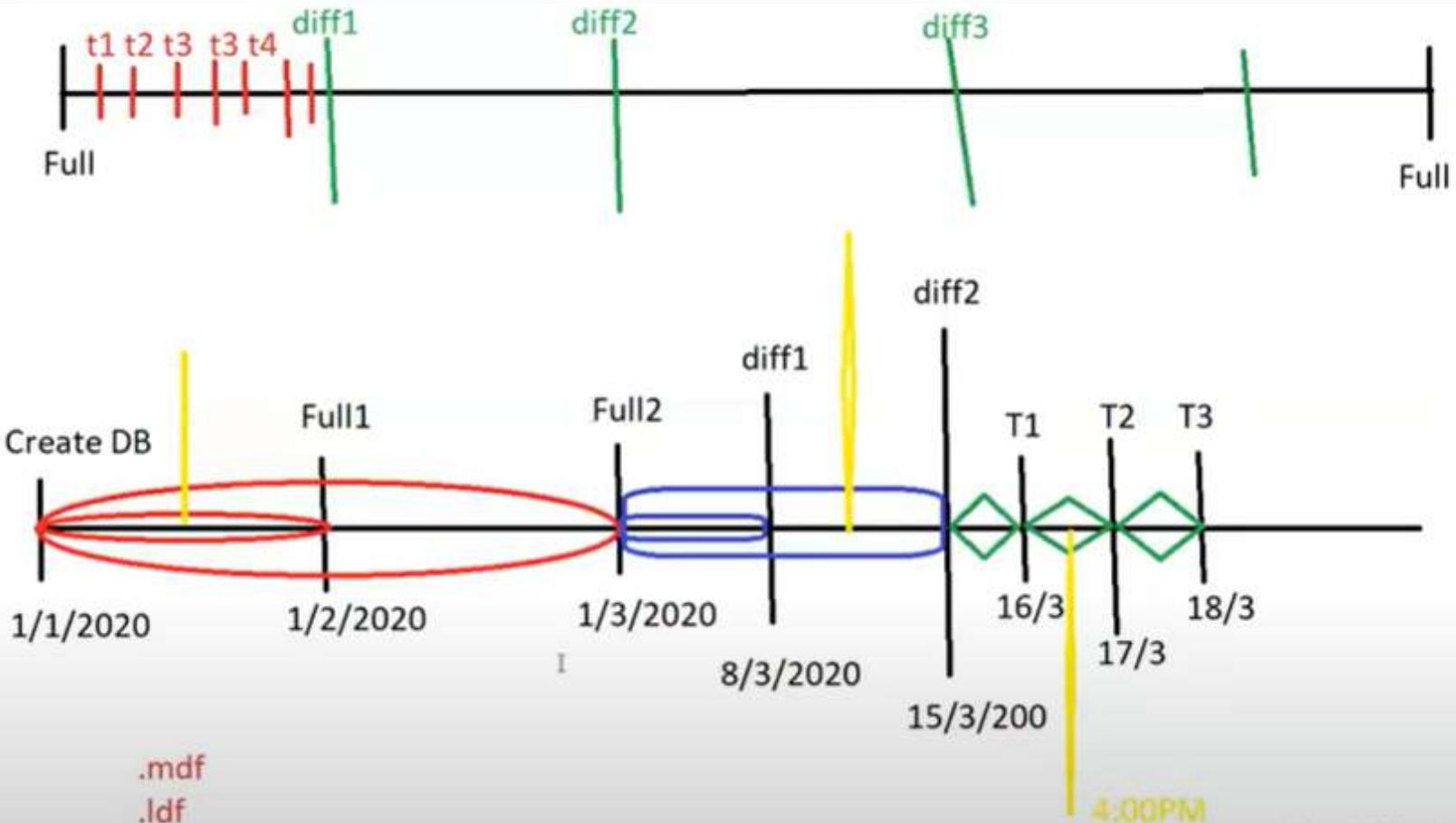
types of backups:

---> Full backup

---> Differential backup

---> Transaction log backup

----Filegroup backup



iti

90% empty

I

Read only DB

Snapshot DB (30/11/2000) 11 am

sid	sname	age
1	ahmed	22
2	eman	21
3	omar	25
4	sally	22

Copy on Write



Select *
from student

Select *
from student

iti

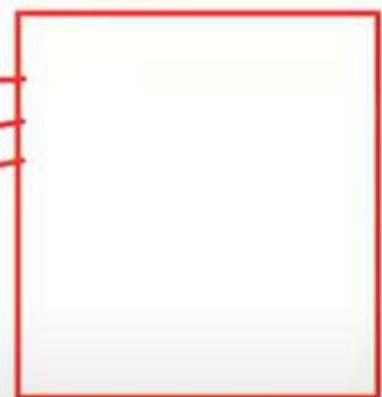
sid	sname	age
1	ahmed	22
4	sally	28
9	khalid	21

Copy on Write

Snapshot DB (30/11/2000) 11 am

2	eman	21
3	omar	25
4	sally	22

Snapshot2



Select *
from student

+

Select *
from student

Activate Windows
Go to Settings to activate Windows.

```
--insert based on execute  
--bulk insert  
bulk insert emp  
from 'd:\mydata.txt'  
with (fieldterminator=',')
```

```
--Snapshot
```

```
create
```

--Snapshot

```
--snapshot  
-----  
| create snapshot itisnap  
| on  
| ( name,  
|   filename=""  
| )  
as snapshot of iti
```

```
--> create Database itisnap  
on  
    I  
    (   
        name='ITI' ,  
        filename='d:\it.snap.ss'  
    )  
as snapshot of iti
```

```
create Database itisnap
```

```
on
```

```
(
```

```
name='ITI',  
filename='d:\itisnap.ss'
```

```
as snapshot of iti
```

```
restore database iti  
from database_snapshot='itisnan'      --snapshot name in object explorer
```

```
create Database itisnap  
on  
(  
name='ITI',  
filename='d:\itisnap.ss'  
)  
as snapshot of iti
```

```
select * from student
```

```
restore database iti  
from database_snapshot='itisnap'      --snapshot name in object explorer  
  
--Cursor  
--backup  
--snapshot  
--SQLCR
```

```
select * from student

restore database iti
from database_snapshot='itisnan'      --snapshot name in object explorer

--Cursor
--backup
--snapshot

--SQLCLR
-----Function
-----New data type I [class struct]

sp_configure ''
go
reconfigure
```

--SQLCLR

-----Function

-----New data type [class struct]

sp_configure 'clr_enable',1

go

reconfigure

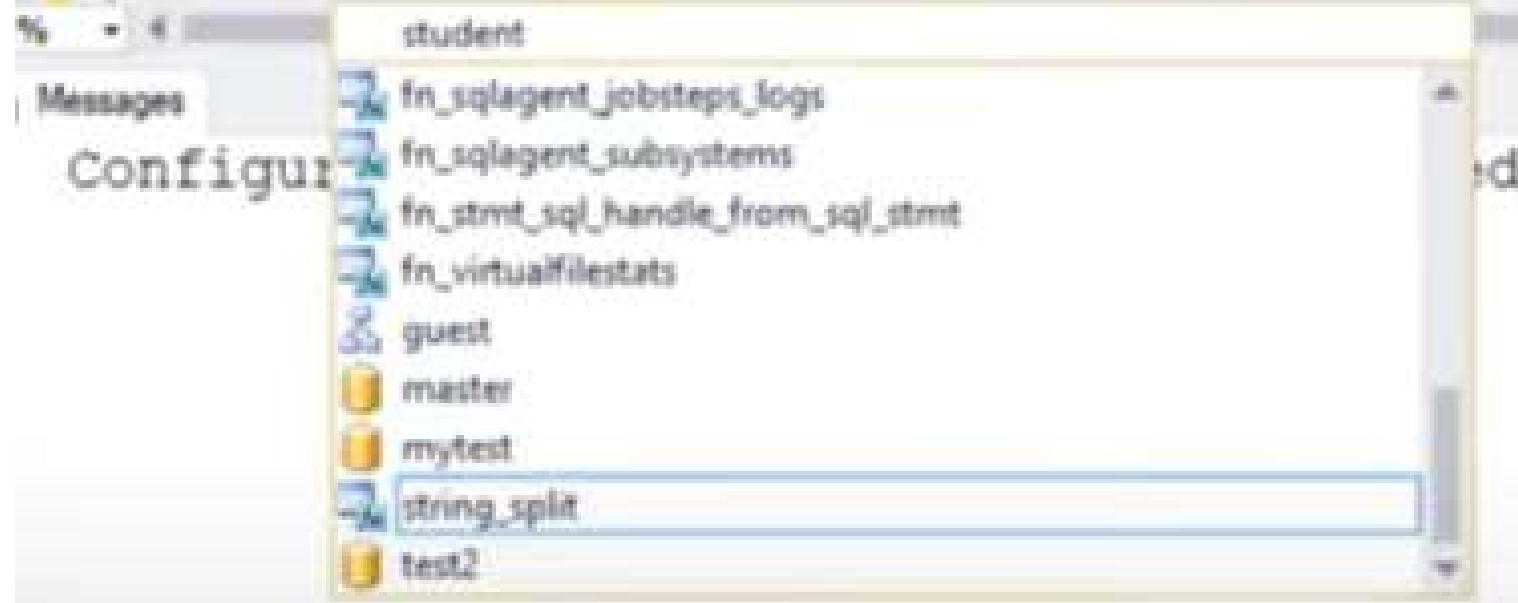
```
1  using System;
2  using System.Data;
3  using System.Data.SqlClient;
4  using System.Data.SqlTypes;
5  using Microsoft.SqlServer.Server;
6
7  public partial class UserDefinedFunctions
8  {
9  [Microsoft.SqlServer.Server.SqlFunction]
10 public static SqlString Sum2Int()
11 {
12     // Put your code here
13     return new SqlString (string.Empty);
14 }
15 }
16 }
```

```
sp_configure 'clr_enable',1  
go
```

```
reconfigure
```

```
select dbo.sum2Int(3,5)
```

```
select dbo.sum2Int(st_id,st_age)  
from student
```



```
go
```

```
reconfigure
```

```
select dbo.sum2Int(3,5)
```

```
select dbo.sum2Int(st_id,st_age)  
from student
```

```
select dbo.sum2Int(3,5)

select dbo.sum2Int(st_id,st_age)
from student

create table shapes
(
    _id int,
    _desc varchar(20),
    _coords
```

```
-- create wan chart (20),  
-- coords Circle  
)  
  
-- -10,20,30  
E select _desc  
from shapes  
where _Coords.x>=10  
  
E select _desc  
from shapes
```

- 1. Crystal reports**
- 2. SQL Injection**
- 3. Red-Gate (SQL Development Tools only)**
- 4. Data Quality Services**
- 5. Power View (shimaa)**
- 6. Power Query**
- 7. Power Pivot**
- 8. Targit BI**
- 9. What is new in SQL Server 2019 as Development**
- 10. DB Mirroring**
- 11. DB Encryption**
- 12. SMO**
- 13. SQLServer Snapshot**
- 14. Hadoop & Map Reduce and Hive**

Research Topics.docx [Compatibility Mode] - Word (Product Activation Failed)

File Home Insert Design Layout References Mailings Review View Tell me what you want to do... Share

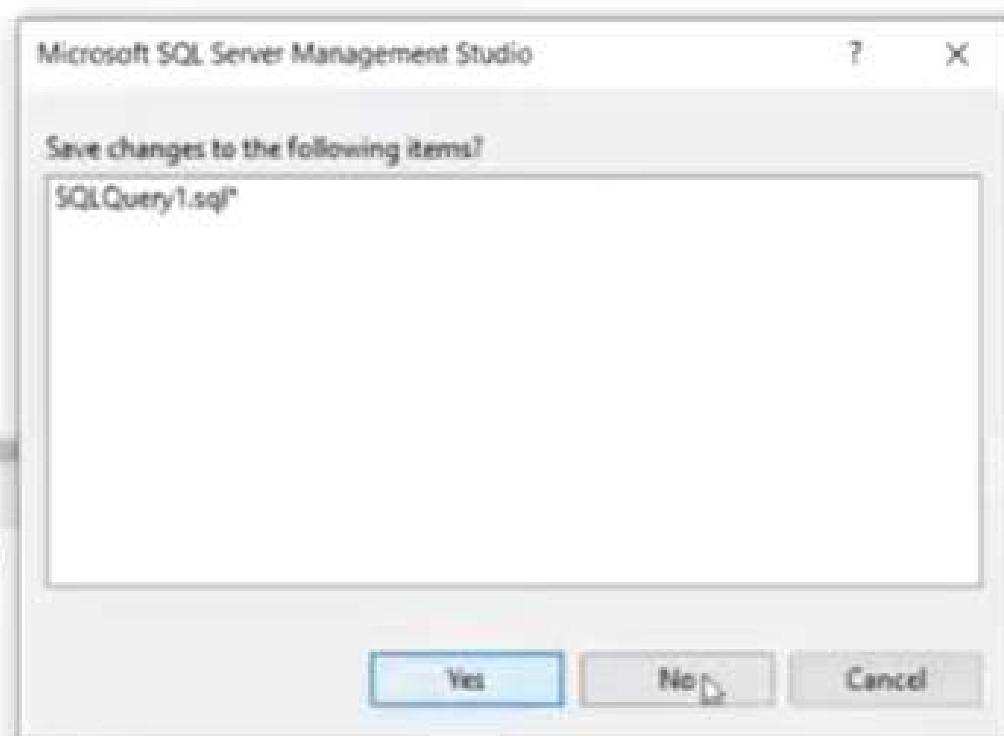
Paste Calibri (Body) 18 A Aa Aa B I U abc x, x² A Aa BbCcDd AaBbCcDd AaBbC 1 Normal 1 No Spac... Heading 1 Editing

Clipboard Font Paragraph Styles

- 1. Crystal reports**
- 2. SQL Injection**
- 3. Red-Gate (SQL Development Tools only)**
- 4. Data Quality Services**
- 5. Power View (shimaa)**
- 6. Power Query**
- 7. Power Pivot**
- 8. Targit BI**
- 9. What is new in SQL Server 2019 as Development**
- 10. DB Mirroring**
- 11. DB Encryption**
- 12. SMO**
- 13. SQLServer Snapshot**
- 14. Hadoop & Map Reduce and Hive**

Page 1 of 1 37 words English (United States) 100%

```
restore database iti  
from database_snapshot='itisnan' --snapshot name in object explorer
```



SnapShot.sql - Notepad

File Edit Format View Help

```
update HumanResources.Employee  
set BirthDate='1988-10-10'  
where EmployeeID =1
```

-- We can't Update or edit snapshot, it's read only database.

```
use AdventureWorks_Snap_01;  
update HumanResources.Employee  
set BirthDate='1988-10-10'  
where EmployeeID =1
```

--Reverting (restoring) from snapshot

-- Cannot revert when db is corrupted or deleted

```
use master;
```

```
restore database AdventureWorks
```

```
from database_snapshot='AdventureWorks_Snap_01' --snapshot name in object explorer
```

--Drop db snapshot

```
drop database AdventureWorks_Snapshot_01
```

--Schemas Vs. Backup:

--1)Snapshot can used to retrieve data directly,

--without need to restore the main database

--(Can used while the source database exist in the same time)

--, while backups can't.

--2)Reverting snapshot does not work in an offline or corrupted

-- database. While backup does.

BI " DAY 1"

2020-10-26 09:00 UTC

Recorded by

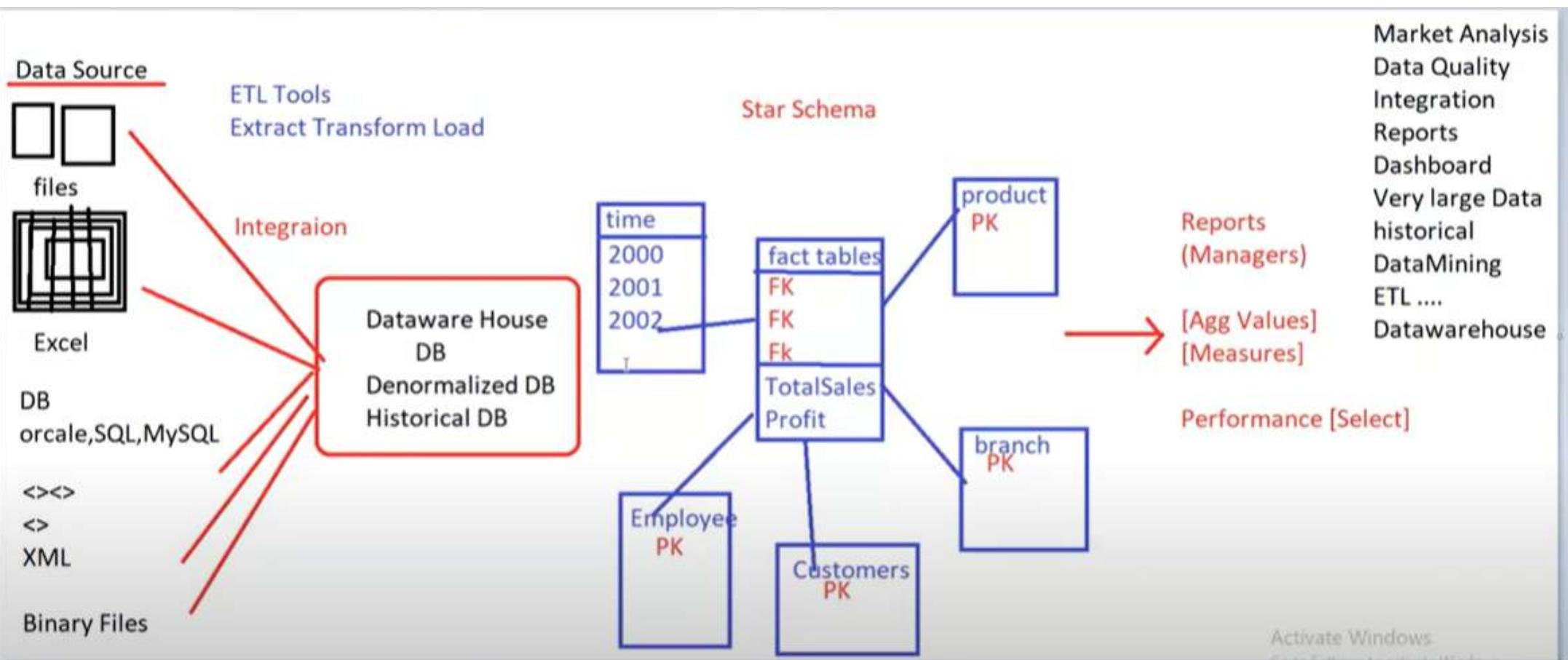
rnagi

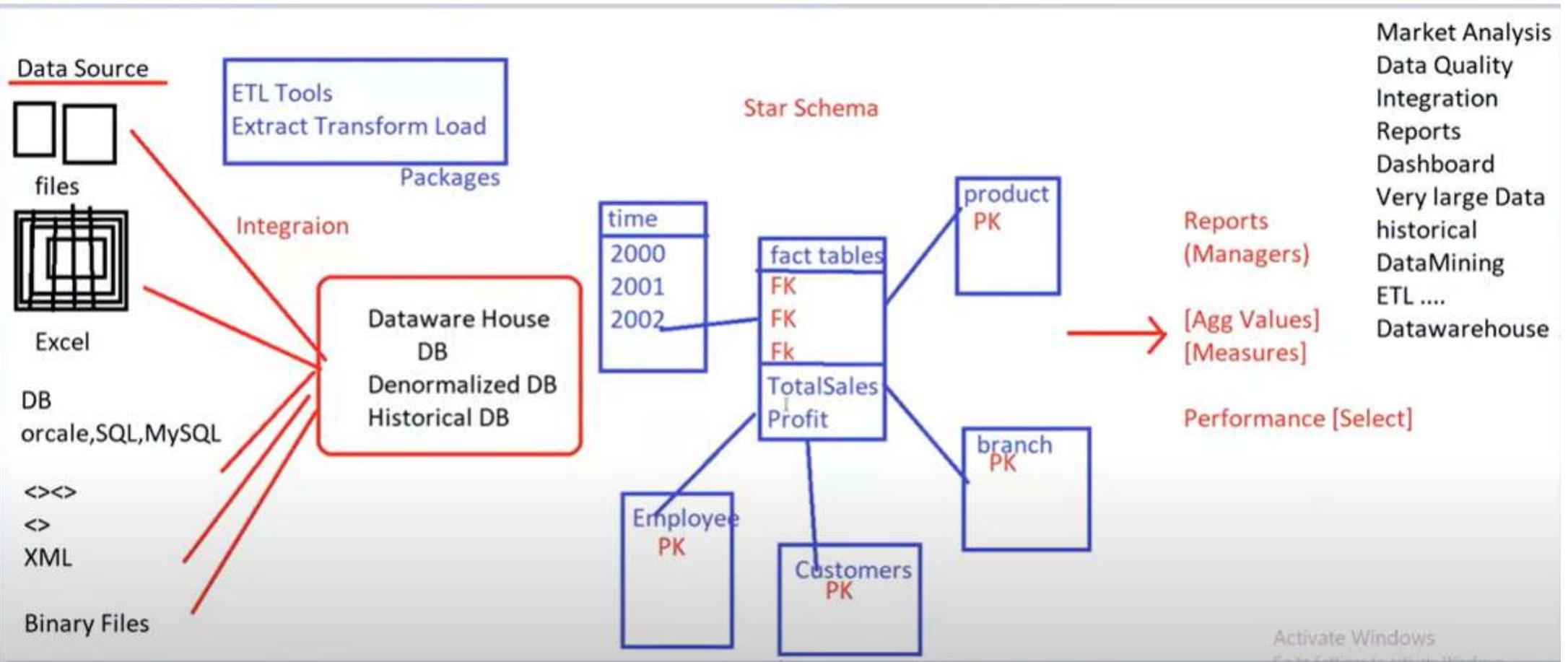
Organized by

aml_sleem94 (Guest)

Channel

General

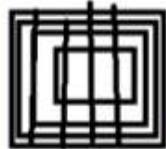




Data Source



files



Excel

DB

oracle,SQL,MySQL

<><>

<>

XML

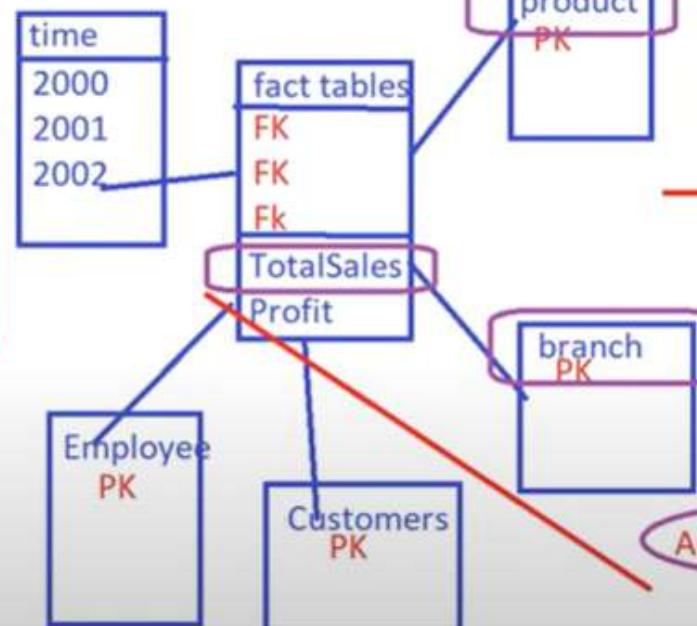
Binary Files

ETL Tools
Extract Transform Load
Packages

Integraion

Dataware House
DB
Denormalized DB
Historical DB

Star Schema



select Sum(Totalsales),Pid,Bid
from ,.....
joins
group by

Reports
(Managers)
[Agg Values]
[Measures]

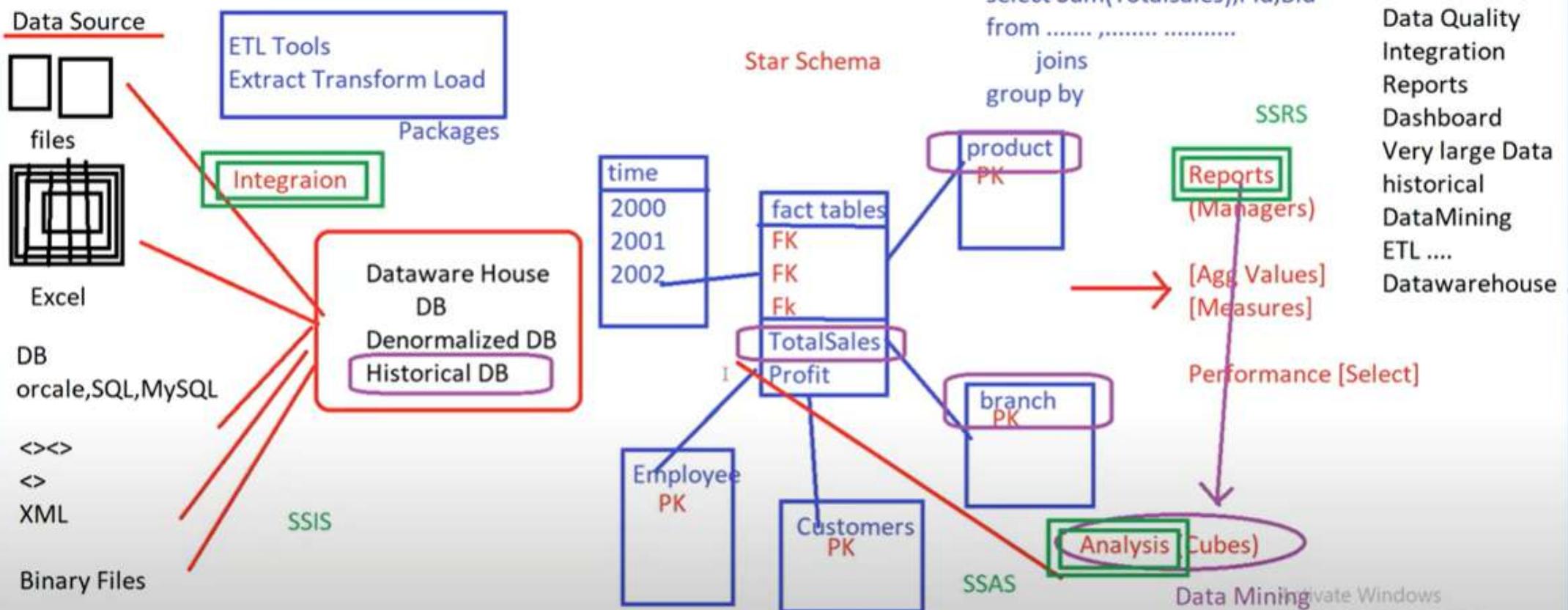
Performance [Select]

Analysis (Cubes)

Market Analysis
Data Quality
Integration
Reports
Dashboard
Very large Data
historical
DataMining
ETL
Datawarehouse

Activate Windows

CrackSoftWorld.com



Definition of Business Intelligence

Business Intelligence(BI)*is a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions.*

BI*is a method of storing and presenting key enterprise data so that anyone in your company can quickly and easily ask questions of accurate and timely data.*

What is Business Intelligence?

- The term Business Intelligence (BI) incorporates the concept of deriving and analyzing useful information from the data in an organization.
- Business Intelligence (BI) is about getting the right information, to the right decision makers, at the right time.
- Help users to understand why business got the particular results that it did
- forecast future results.
- BI leads to:
 - fact-based decision making
 - “single version of the truth”
- BI includes reporting and analytics.

What is Business Intelligence?

- The term Business Intelligence (BI) incorporates the concept of deriving and analyzing useful information from the data in an organization.
- Business Intelligence (BI) is about getting the right information, to the right decision makers, at the right time.
- Help users to understand why business got the particular results that it did
- forecast future results.
- BI leads to:
 - fact-based decision making
 - “single version of the truth”
- BI includes reporting and analytics.

Microsoft Business Intelligence

Integrate

- Data acquisition from source systems and integration
- Data transformation

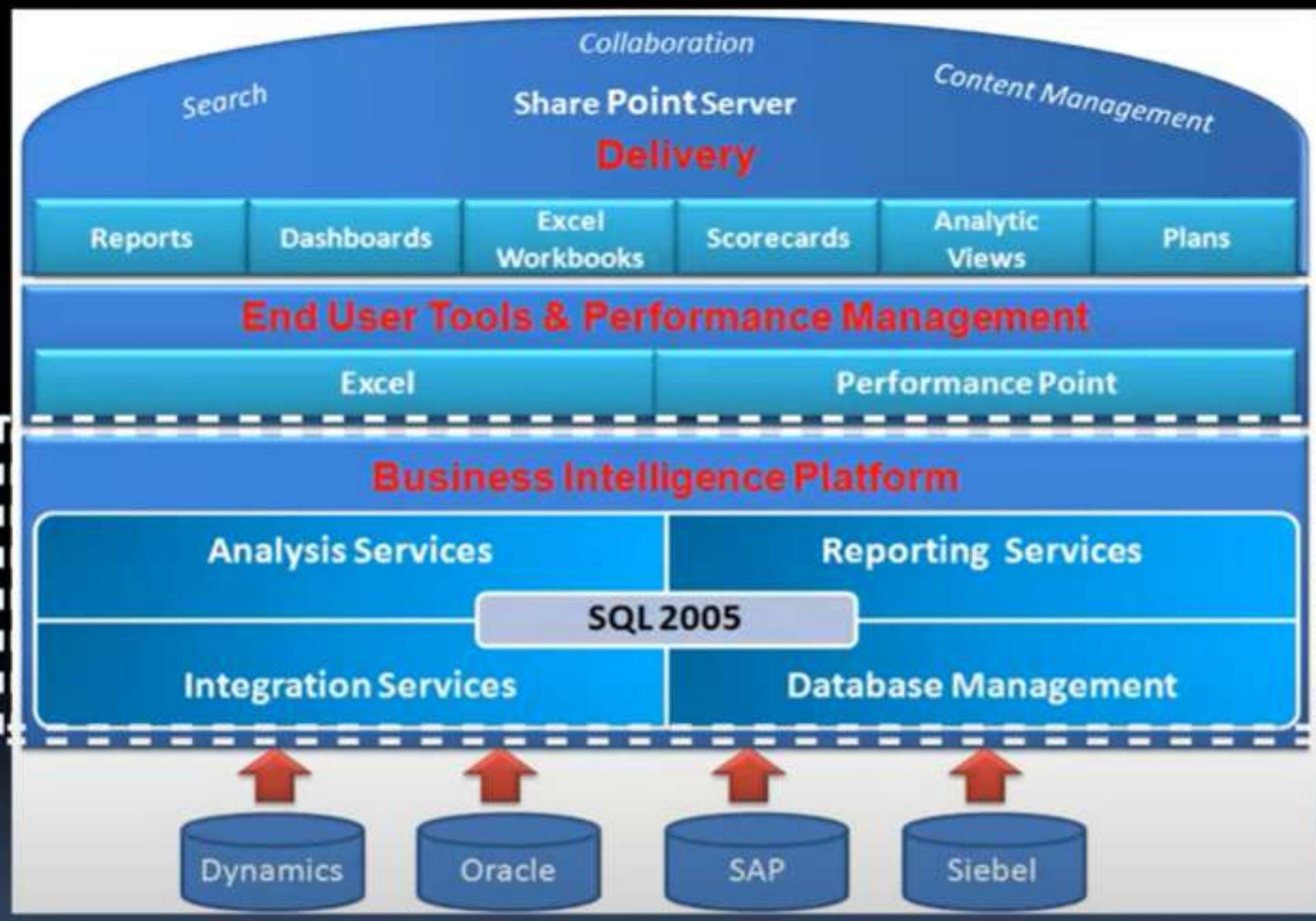
Analyze

- Historical Data with business logic, hierarchical views
- Data discovery via data mining

Report

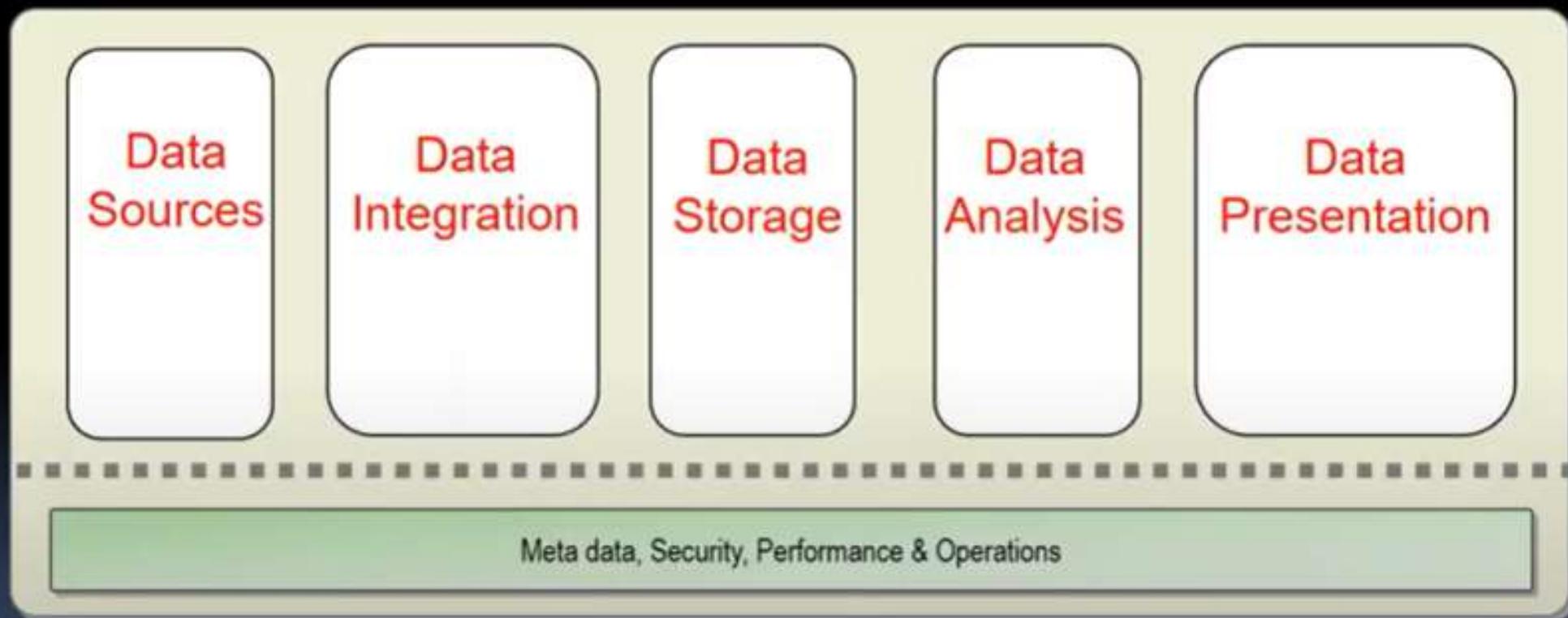
- Data presentation and distribution
- Data access

Microsoft BI Platform



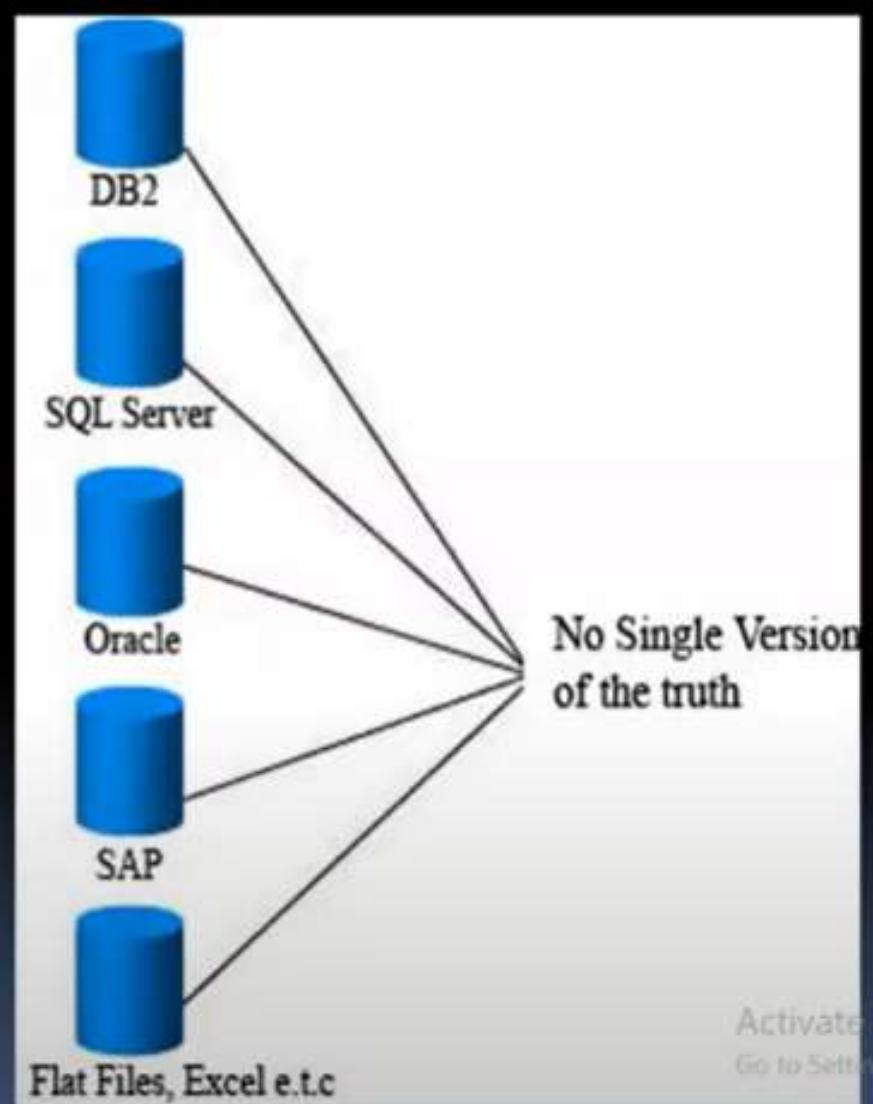
Implementation of BI

- Designing a BI application involves multiple layers



Data Sources

- Diverse data sources
- Heterogeneous environments
- Different database systems
- Different schemas, data formats,
- Different naming conventions
- Geographically separated source locations
- Large Sums of Data (Terabytes)



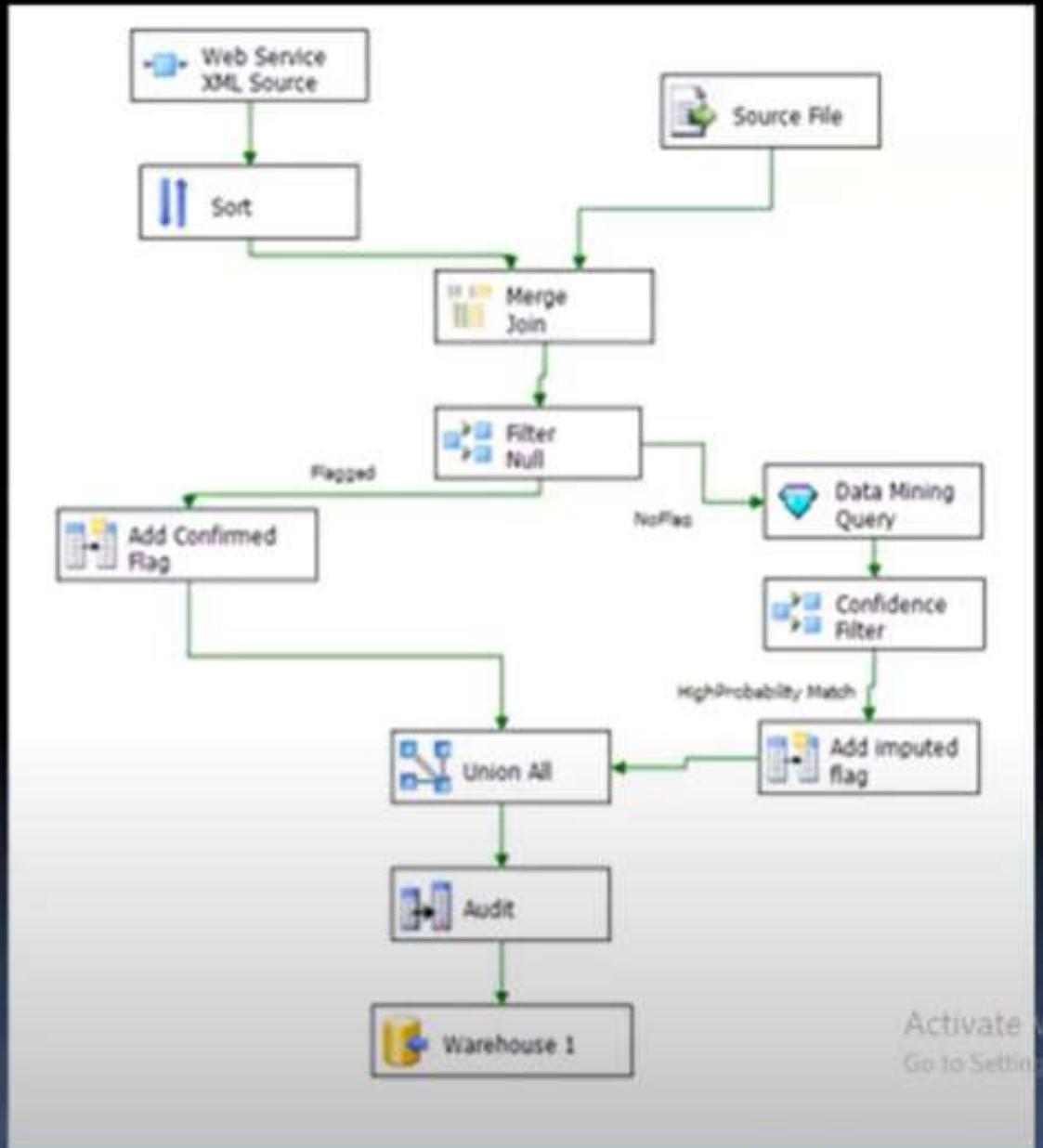
SSIS Planning

- After gathering the business requirements, the first step in the design of an ETL component is to **plan** the data transfer and staging solutions.
- This will prevent unnecessary development effort and delayed implementation



SSIS Example

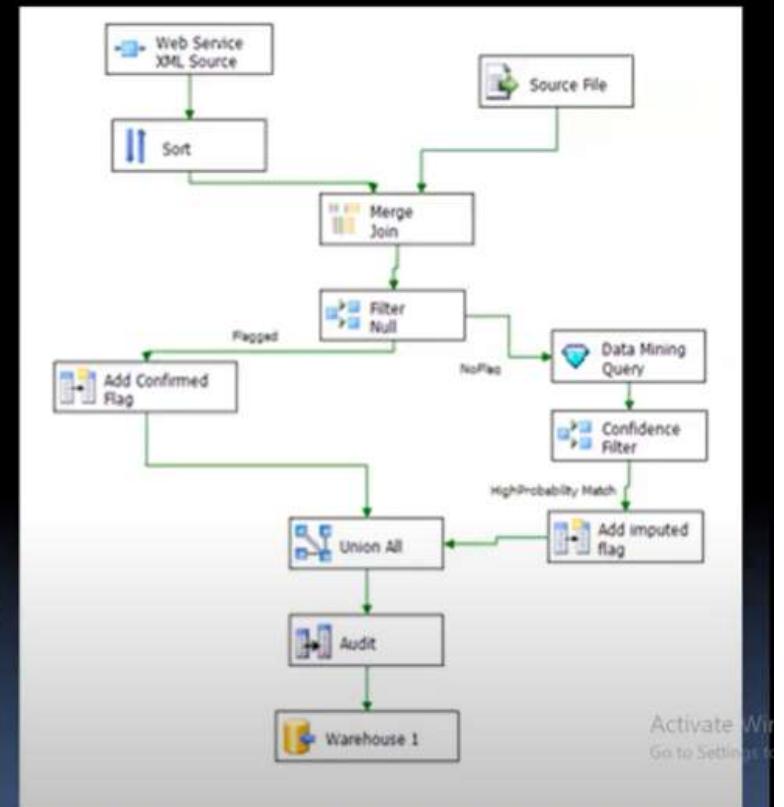
- A new Microsoft SQL Server Business Intelligence application
- The platform for a new generation of high performance data integration technologies



Activate Win
Go to Settings to

SSIS Example

- A new Microsoft SQL Server Business Intelligence application
- The platform for a new generation of high performance data integration technologies



OLTP Databases

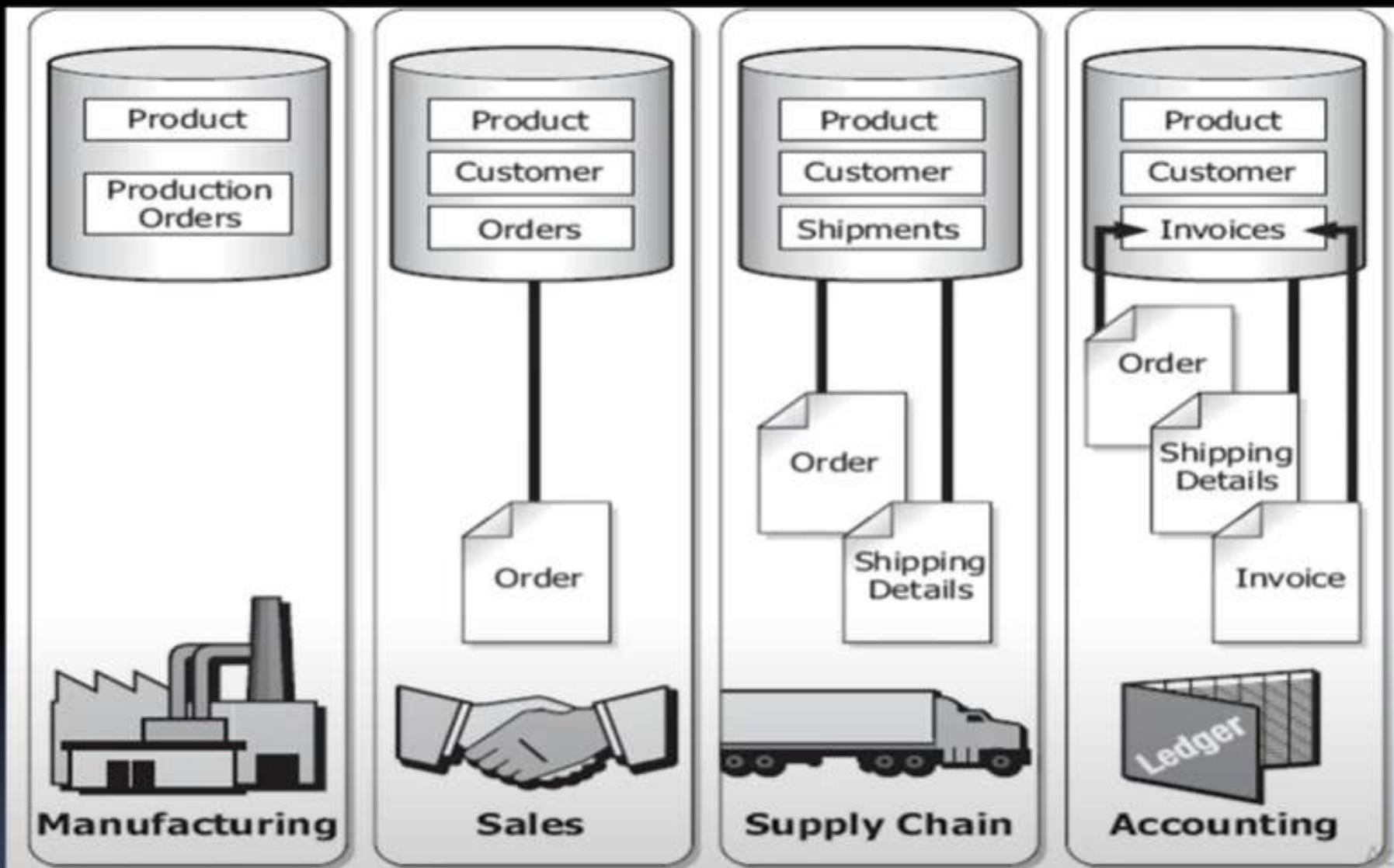


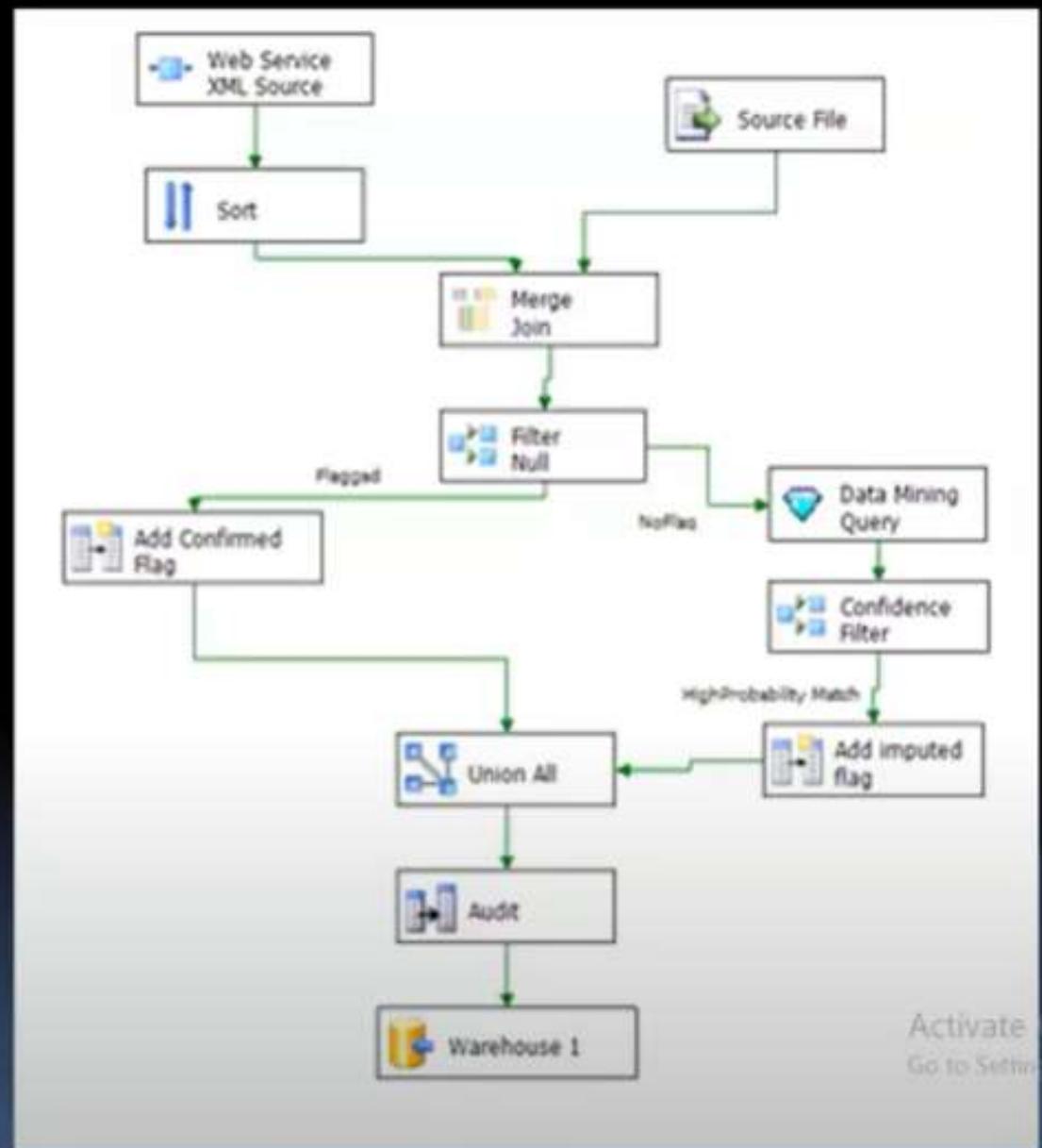
Figure 2-1 Operational systems record data from operational tasks.

Data Warehousing

- Data Warehousing is a repository providing access to integrated enterprise-wide data for management and decision support analysts.(Denormalized DB)
- The information is subject-orientated, recorded over time and may be stored at various degrees of summarization (Granularity)
- Solves the problem of having multiple Data sources and “integrates” the data

SSIS Example

- A new Microsoft SQL Server Business Intelligence application
- The platform for a new generation of high performance data integration technologies



Activate Win
Go to Settings to

Data Warehouse(OLAP) And OLTP

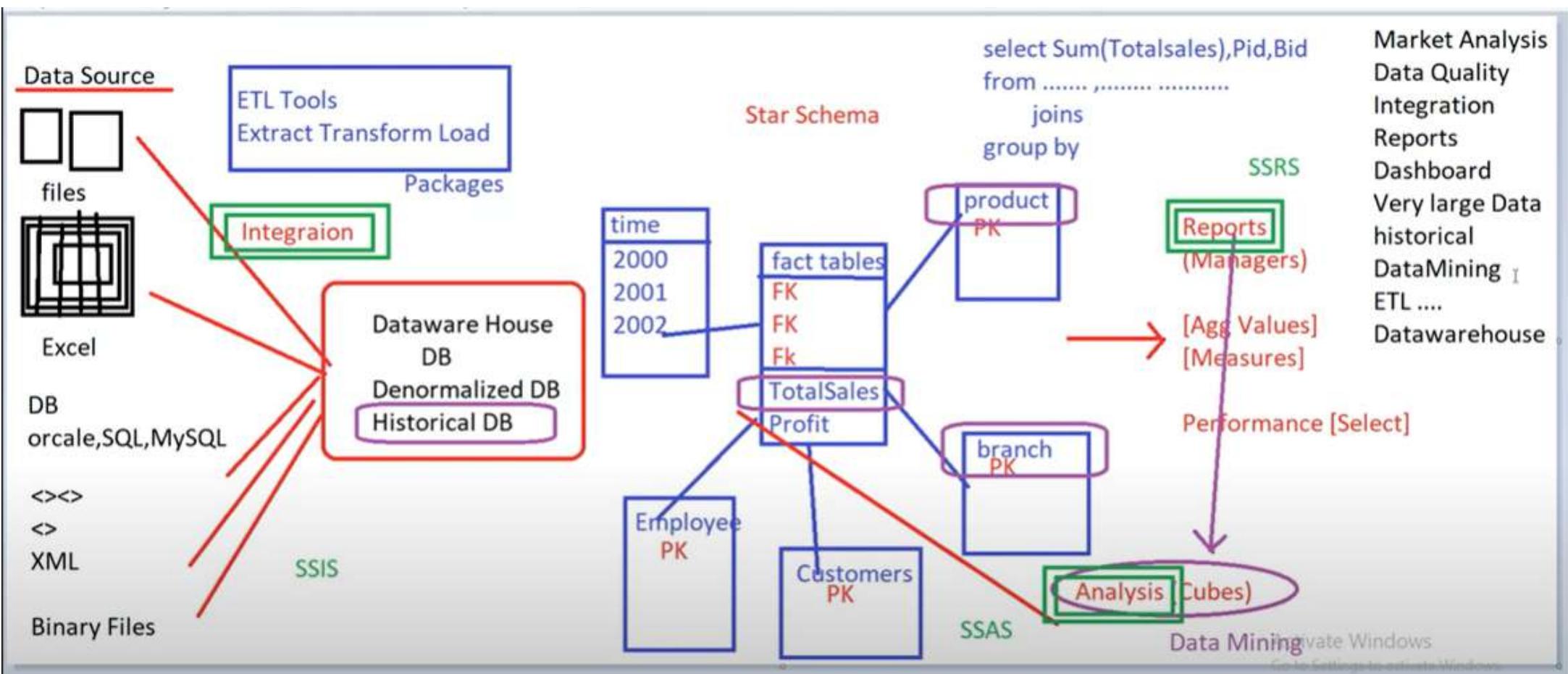
Data Warehouse	OLTP
Works with Enterprise Wide information	Works with small pieces of information
Updated on a schedule	Updated in real-time
De-Normalised	Normalised
Large to Very Large Database	Small to Large Database
Read Queries	Update, Insert Queries
Non-Volatile	Volatile Data
Applications that analyse the business	Applications that run the business

Data Warehouse(OLAP) And OLTP

Data Warehouse	OLTP
Works with Enterprise Wide information	Works with small pieces of information
Updated on a schedule	Updated in real-time
De-Normalised	Normalised
Large to Very Large Database	Small to Large Database
Read Queries	Update, Insert Queries
Non-Volatile	Volatile Data
Applications that analyse the business	Applications that run the business

Data Warehouse(OLAP) And OLTP

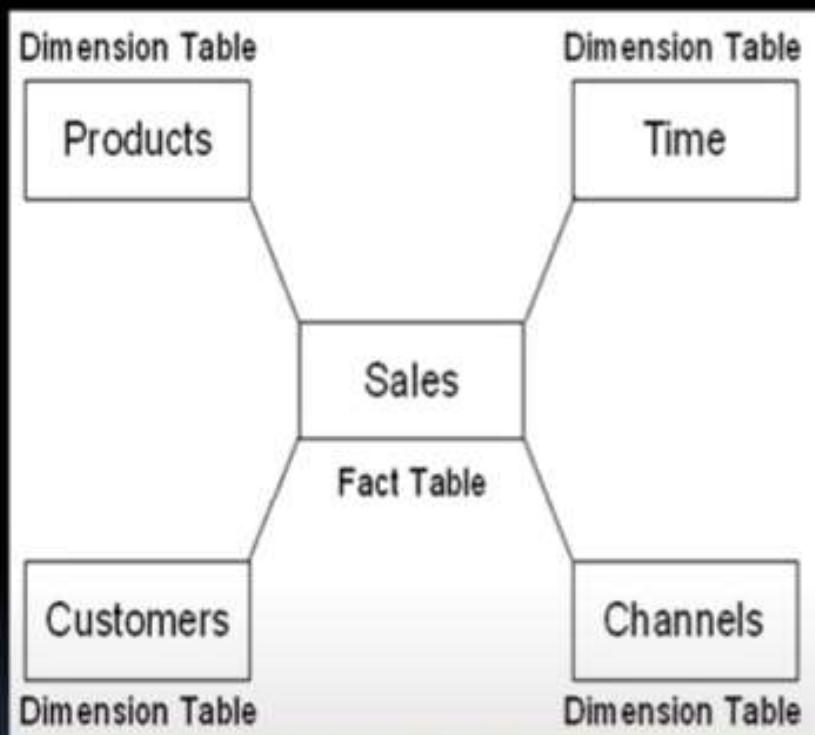
Data Warehouse	OLTP
Works with Enterprise Wide information	Works with small pieces of information
Updated on a schedule	Updated in real-time
De-Normalised	Normalised
Large to Very Large Database	Small to Large Database
Read Queries	Update, Insert Queries
Non-Volatile	Volatile Data
Applications that analyse the business	Applications that run the business



OLAP Dimensional Modeling

- Dimensional modeling is the design concept used by many data warehouse designers to build their data warehouse especially when BI is being planned
- Dimensional Modeling is based on the **star schema** with a centralized **fact table** surrounded by smaller **dimensional tables** representing key scientific objects

Star Schema Explained



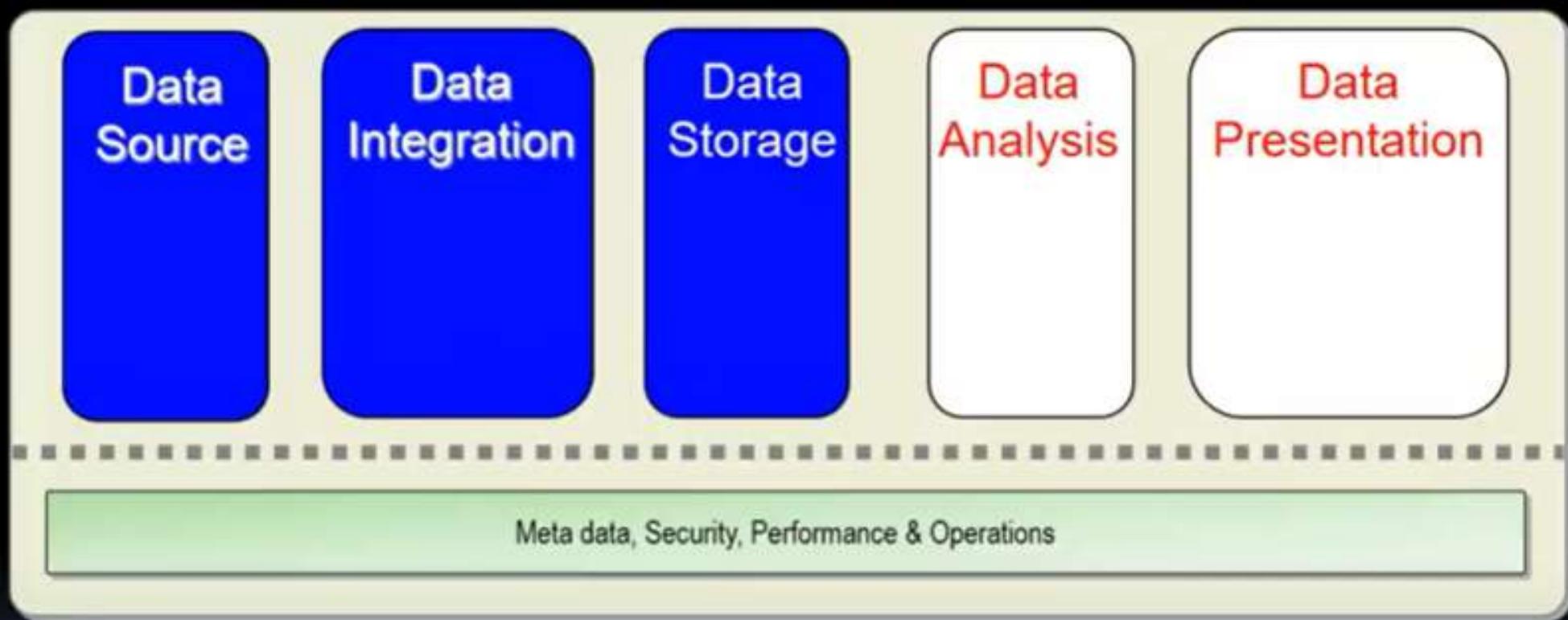
Dimension table: It is a business entity of the source system.

Example: Time Dimension, Customer Dimension, Product Dimension

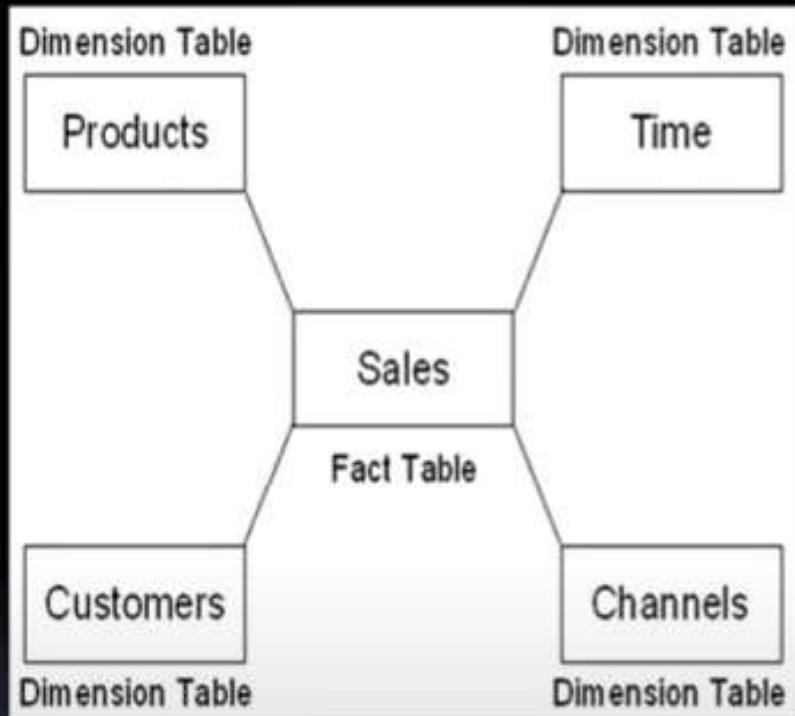
Fact table: A central table containing numerical measures and keys relating facts to dimension tables

Example: Profitability

Implementation of BI



Star Schema Explained



Dimension table: It is a business entity of the source system.

Example: Time Dimension, Customer Dimension, Product Dimension

Fact table: A central table containing numerical measures and keys relating facts to dimension tables

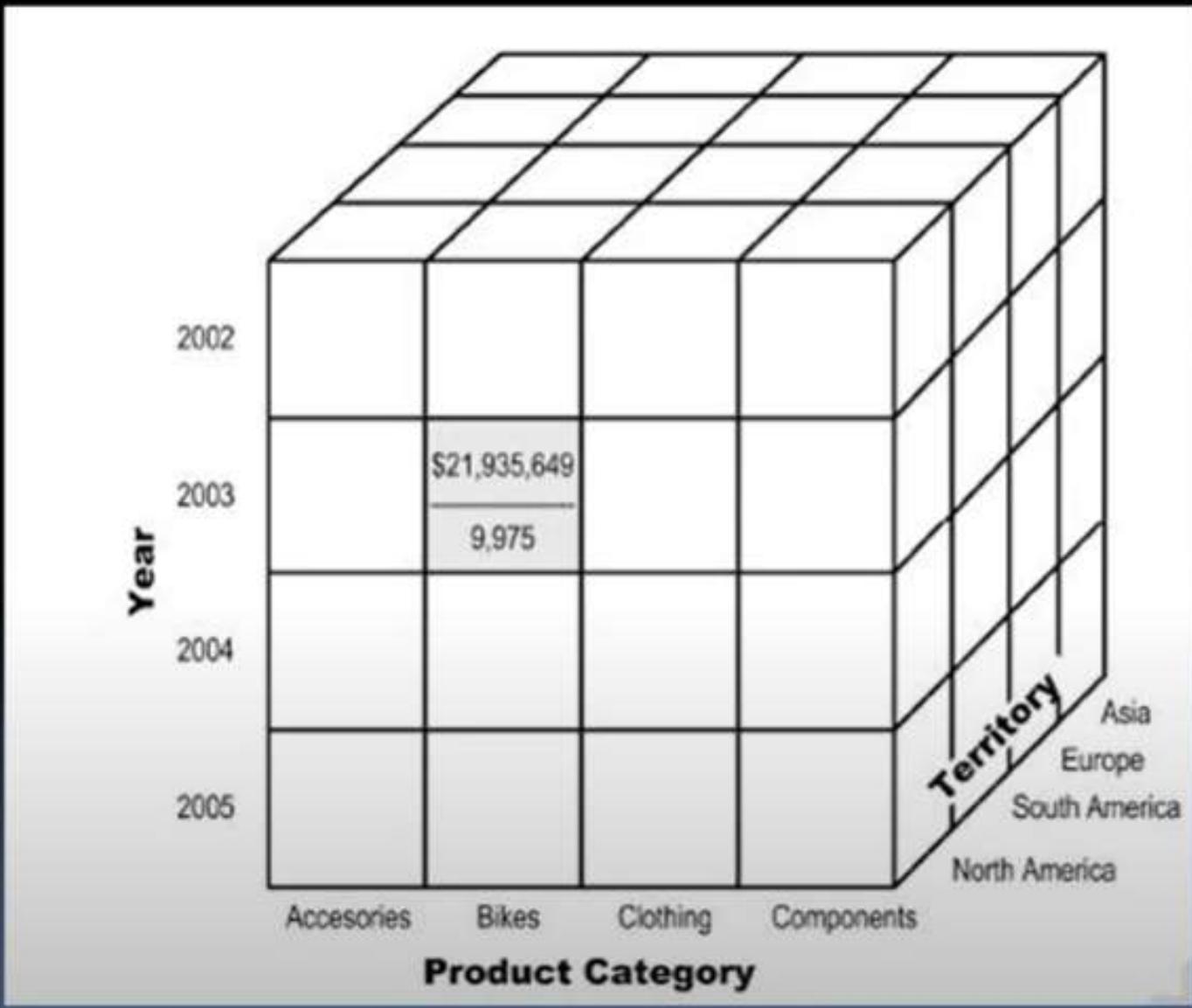
Example: Profitability

“What is a measure?”

Data Analysis

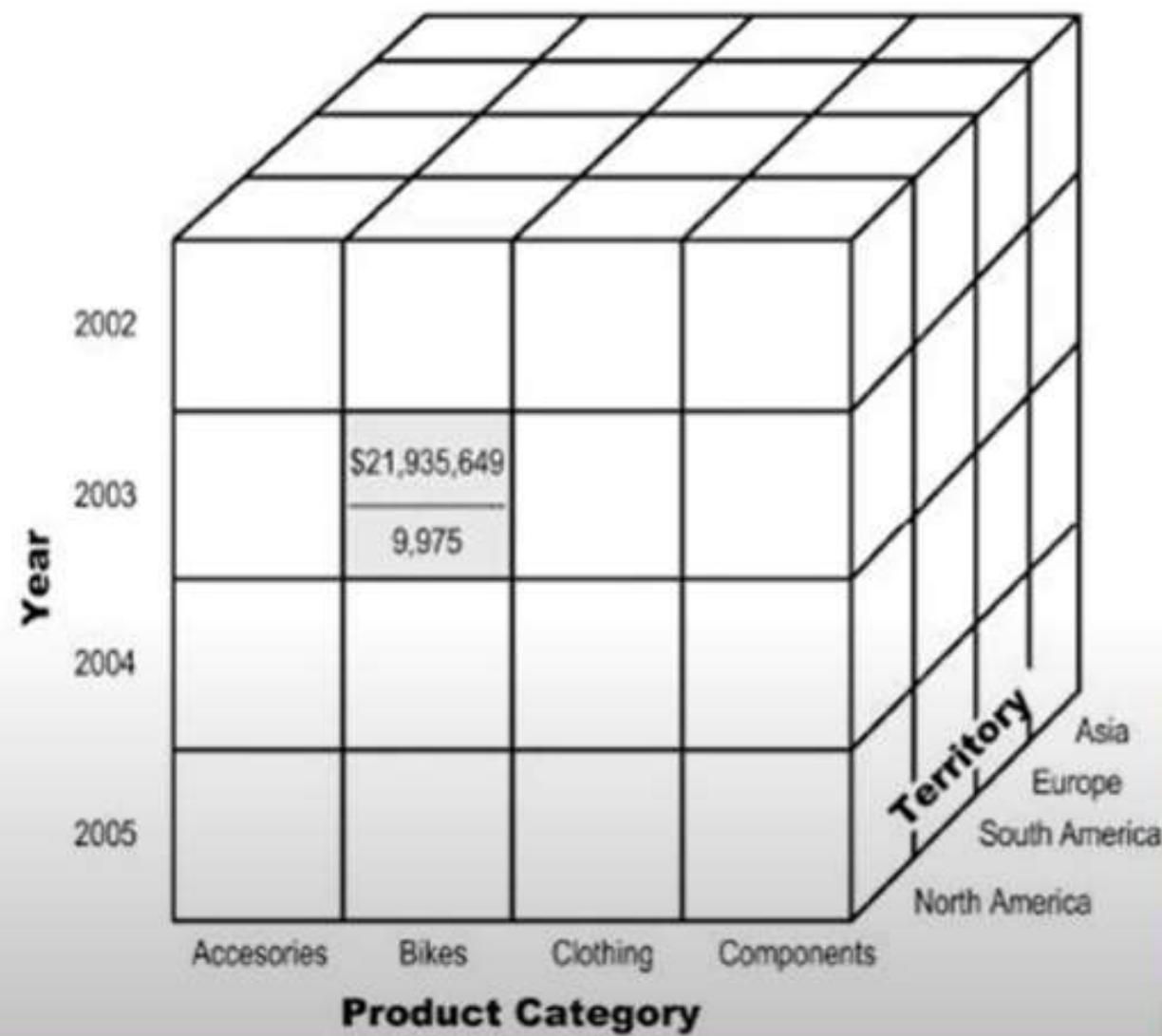
- Enables the creation of Unified Dimensional Model (UDM) over one or more physical data sources
- Automatically aggregates the Data producing summary values calculated during **cube processing**.
- Aggregations allow SSAS to ready calculations before queries are executed, thereby dramatically improving application response times. Even if you have millions of transactions stored in your database, SSAS can generate a summary report of these transactions **within a second**.

What is Cube?



- Measures
- Dimensions
- Aggregations

What is Cube?

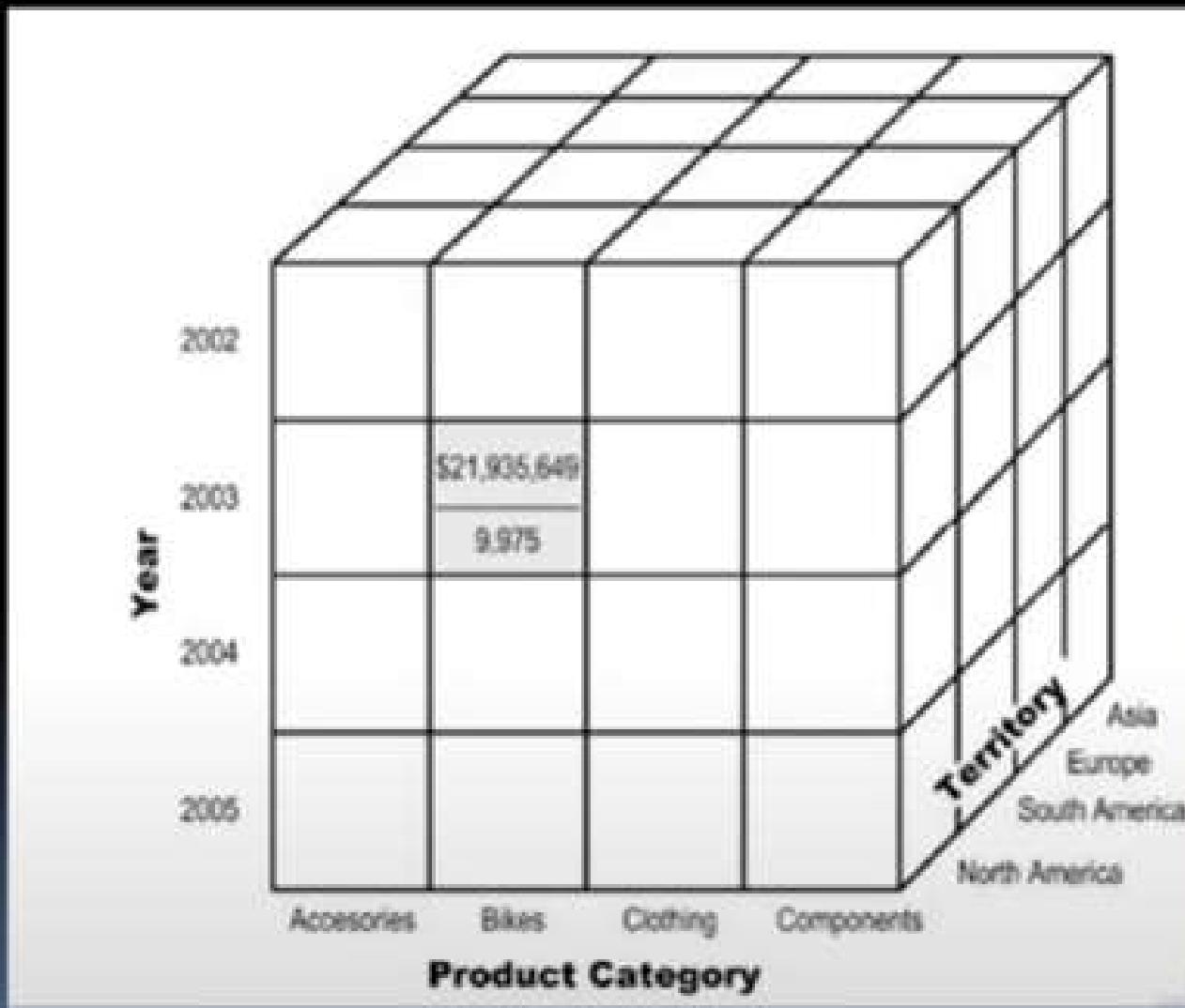


- Measures
- Dimensions
- Aggregations

Data Presentation

- Using Excel pivot tables and more
- Using SQL Server Reporting Services (SSRS)
- Understanding SharePoint 2003/2007 Web parts
- Reporting tools (Crystal Reports)
- 3rd Party tools (ProClarity)

What is Cube?



- Measures
- Dimensions
- Aggregations

SSIS

--used to generate Packages

--Control Flow

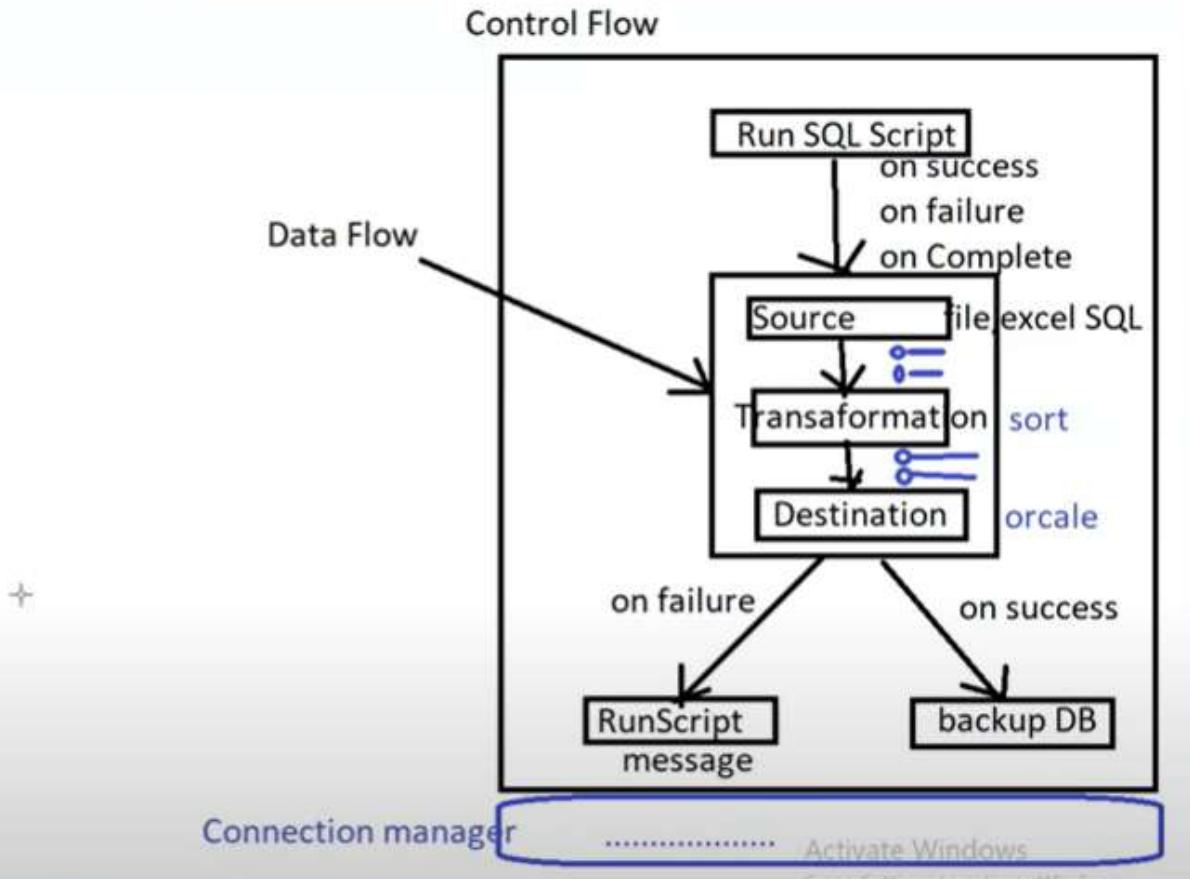
--Data Flow

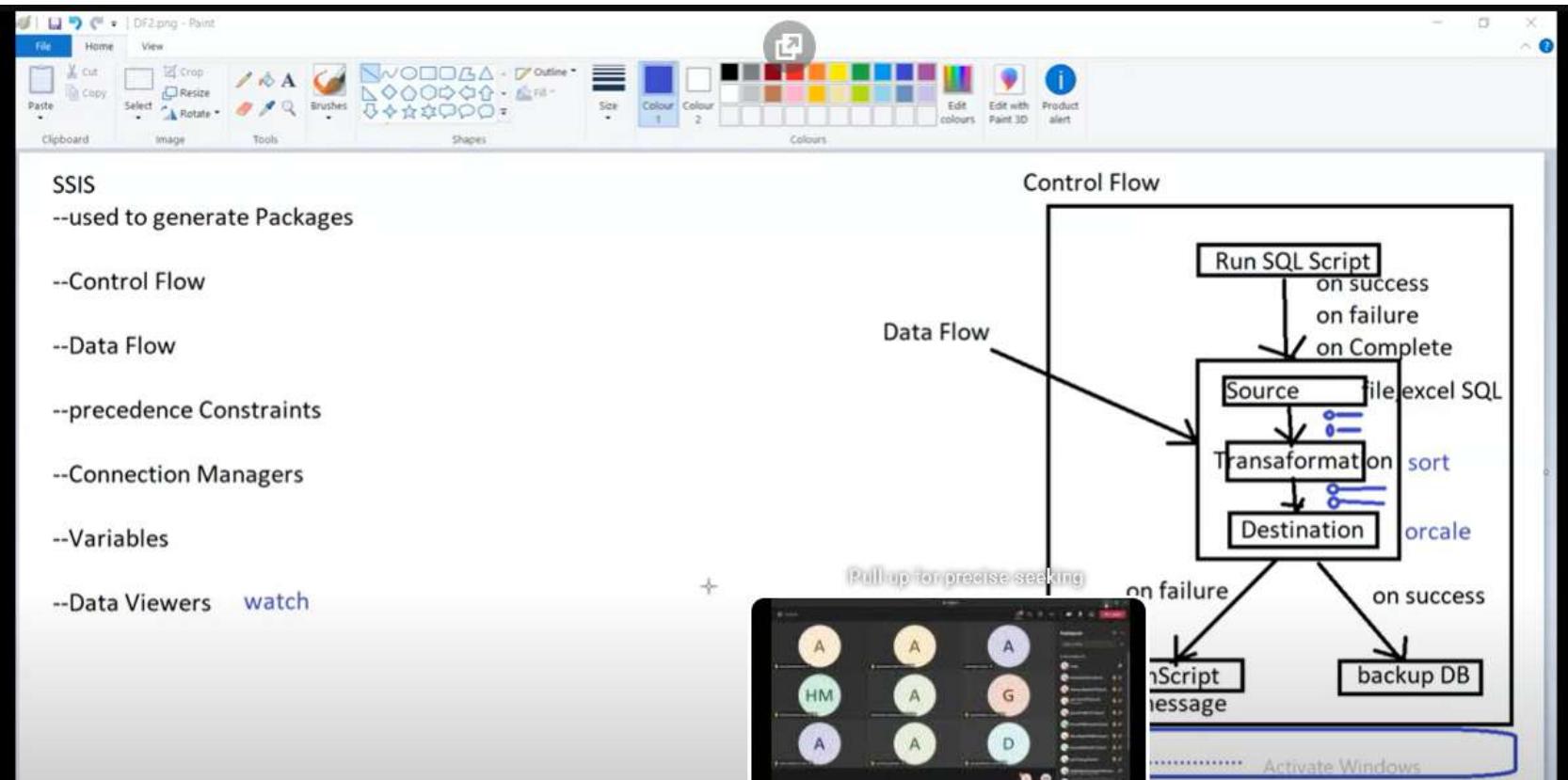
--precedence Constraints

--Connection Managers

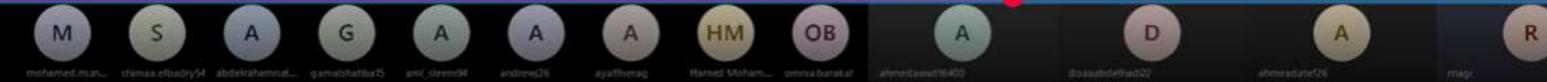
--Variables

--Data Viewers watch





◀ ▶ ⏪ ⏩ 2:02:25 / 3:19:27



1-What is business Intelligence, SQL Server Integration Service-SSIS

SSIS

--used to generate Packages

--Control Flow

--Data Flow

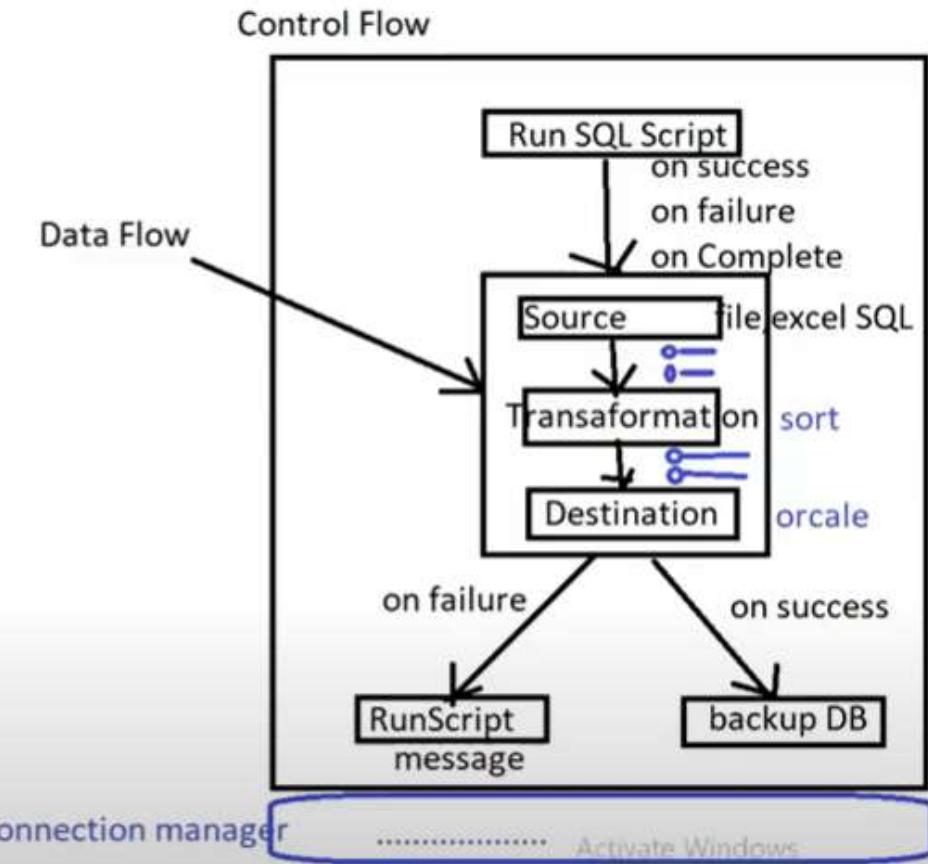
--precedence Constraints

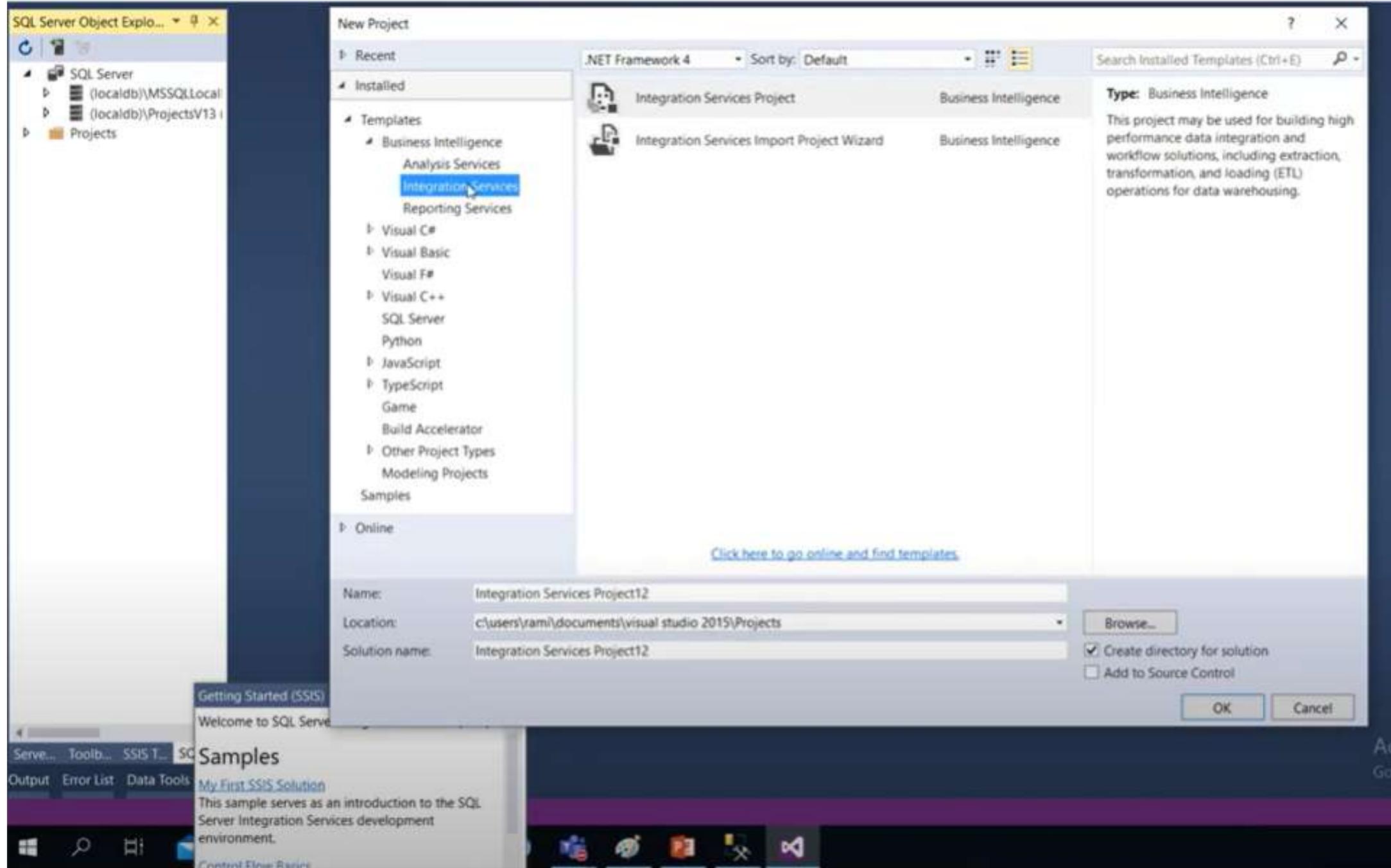
--Connection Managers

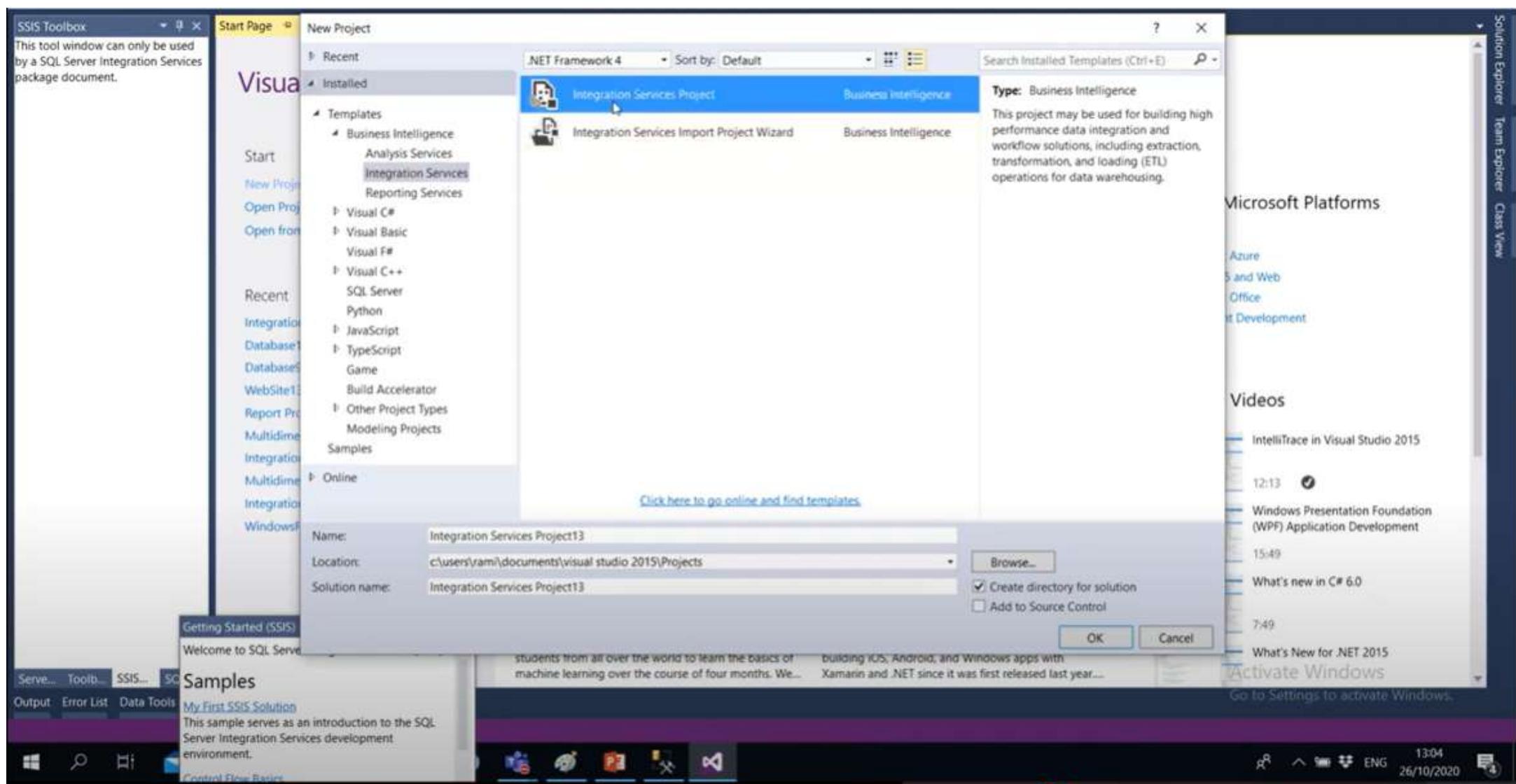
--Variables

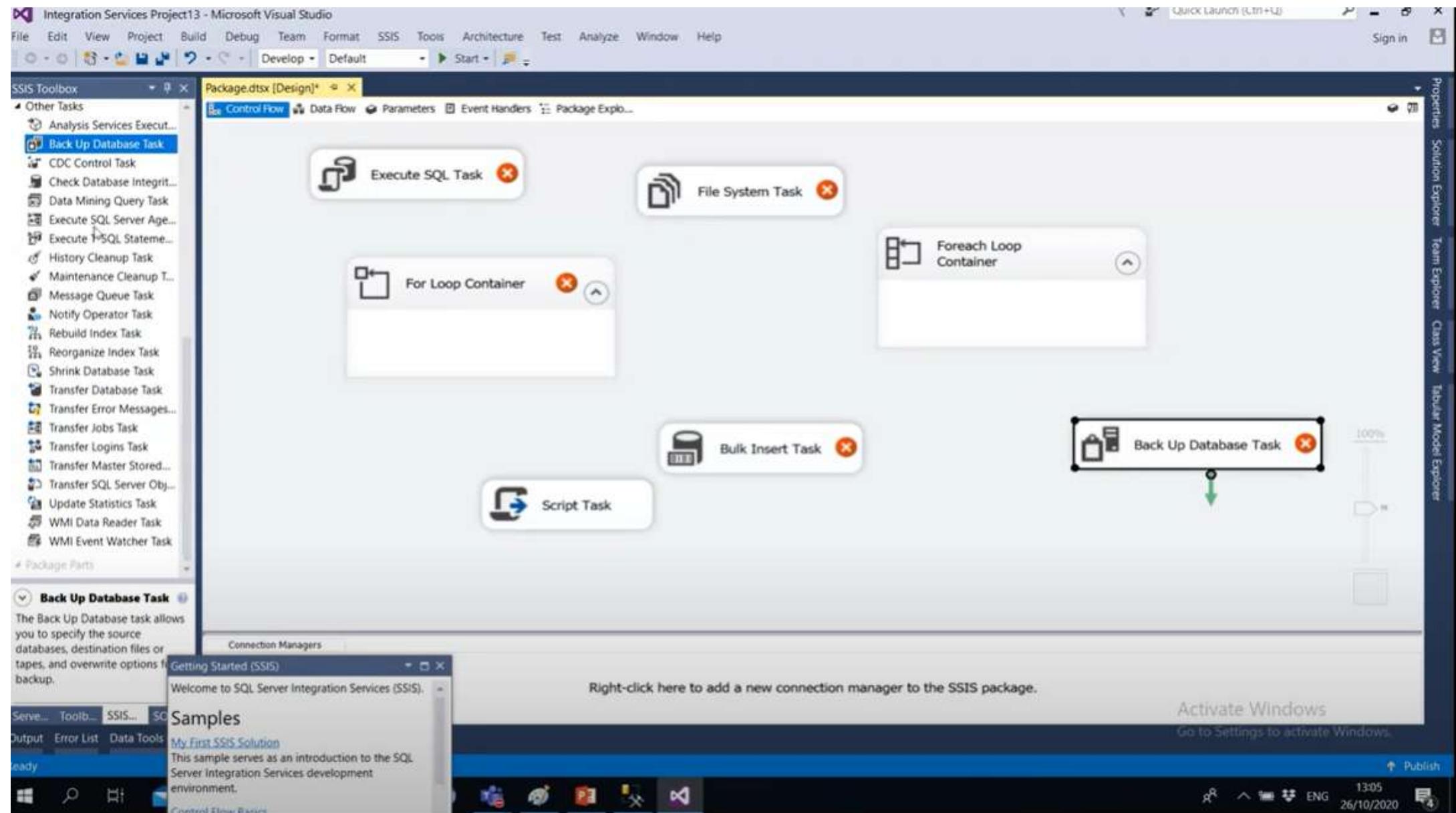
--Data Viewers watch

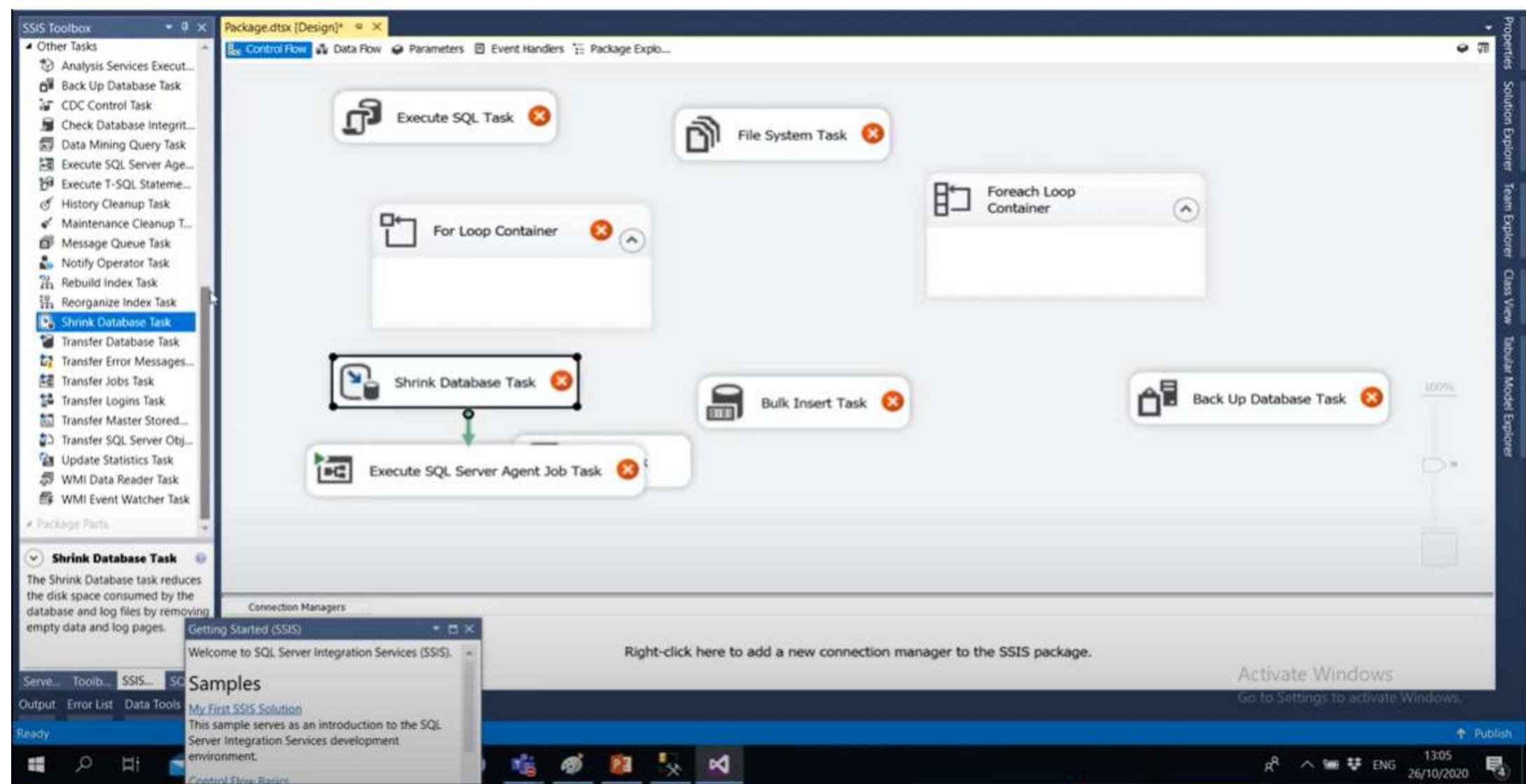
+

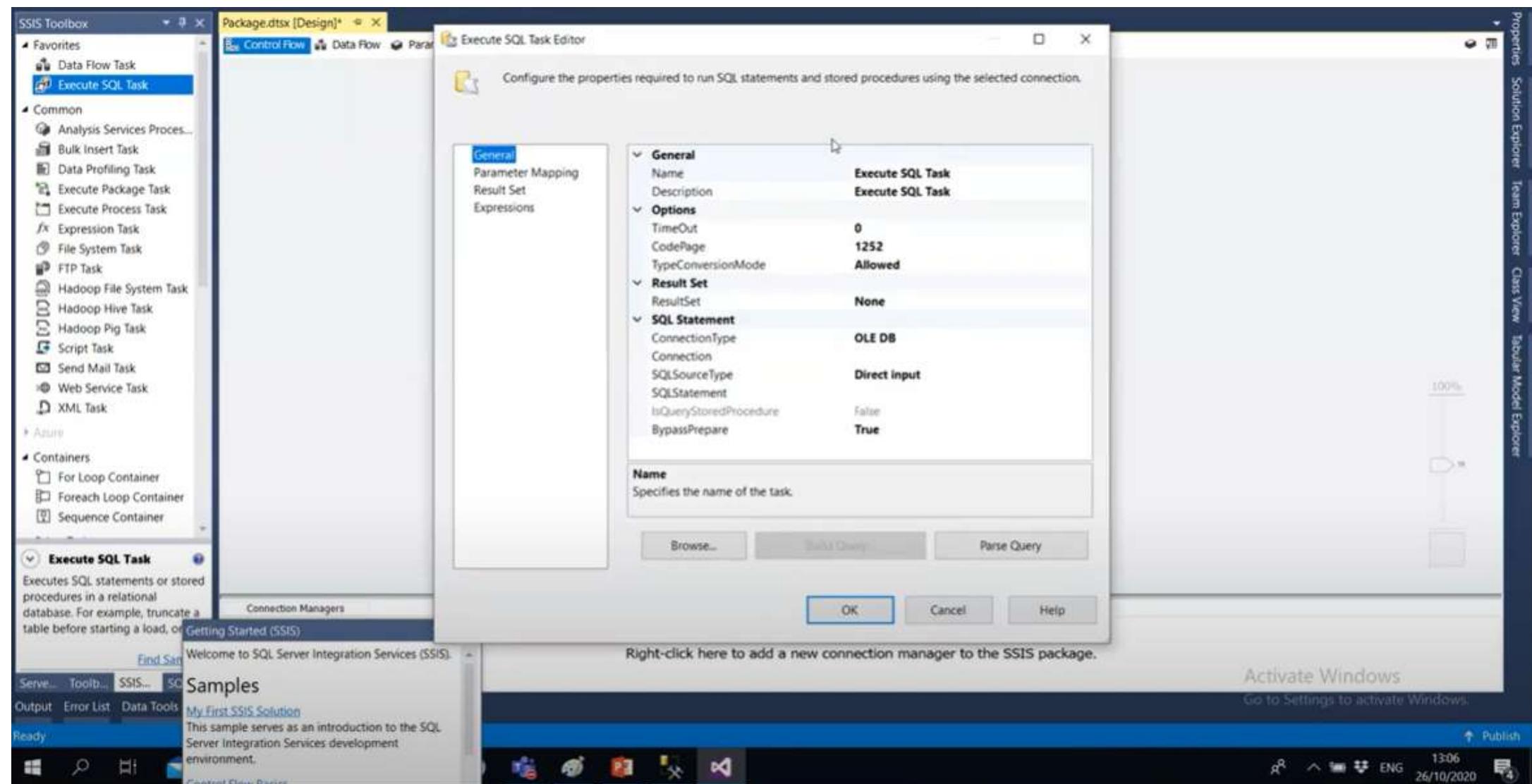












SSIS Toolbox

This tool window can only be used by a SQL Server Integration Services package document.

Package.dtsx [XML] * X Package.dtsx [Design]*

```
DT Close SID="{D83E9637-3C93-497C-AB19-497C5220FED2}"
DTS:ExecutableType="Microsoft.ExecuteSQLTask"
DTS:LocaleID="-1"
DTS:ObjectName="Execute SQL Task"
DTS:TaskContact="Execute SQL Task; Microsoft Corporation; SQL Server 2016; © 2015 Microsoft Corporation; All rights reserved."
DTS:ThreadHint="0"
<DTS:Variables />
<DTS:ObjectData>
    <SQLTask:SqlTaskData xmlns:SQLTask="www.microsoft.com/sqlserver/dts/tasks/sqltask" />
</DTS:ObjectData>
</DTS:Executable>
</DTS:Executables>
<DTS:DesignTimeProperties><![CDATA[<?xml version="1.0"?>
<!--This CDATA section contains the layout information of the package. The section includes information such as (x,y) coordinates for controls, control sizes, and colors. If you manually edit this section and make a mistake, you can delete it. -->
<!--The package will still be able to load normally but the previous layout information will be lost and the design surface will not reflect the changes. -->
<Objects>
    <Version="8">
        <!--Each node below will contain properties that do not affect runtime behavior.-->
        <Package
            design-time-name="Package">
            <LayoutInfo>
                <GraphLayout
                    xmlns="clr-namespace:Microsoft.SqlServer.IntegrationServices.Designer.Model.Serialization;assembly=Microsoft.SqlServer.IntegrationServices.Designer.Model">
```

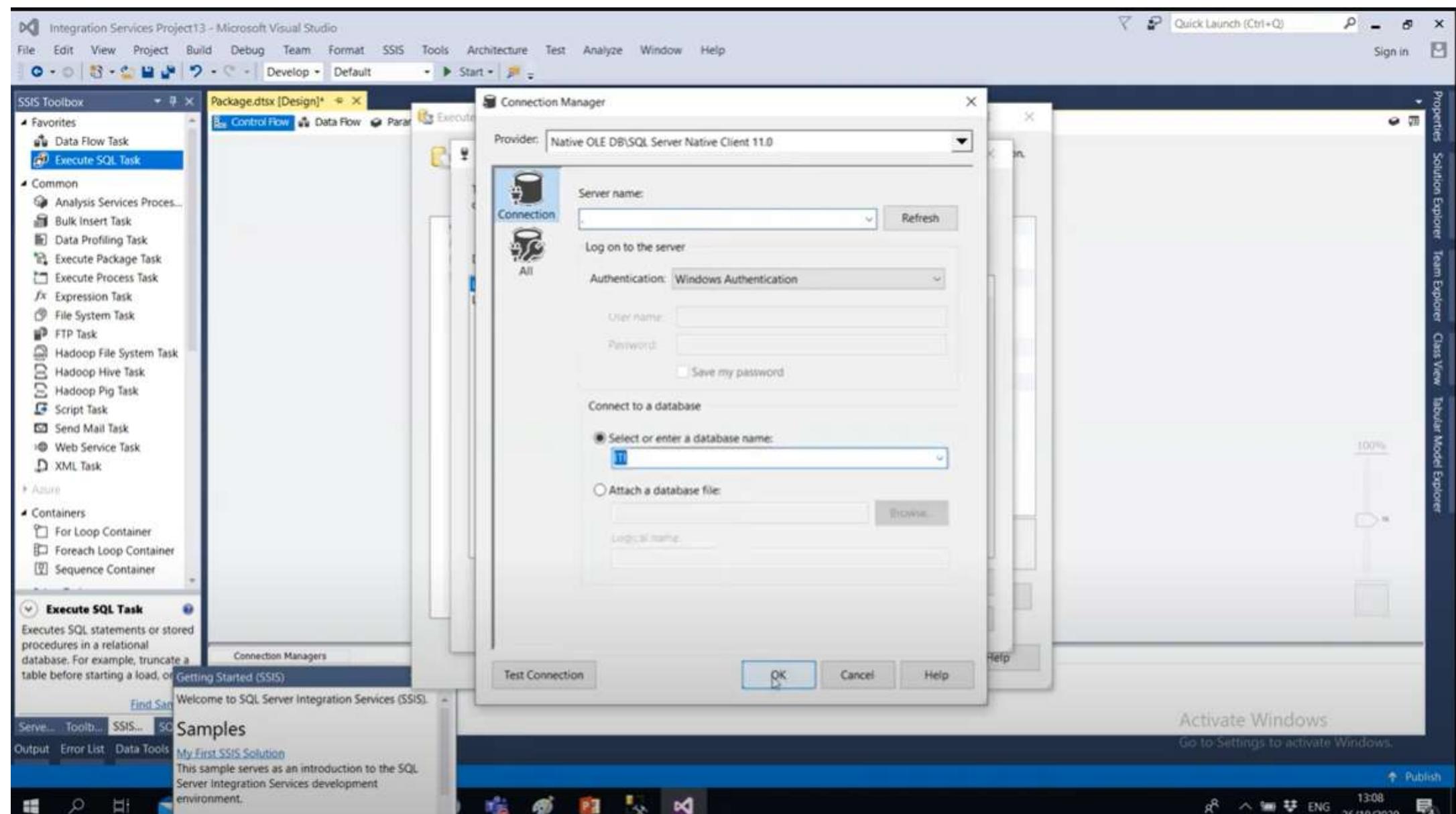
Getting Started (SSIS)

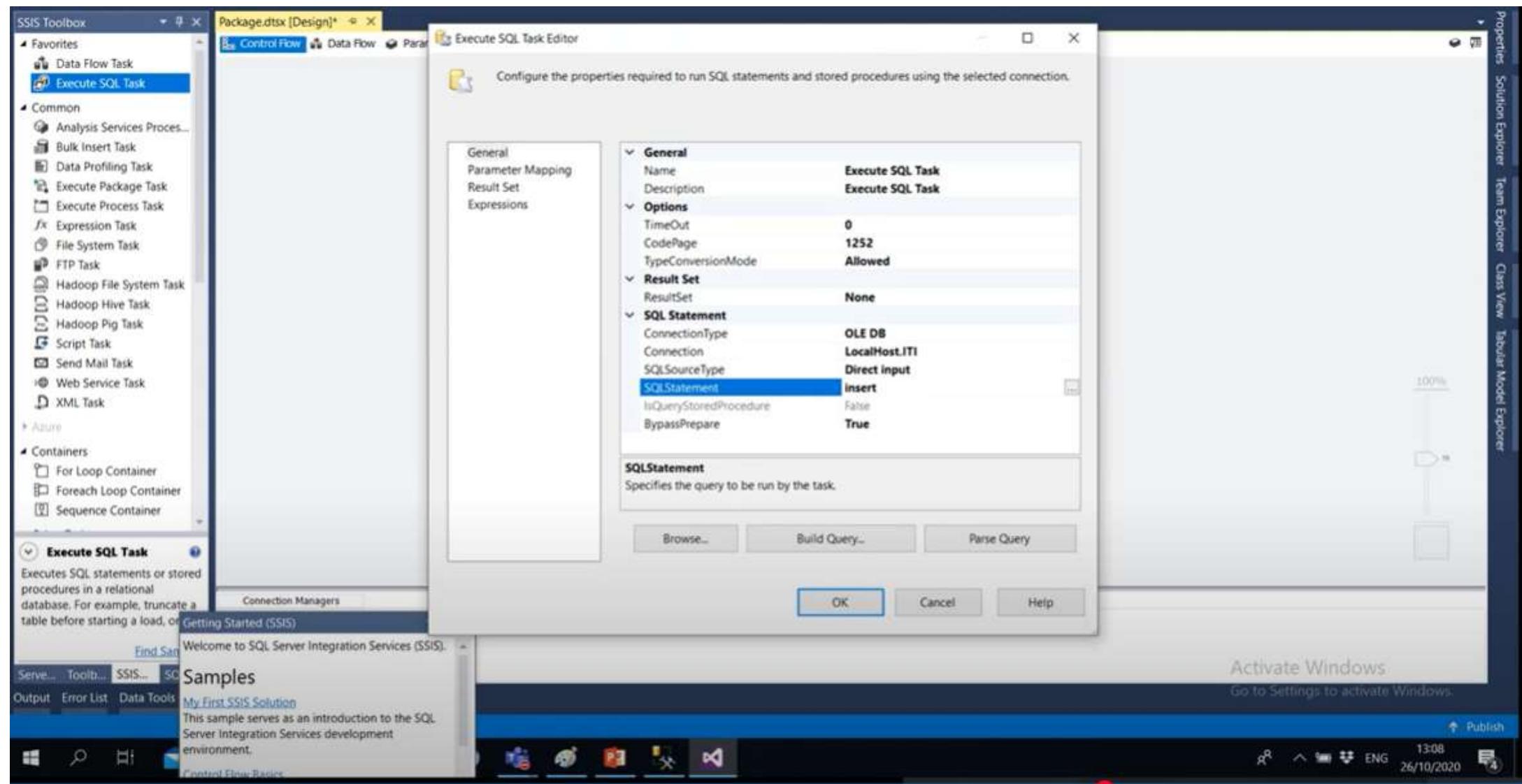
Welcome to SQL Server Integration Services (SSIS).

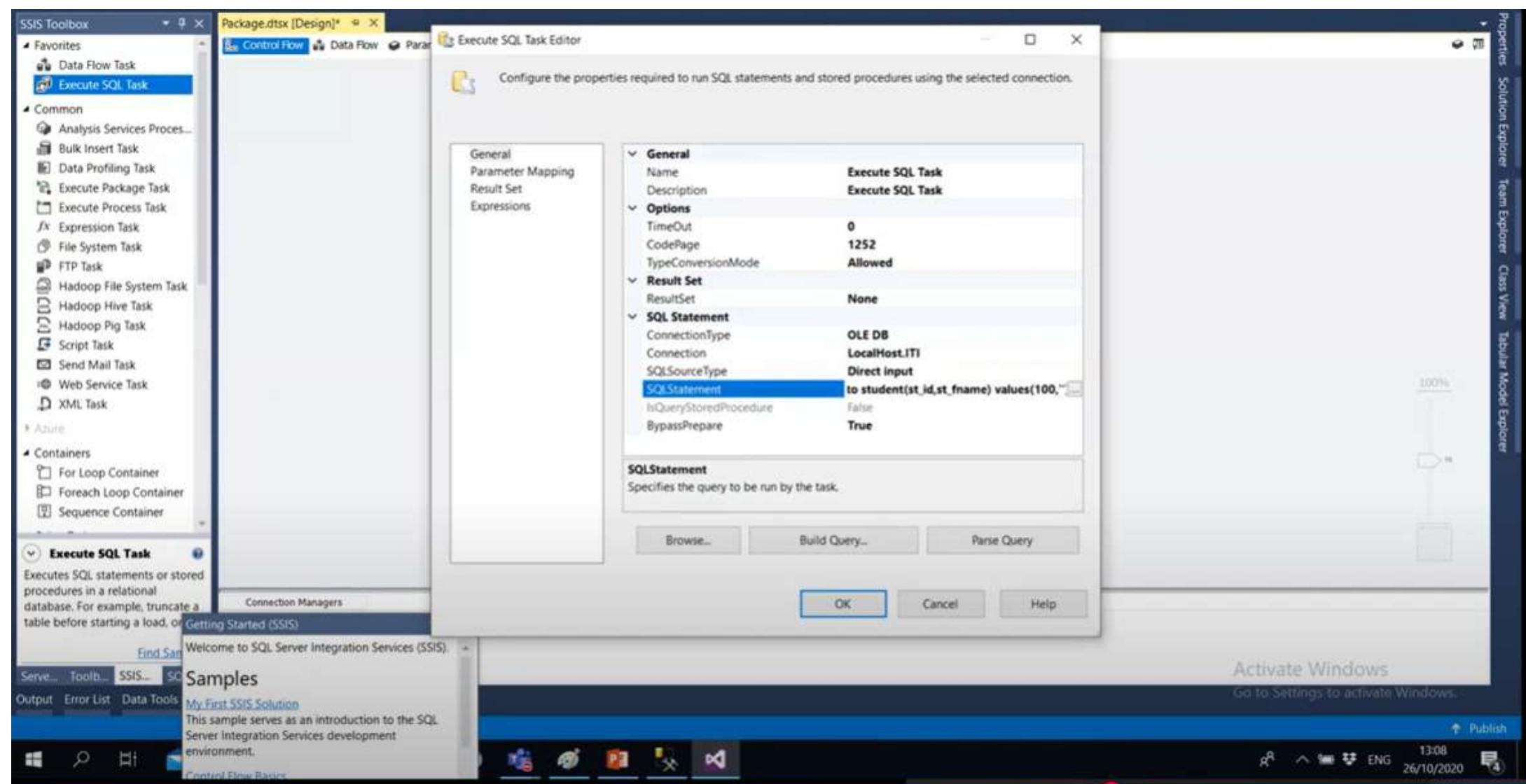
Serve... Toolbar SSIS... Output Error List Data Tools Samples My First SSIS Solution This sample serves as an introduction to the SQL Server Integration Services development environment.

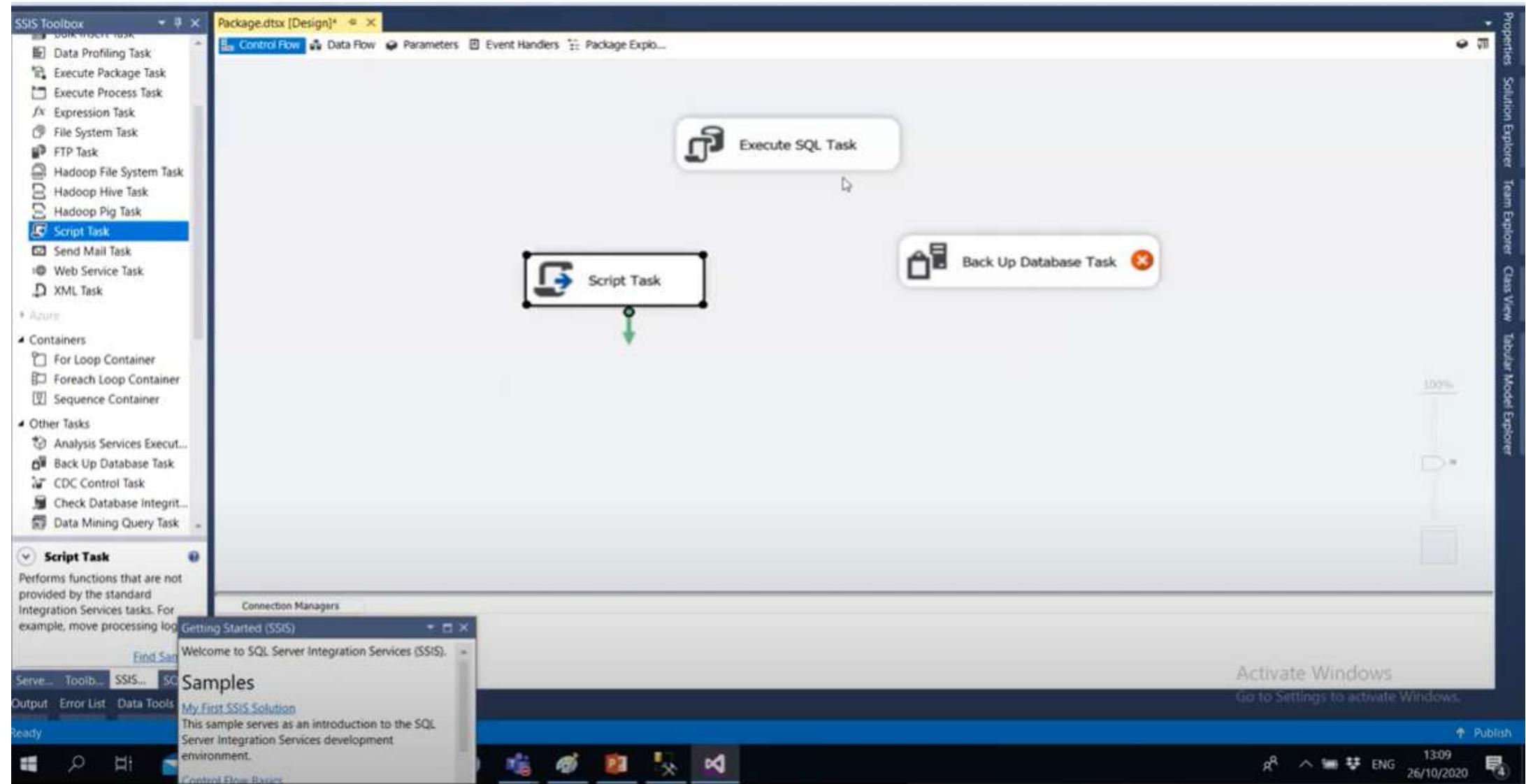
Activate Windows Go to Settings to activate Windows.

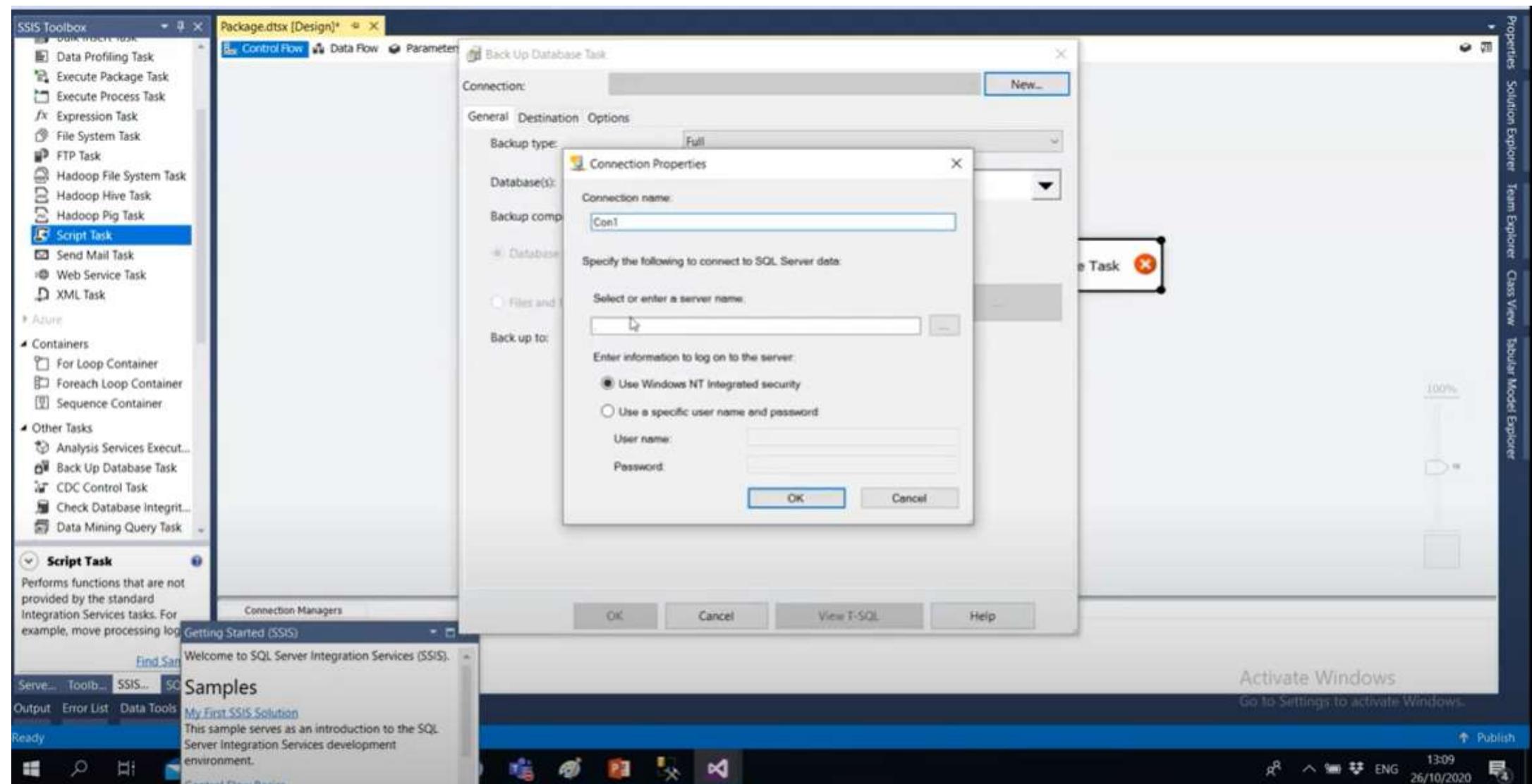
13:07 26/10/2020

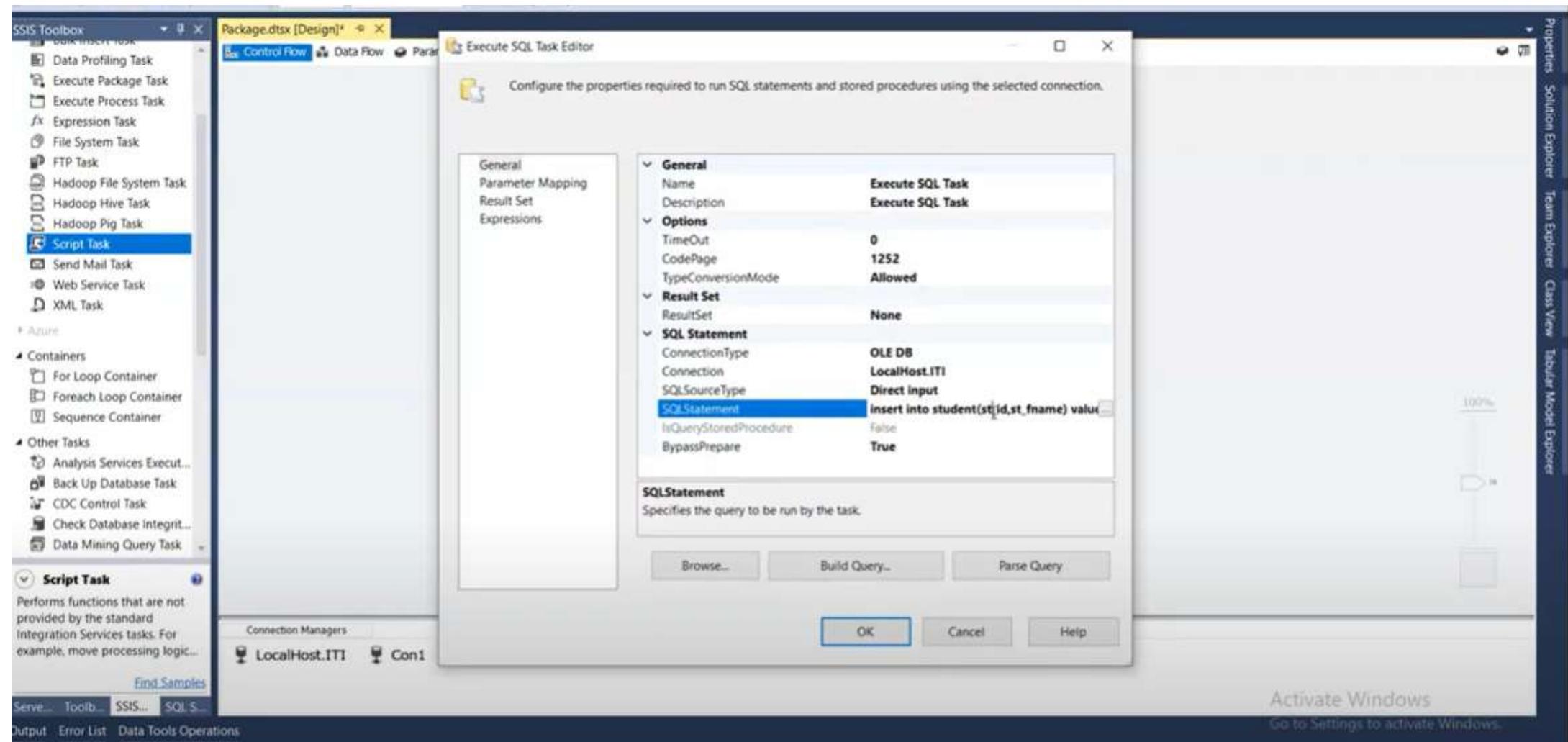


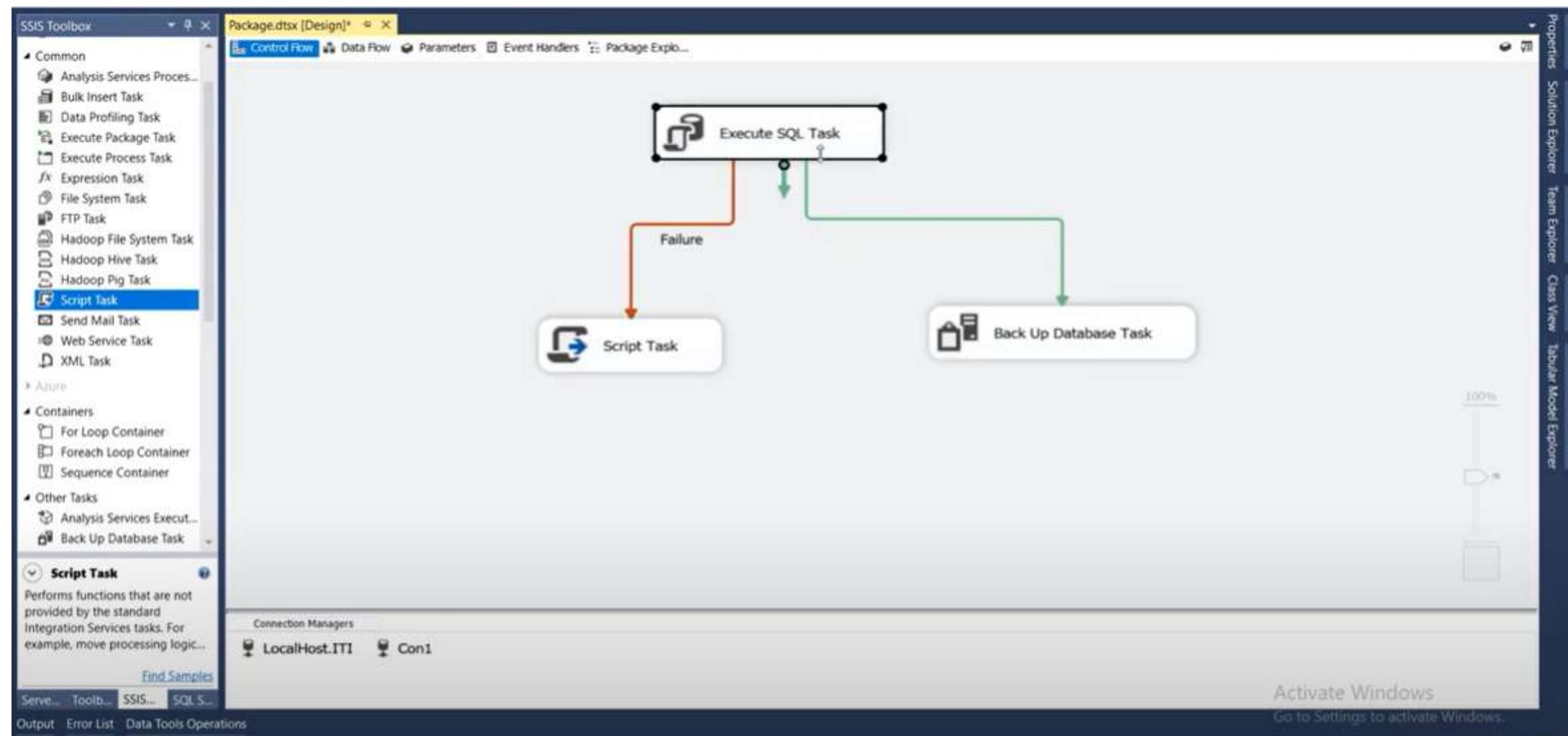


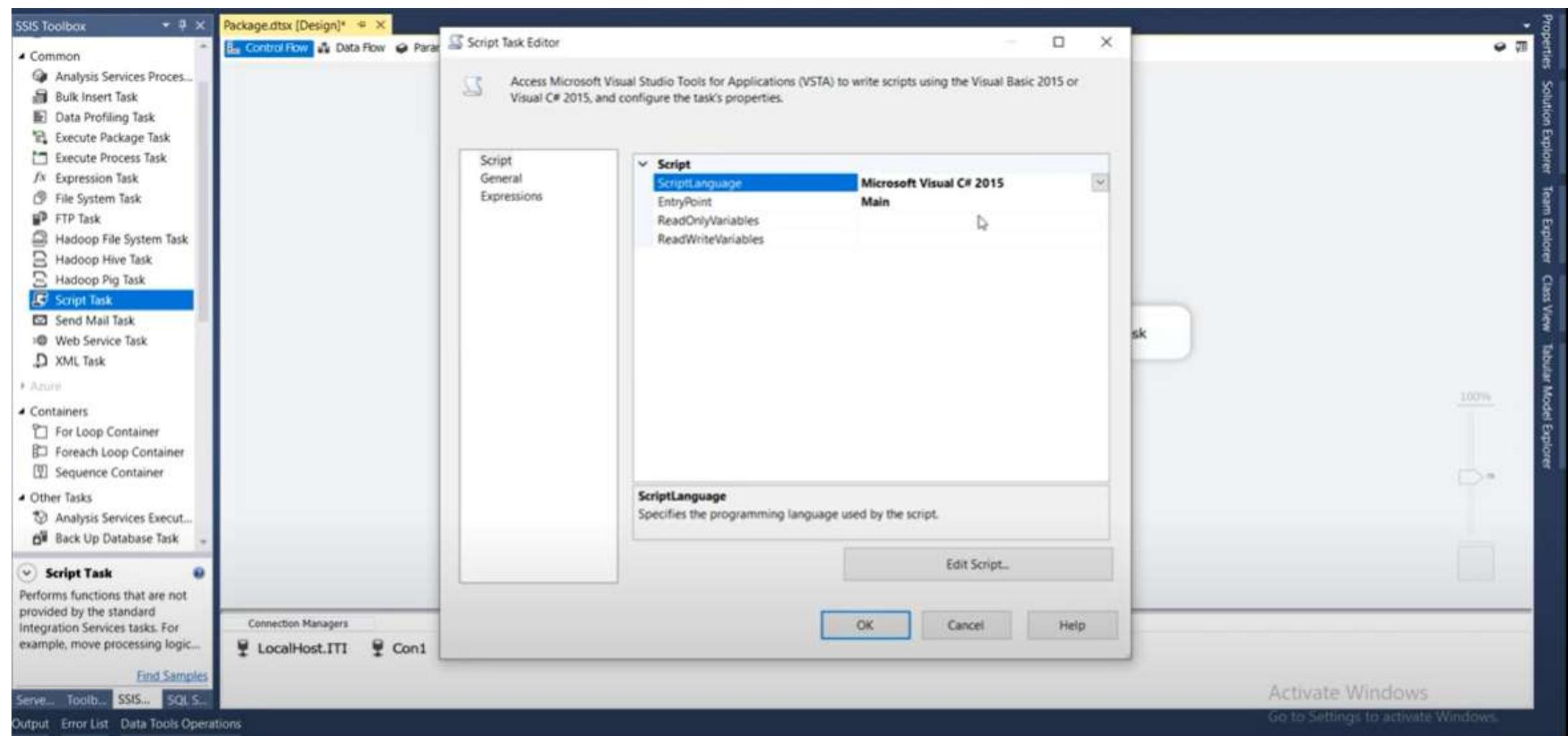












SQL Server Object Explor... X

ScriptMain.cs* X

ST_c26d33a39d184a3c8cf5ed8abbfc9804

ST_c26d33a39d184a3c8cf5ed8abbfc9804.ScriptMain

Main()

```
25
26     Help: Using Integration Services variables and parameters in a script
52
53     Help: Firing Integration Services events from a script
66
67     Help: Using Integration Services connection managers in a script
84
85
86     /// <summary>
87     /// This method is called when this script task executes in the control flow.
88     /// Before returning from this method, set the value of Dts.TaskResult to indicate success or failure.
89     /// To open Help, press F1.
90     /// </summary>
91     public void Main()
92     {
93         MessageBox.Show("error in Insert");
94     }
95
96     ScriptResults declaration
109
110 }
111 }
```

Getting Started (SSIS)

Welcome to SQL Server Integration Services (SSIS).

Samples

My First SSIS Solution

This sample serves as an introduction to the SQL Server Integration Services development.

Activate Windows

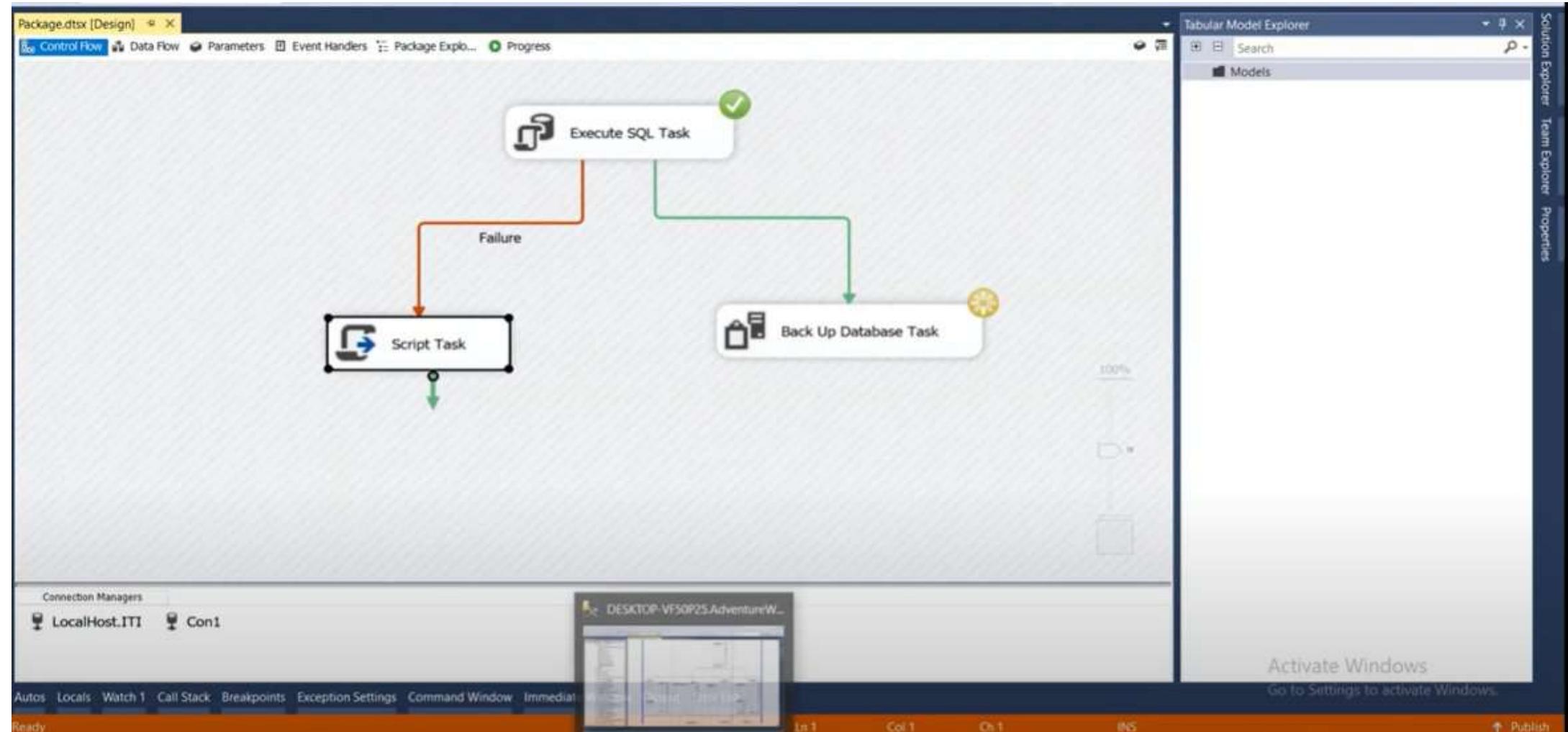
Go to Settings to activate Windows.

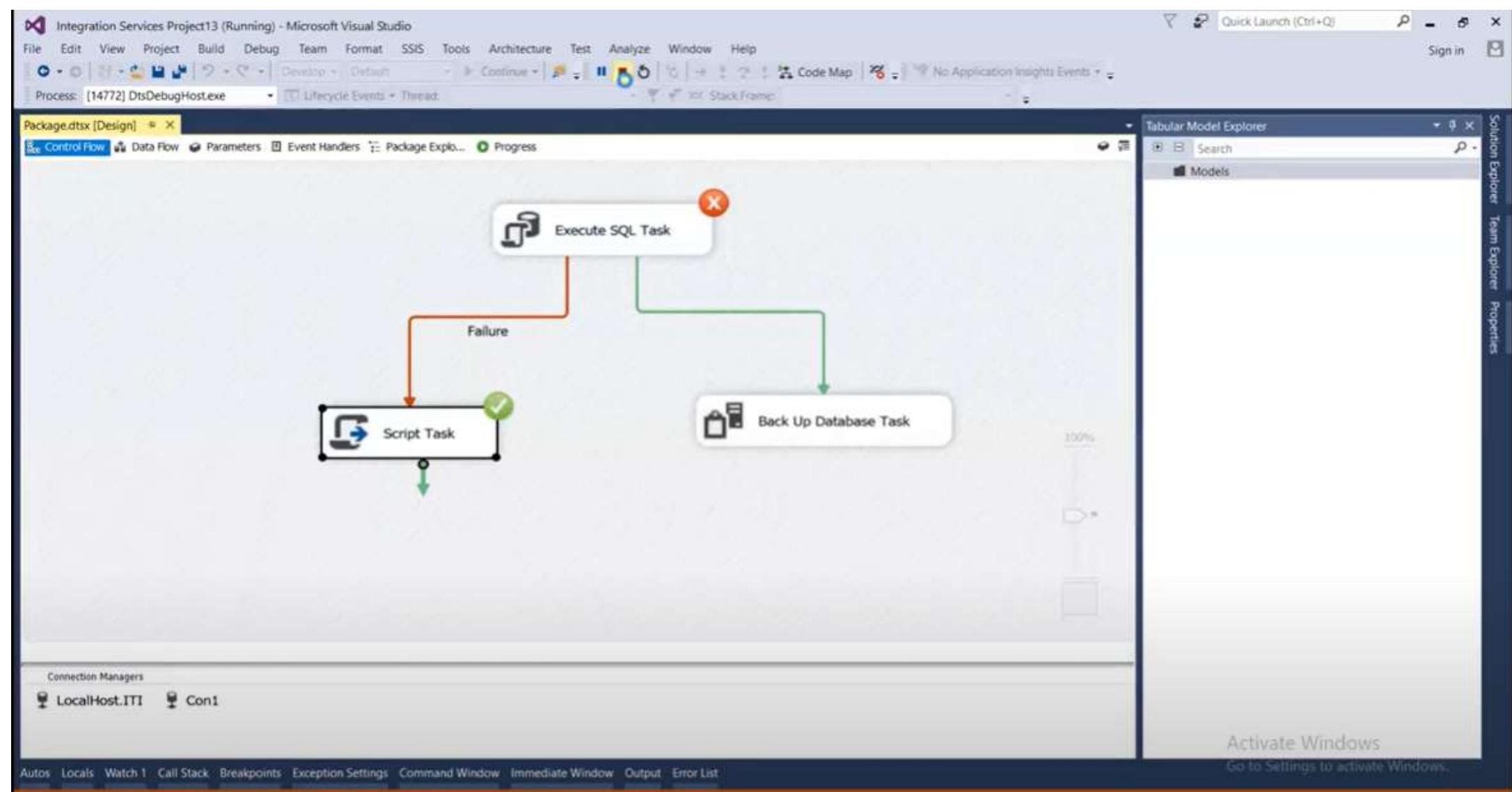
SSIS Toolbox SQL Server

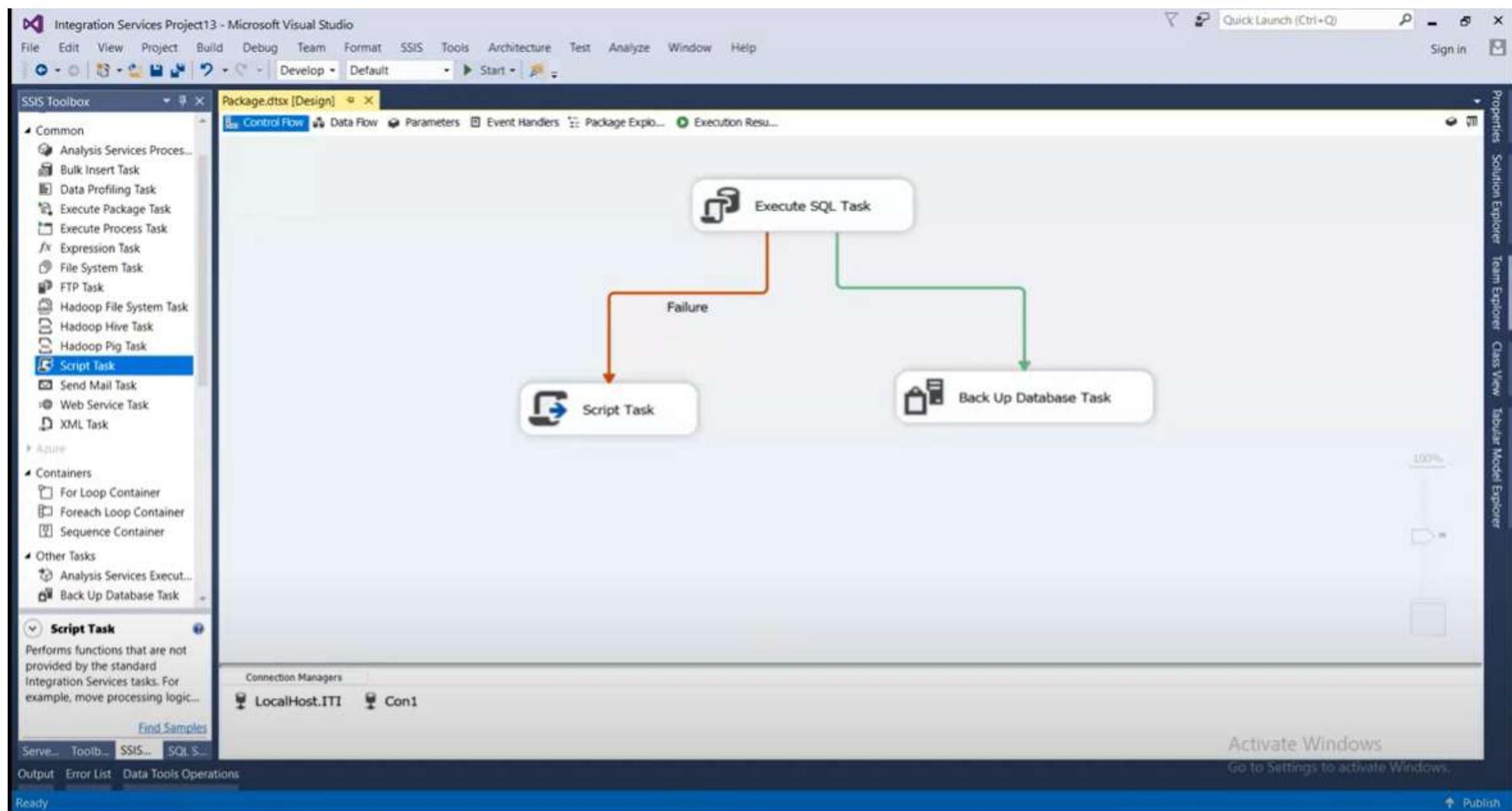
Output Error List Data

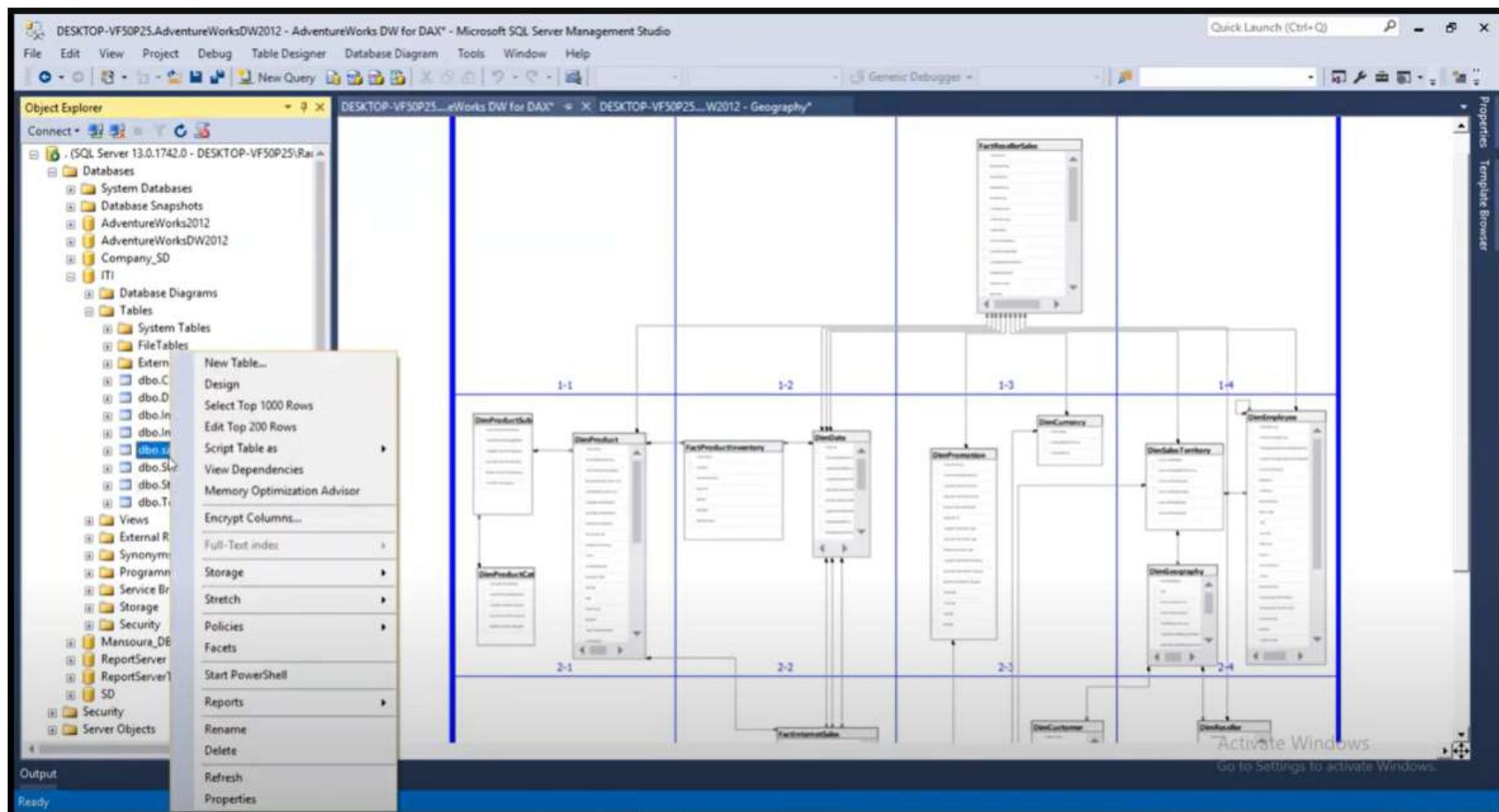
Ready

In 93 Col 48 Ch 48 INS





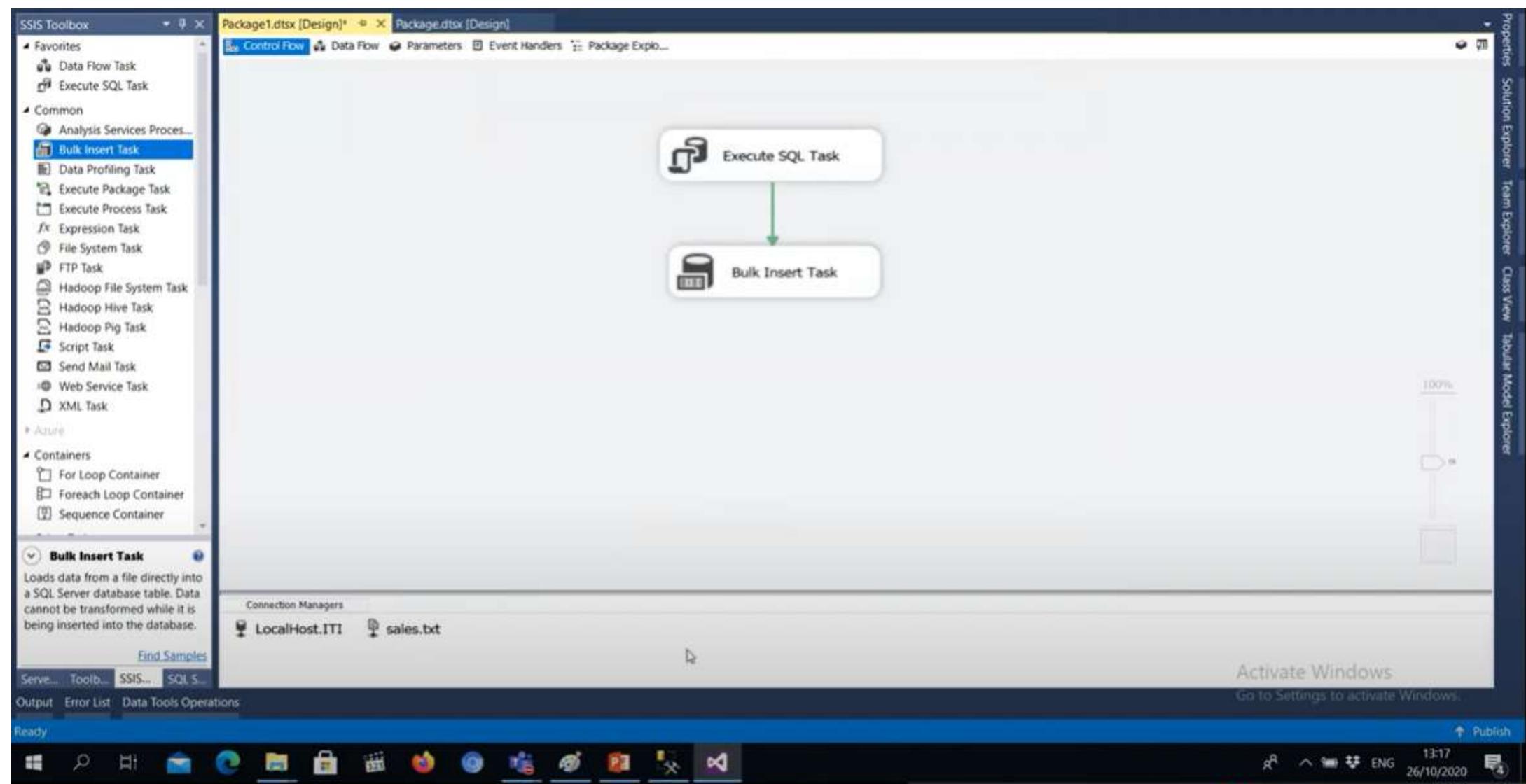


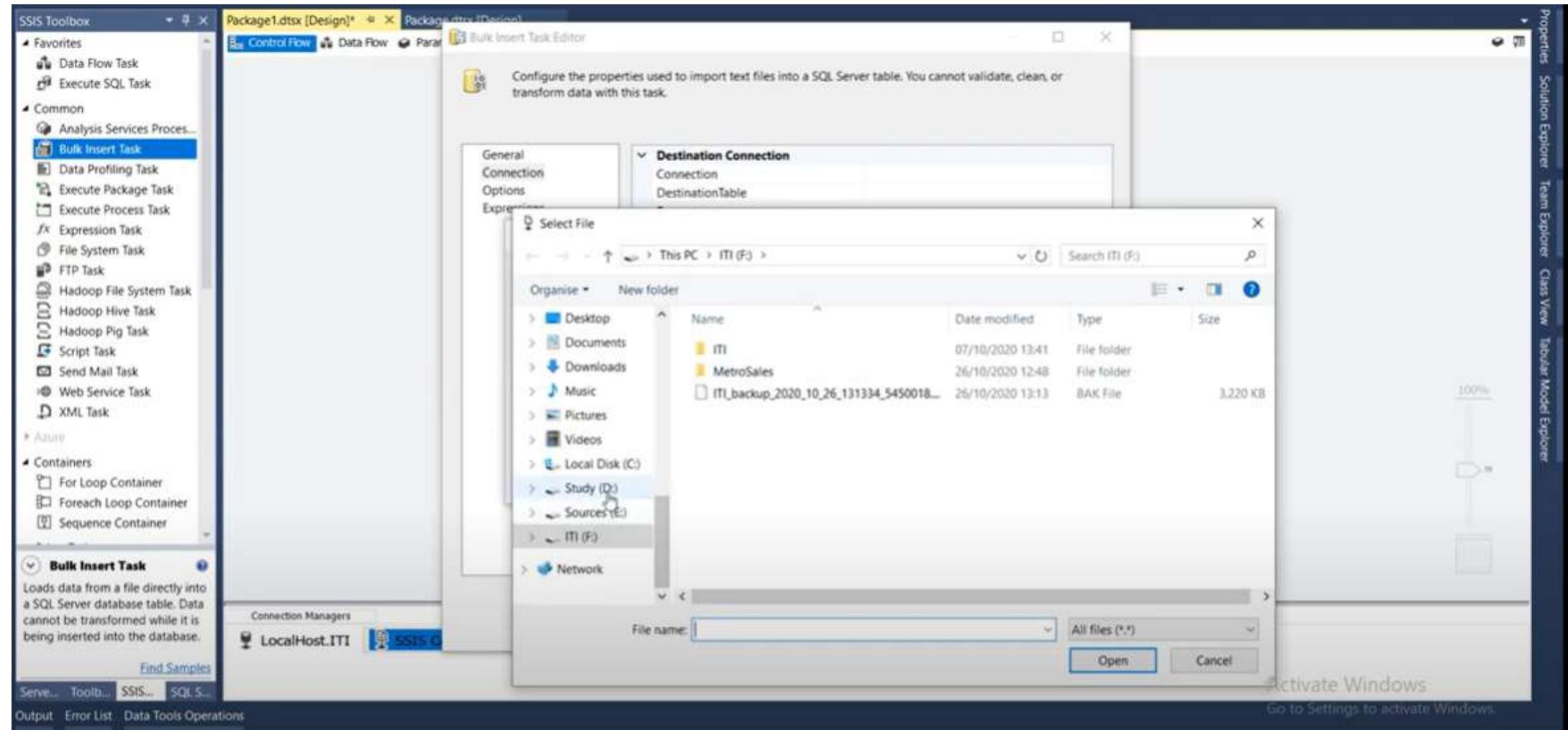


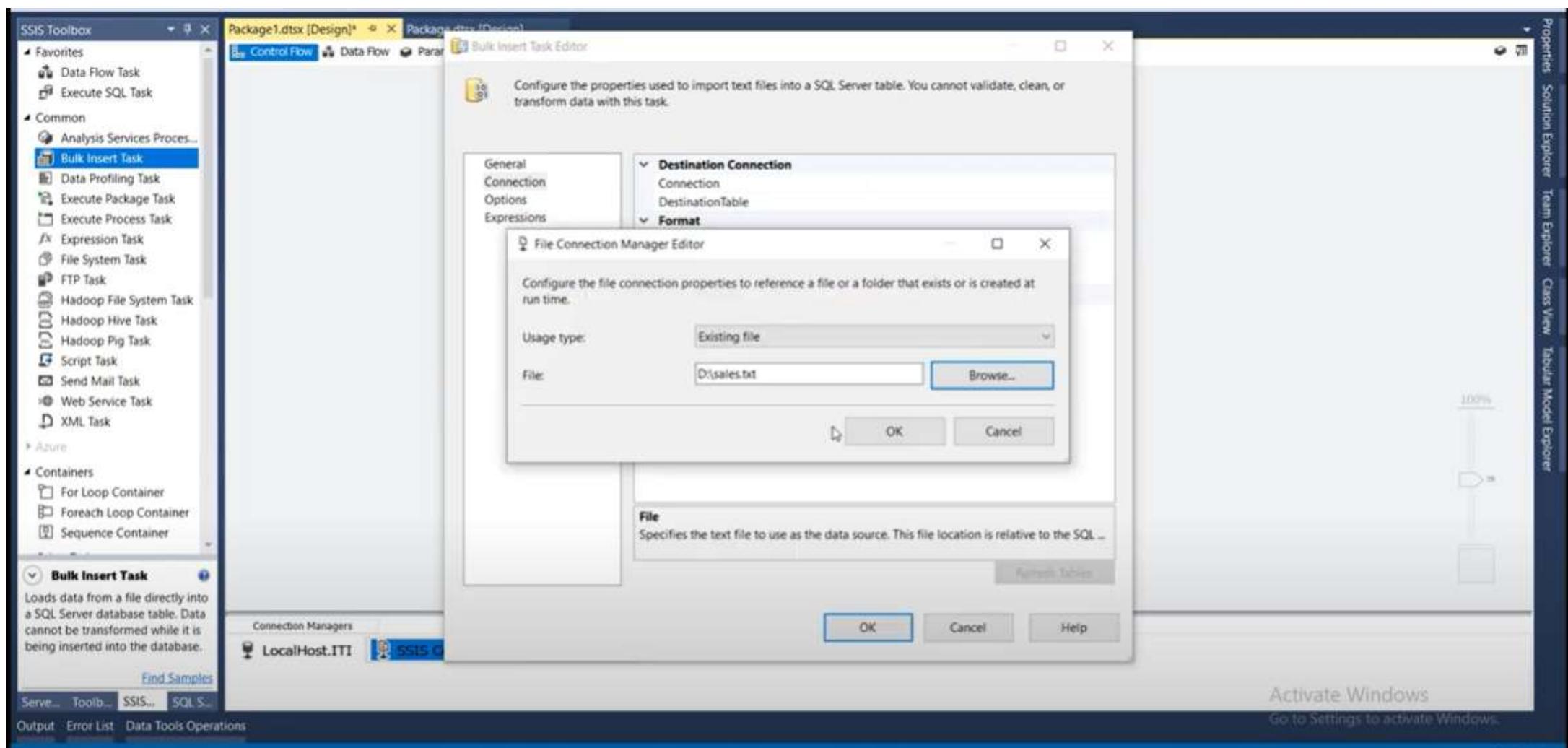
sales.txt - Notepad

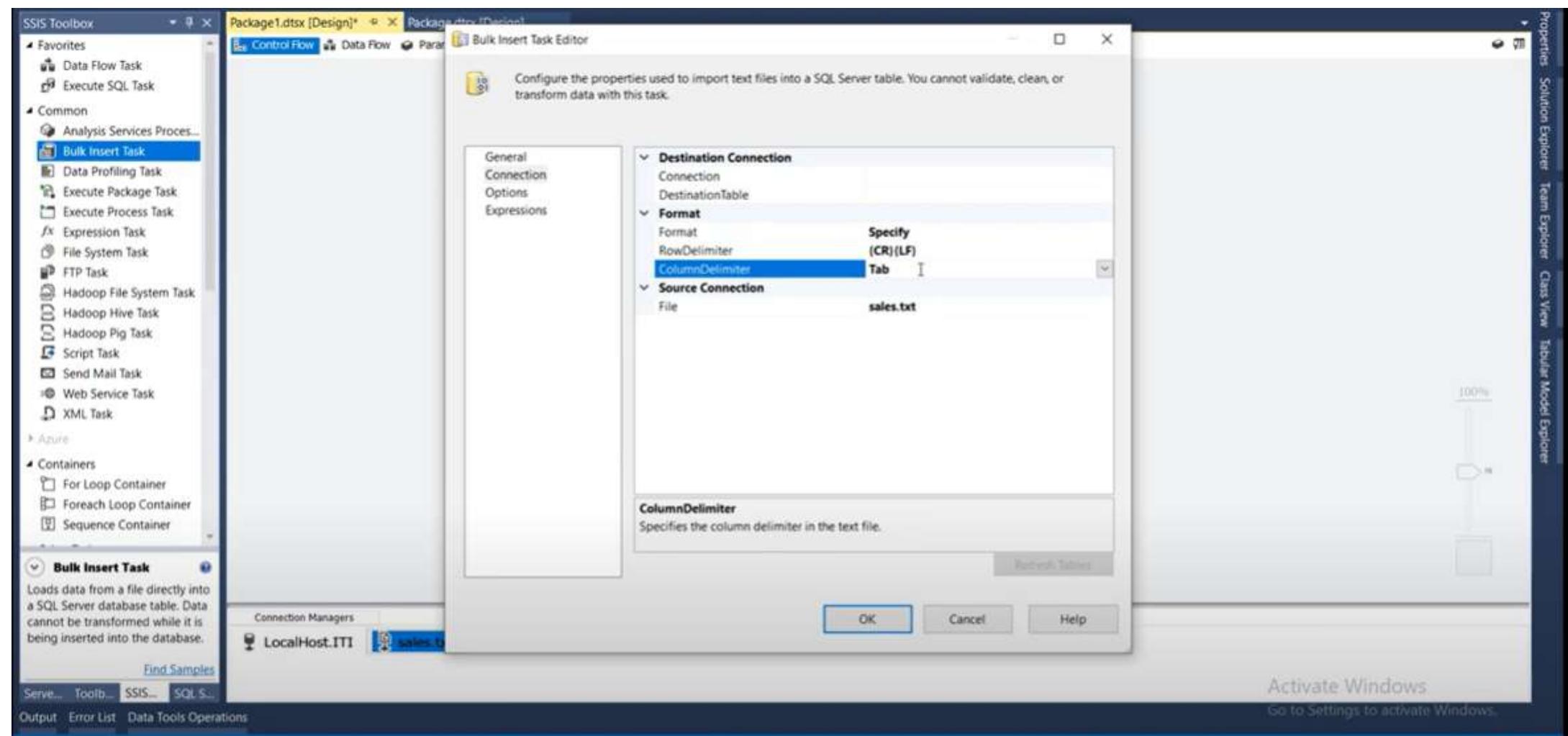
File Edit Format View Help

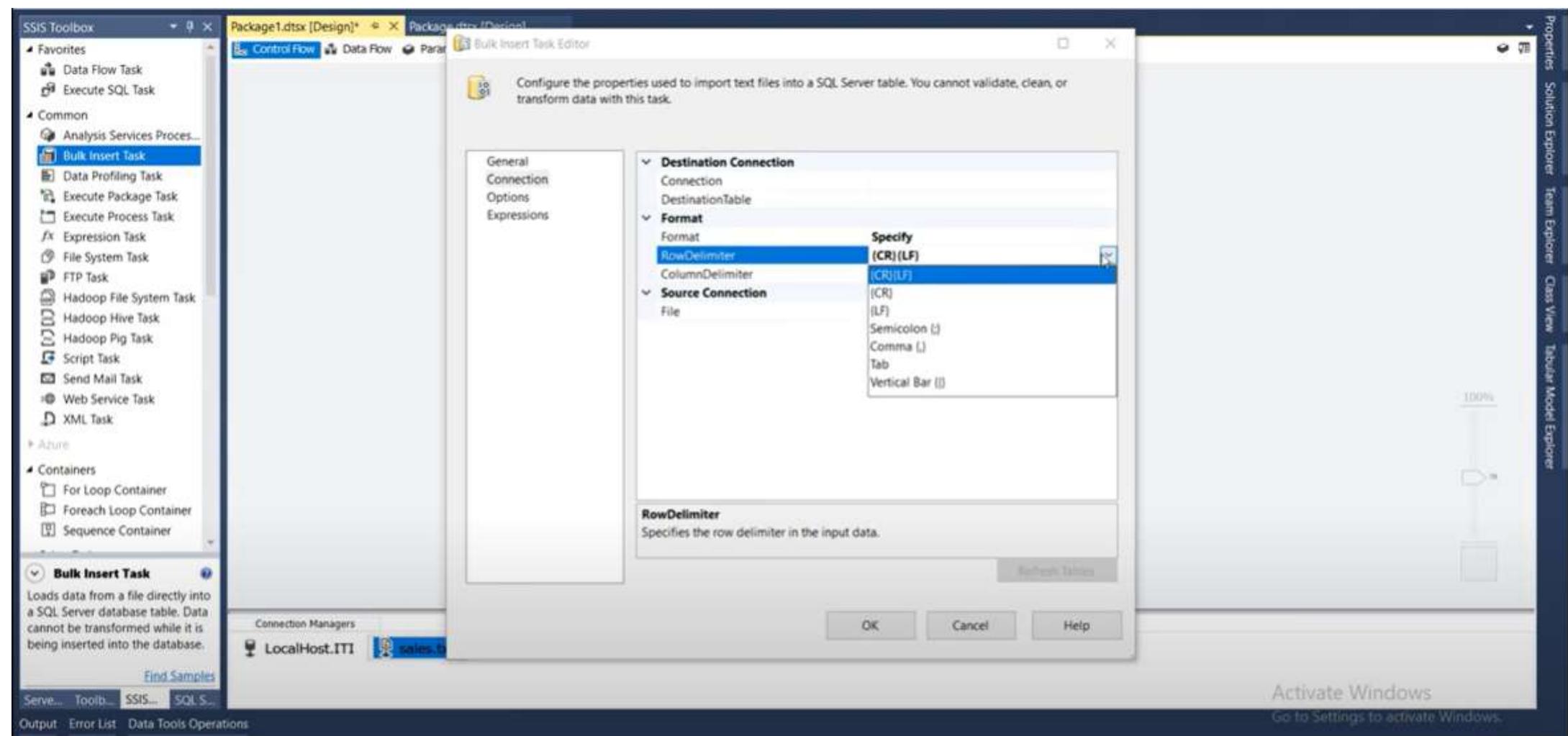
1, ahmed, 10
1, khalid, 20
1, ali, 45
2, ahmed, 15
2, khalid, 30
2, ali, 20
3, ahmed, 30
4, ali, 80
1, ahmed, 25
1, khalid, 10
1, ali, 100
2, ahmed, 55
2, khalid, 40
2, ali, 70
3, ahmed, 30
4, ali, 90
3, khalid, 30
4, khalid, 90

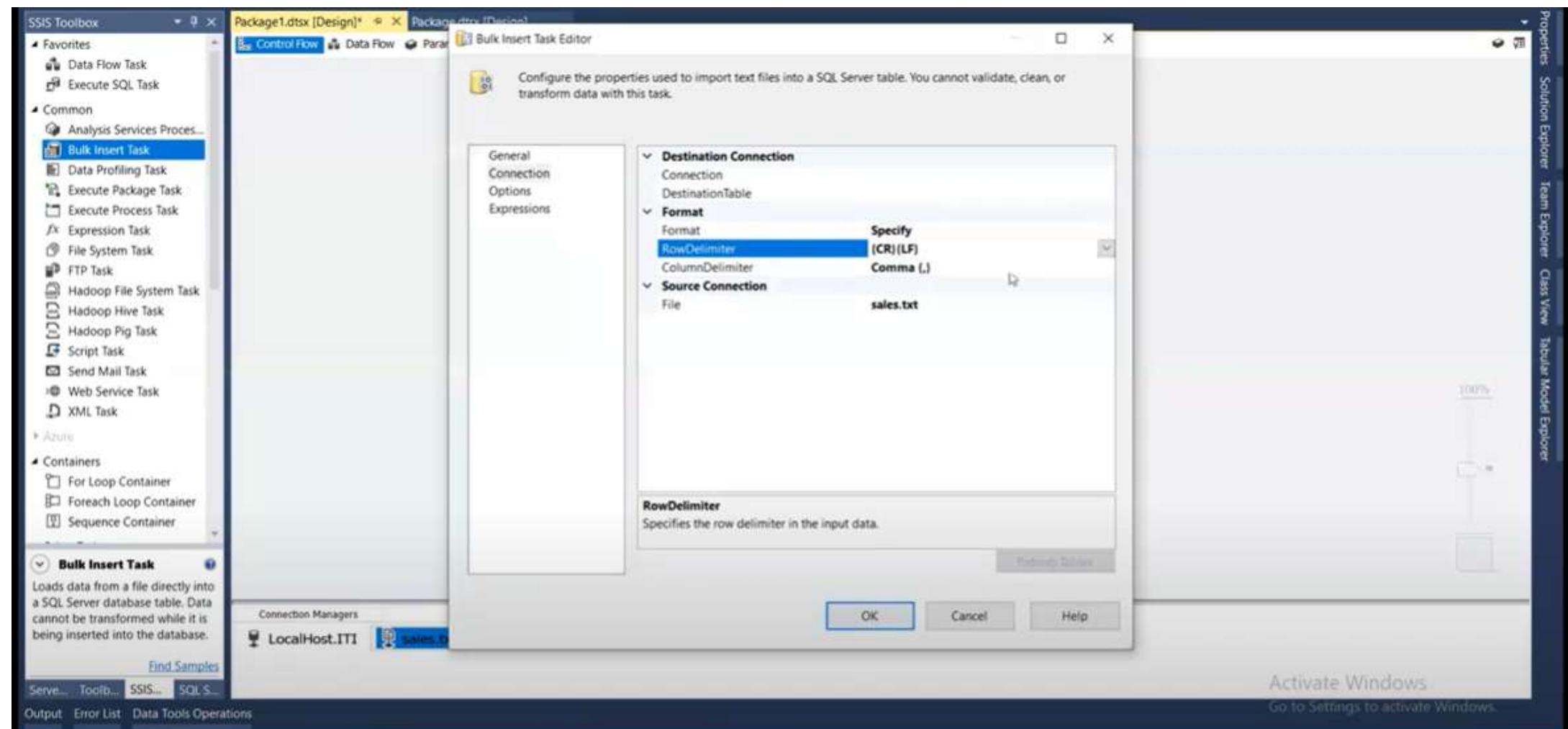


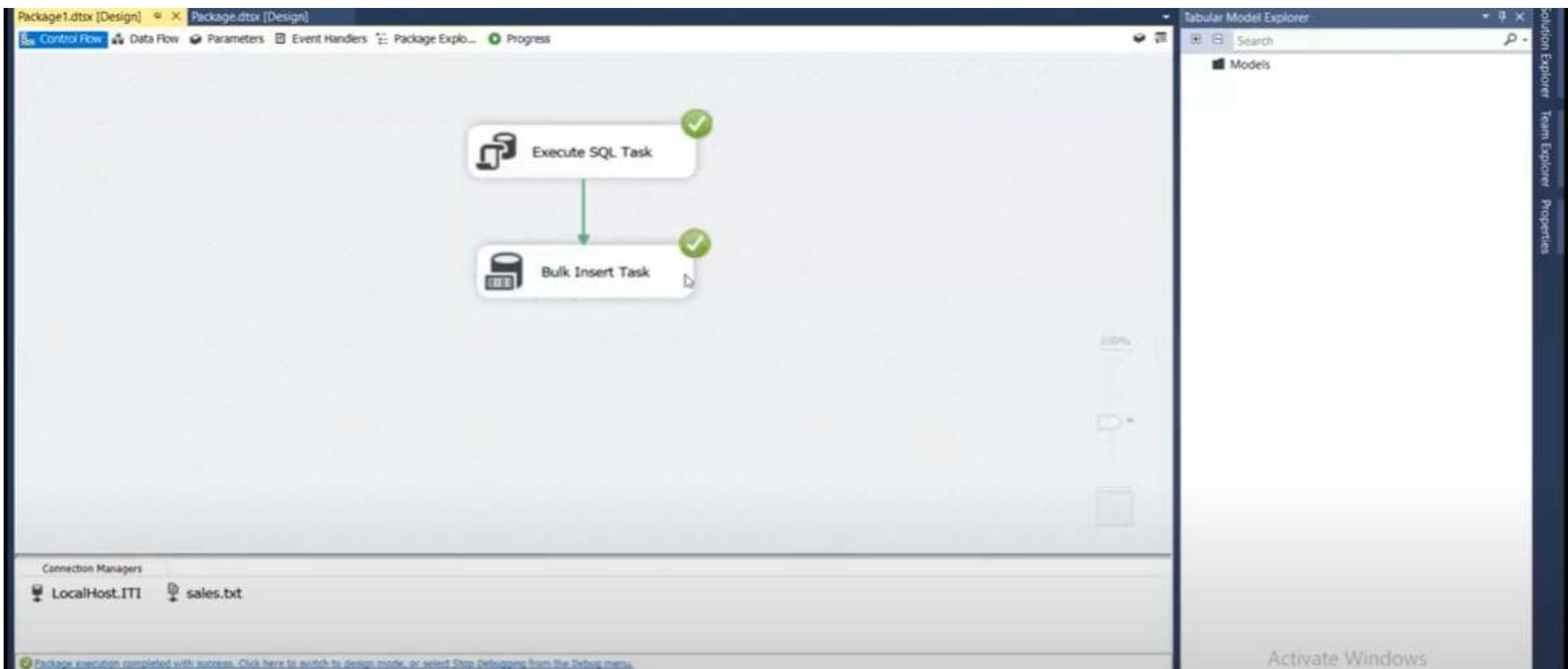


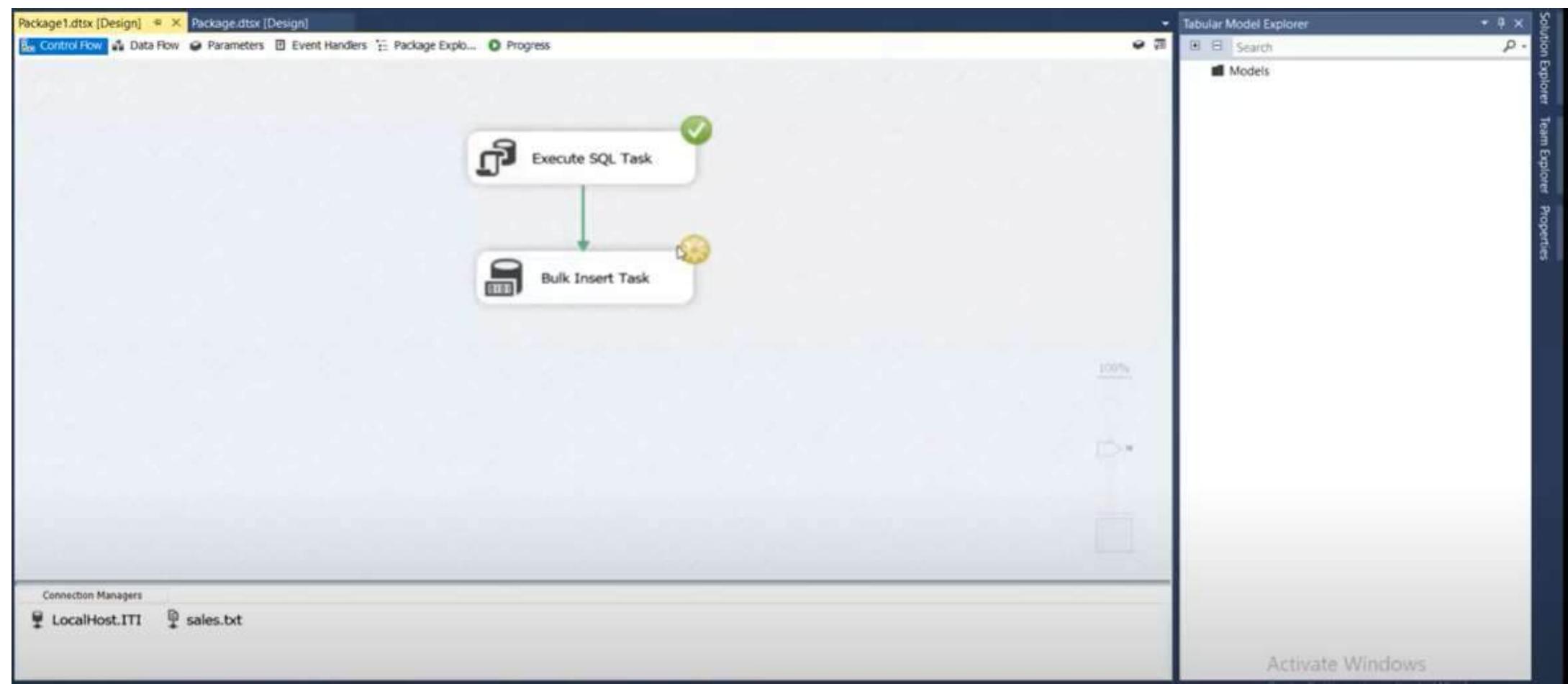












Object Explorer

Connect ▾

(SQL Server 13.0.1742.0 - DESKTOP-VF50P25\RAI)

- Databases
 - System Databases
 - Database Snapshots
 - AdventureWorks2012
 - AdventureWorksDW2012
 - Company_SD
- ITI
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - dbo.Course
 - dbo.Department
 - dbo.Ins_Course
 - dbo.Instructor
 - dbo.sales
 - dbo.Stud_Course
 - dbo.Student
 - dbo.Topic
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
- Mansoura_DB
- ReportServer
- ReportServerTempDB
- SD
- Security
- Server Objects

DESKTOP-VF50P25\ITI - dbo.sales

DESKTOP-VF50P25\ITI - eWorks DW for DAX*

DESKTOP-VF50P25\ITI - Geography*

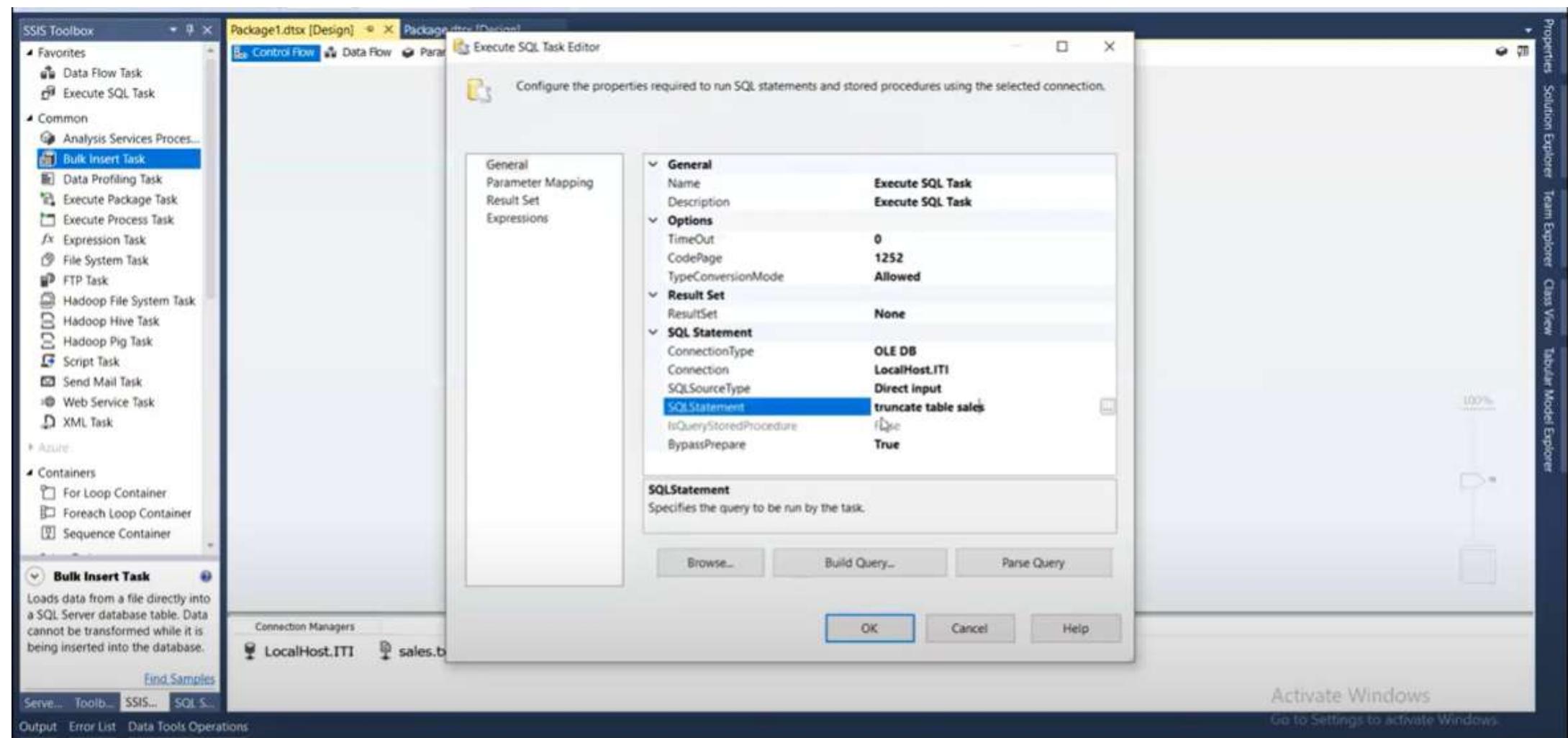
ProductID SalesmanName Quantity

1	ahmed	10
1	khalid	20
1	ali	45
2	ahmed	15
2	khalid	30
2	ali	20
3	ahmed	30
4	ali	80
1	ahmed	25
1	khalid	10
1	ali	100
2	ahmed	55
2	khalid	40
2	ali	70
3	ahmed	30
4	ali	90
3	khalid	30
4	khalid	90
NULL	NULL	NULL

Output

Activate Windows

Go to Settings to activate Windows.



◆ AI Overview

In SSIS (SQL Server Integration Services), "SQL Tasks" primarily refers to the Execute SQL Task. This task is a control flow component within an SSIS package that allows you to execute Transact-SQL statements or stored procedures against a database.

Purpose and Uses of the Execute SQL Task:

The Execute SQL Task is highly versatile and can be used for various database-related operations within an SSIS package, including:

Data Manipulation:

- Executing `INSERT`, `UPDATE`, and `DELETE` statements to modify data in tables.
- Truncating or deleting data from tables before loading new data.

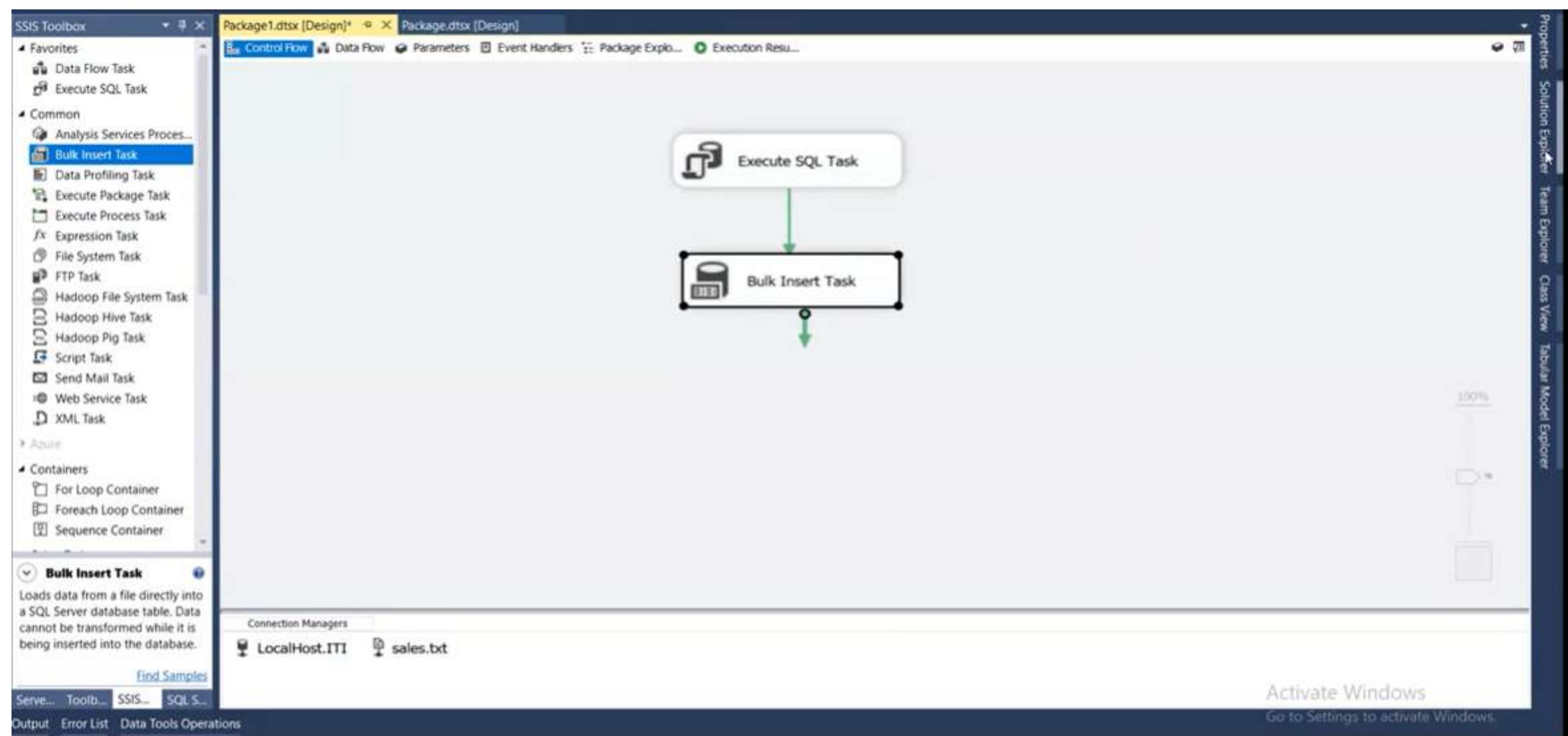
Database Object Management:

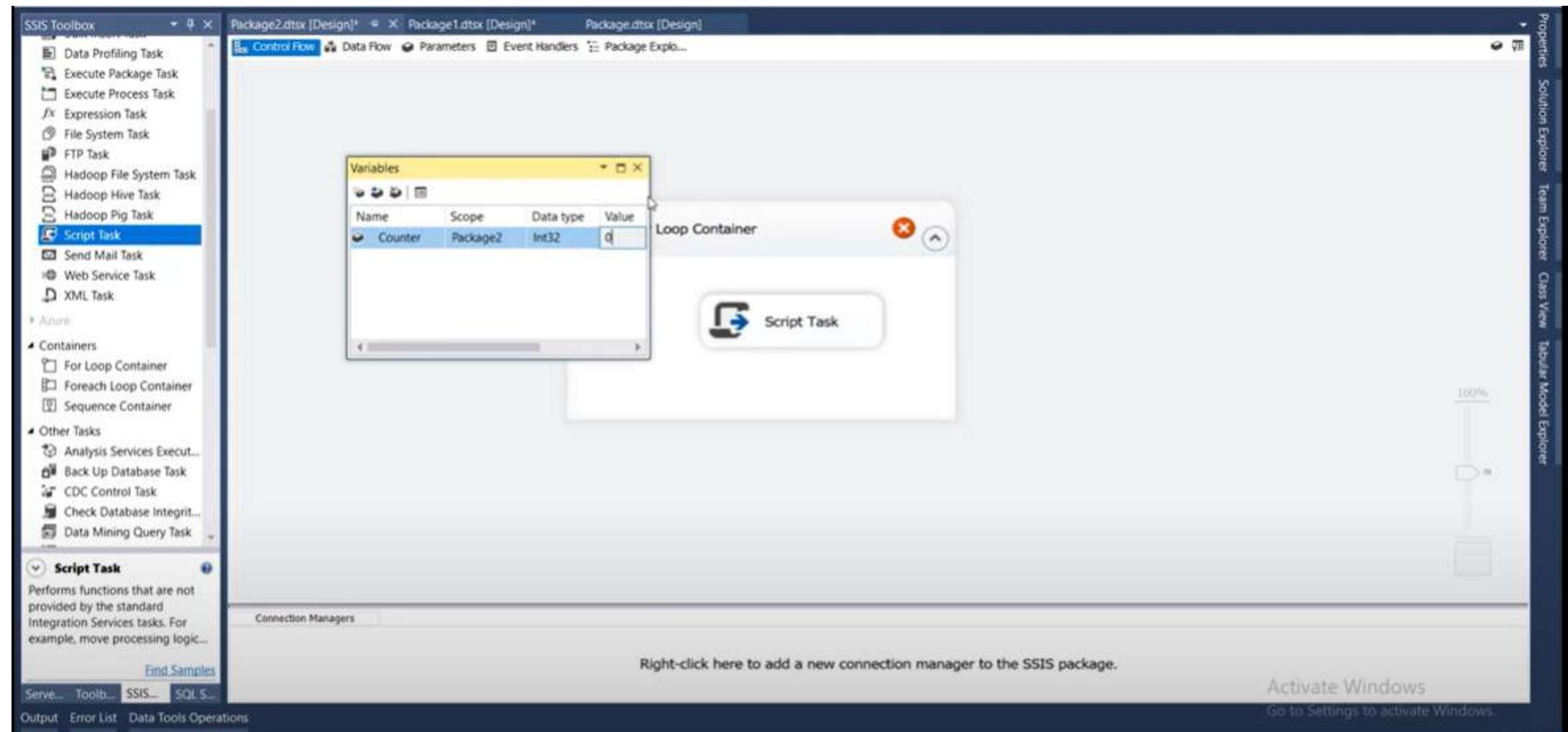
- Creating, altering, or dropping tables, views, indexes, or other database objects.

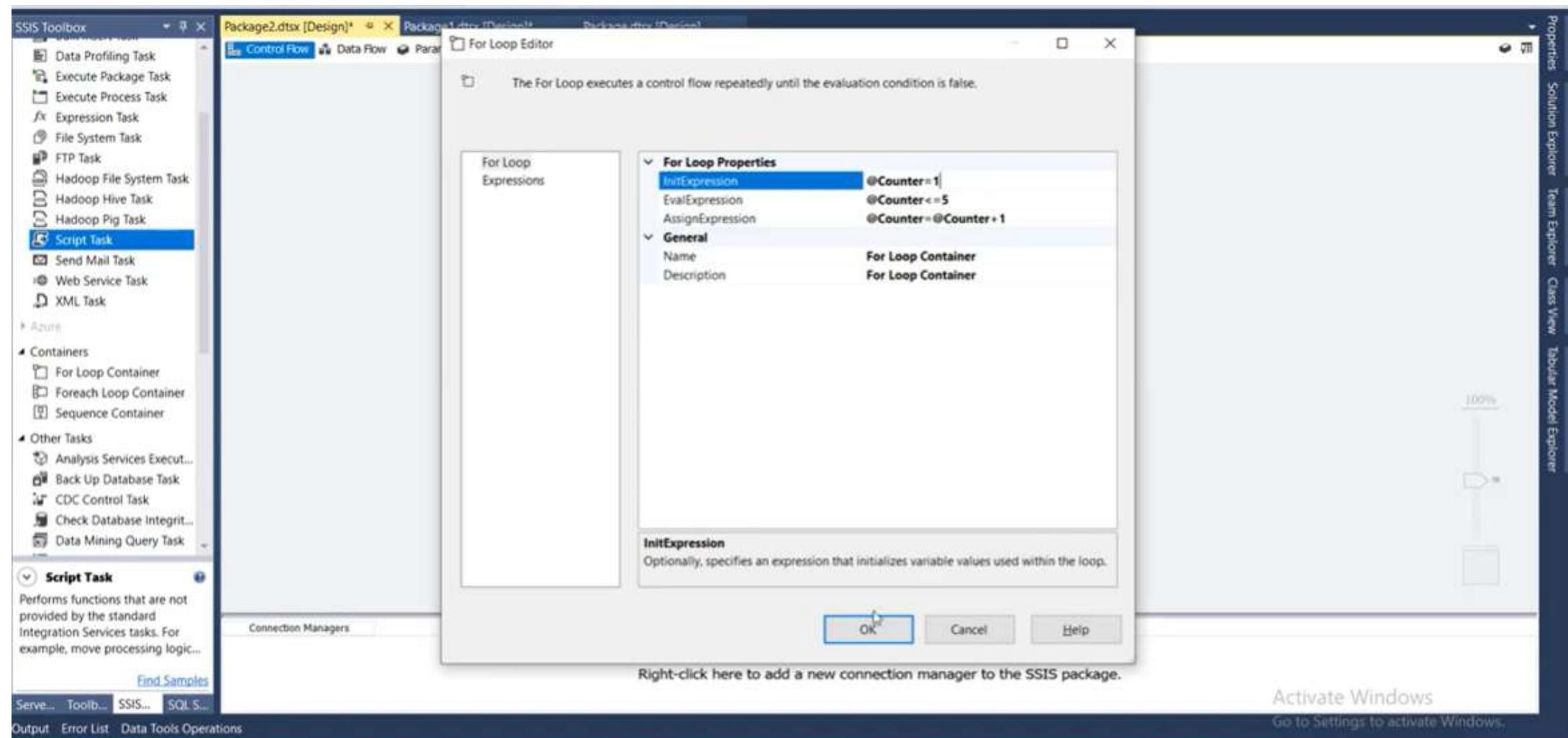
Stored Procedure Execution:

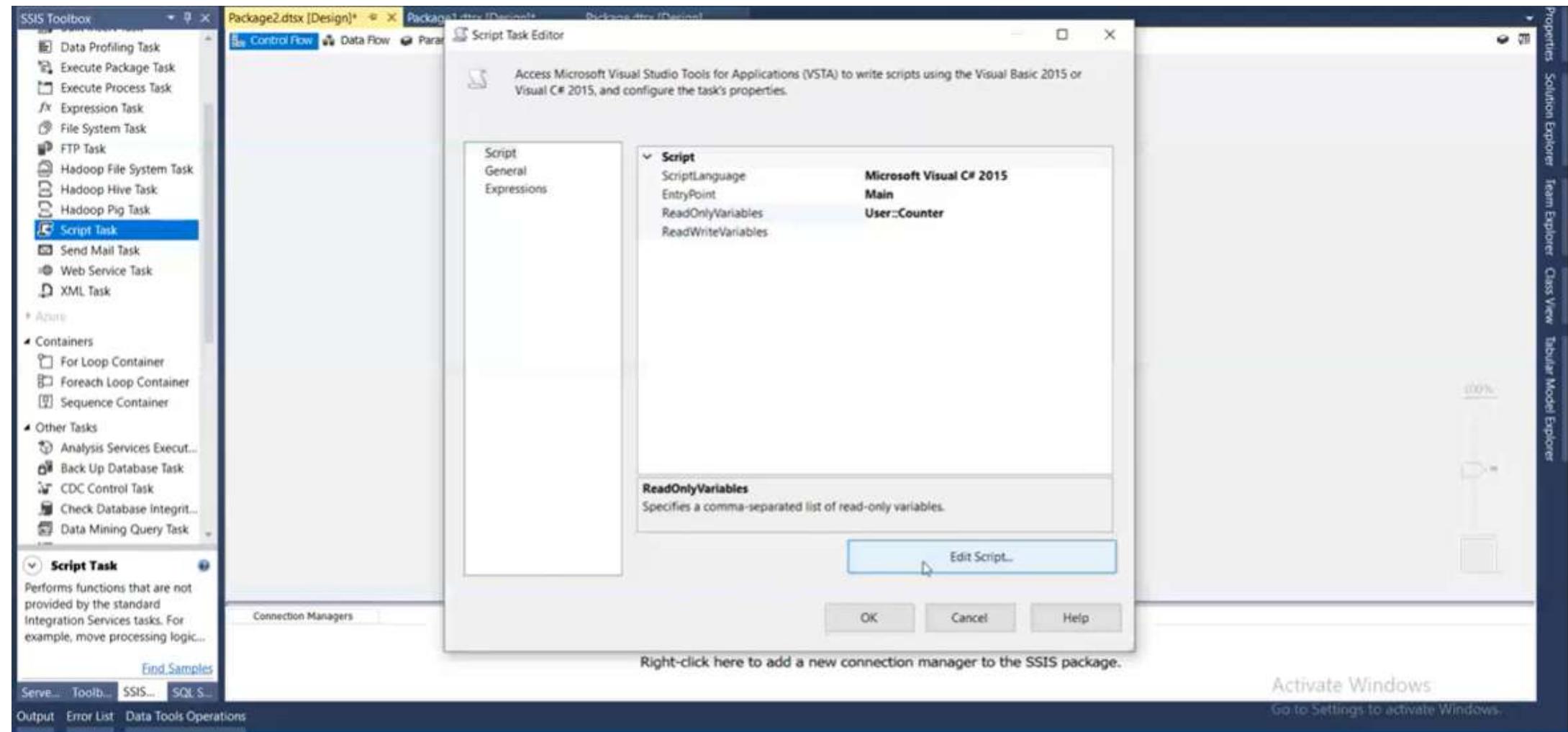
- Calling stored procedures to perform complex operations or encapsulate business logic.

Retrieving Data:









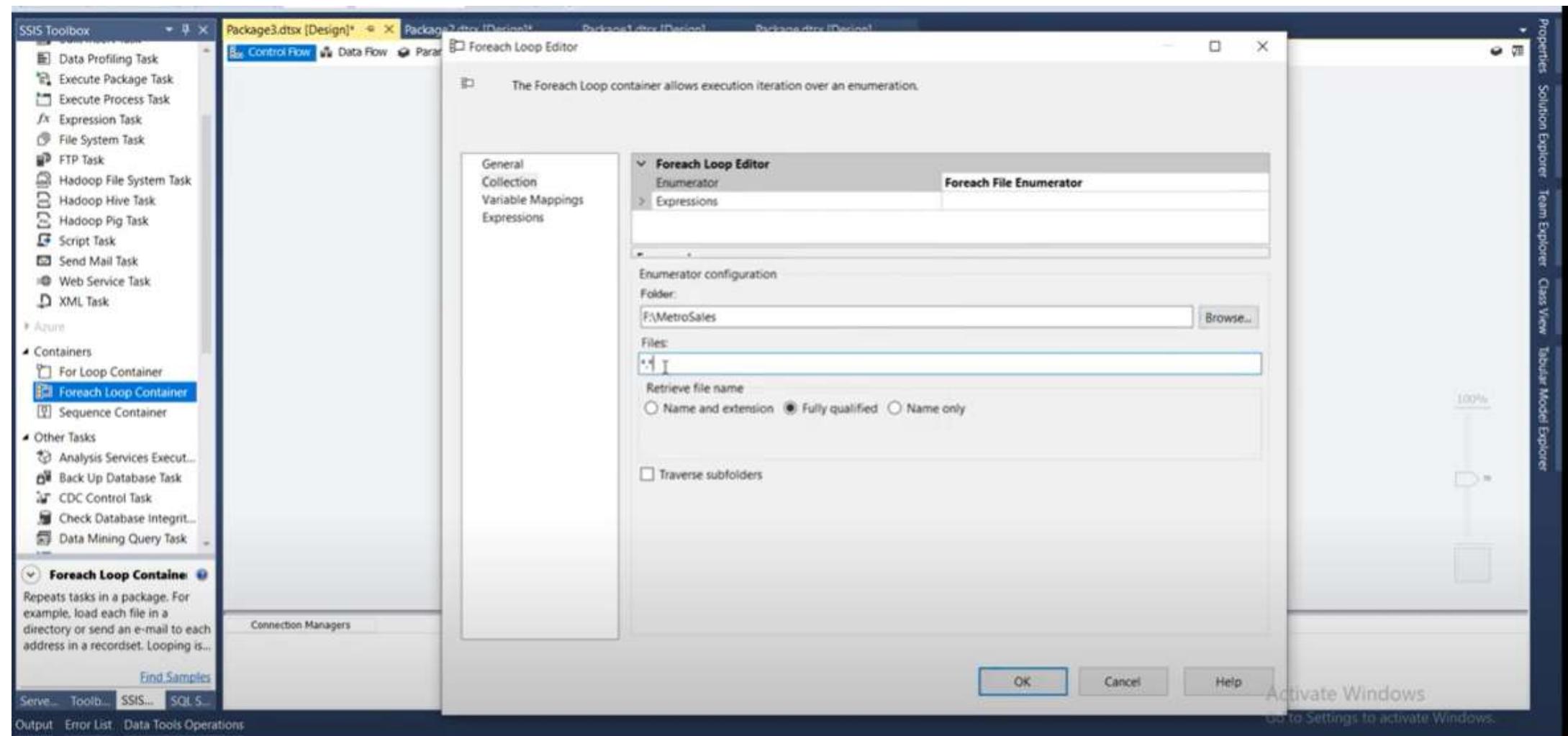
SSIS Toolbox X ScriptMain.cs X

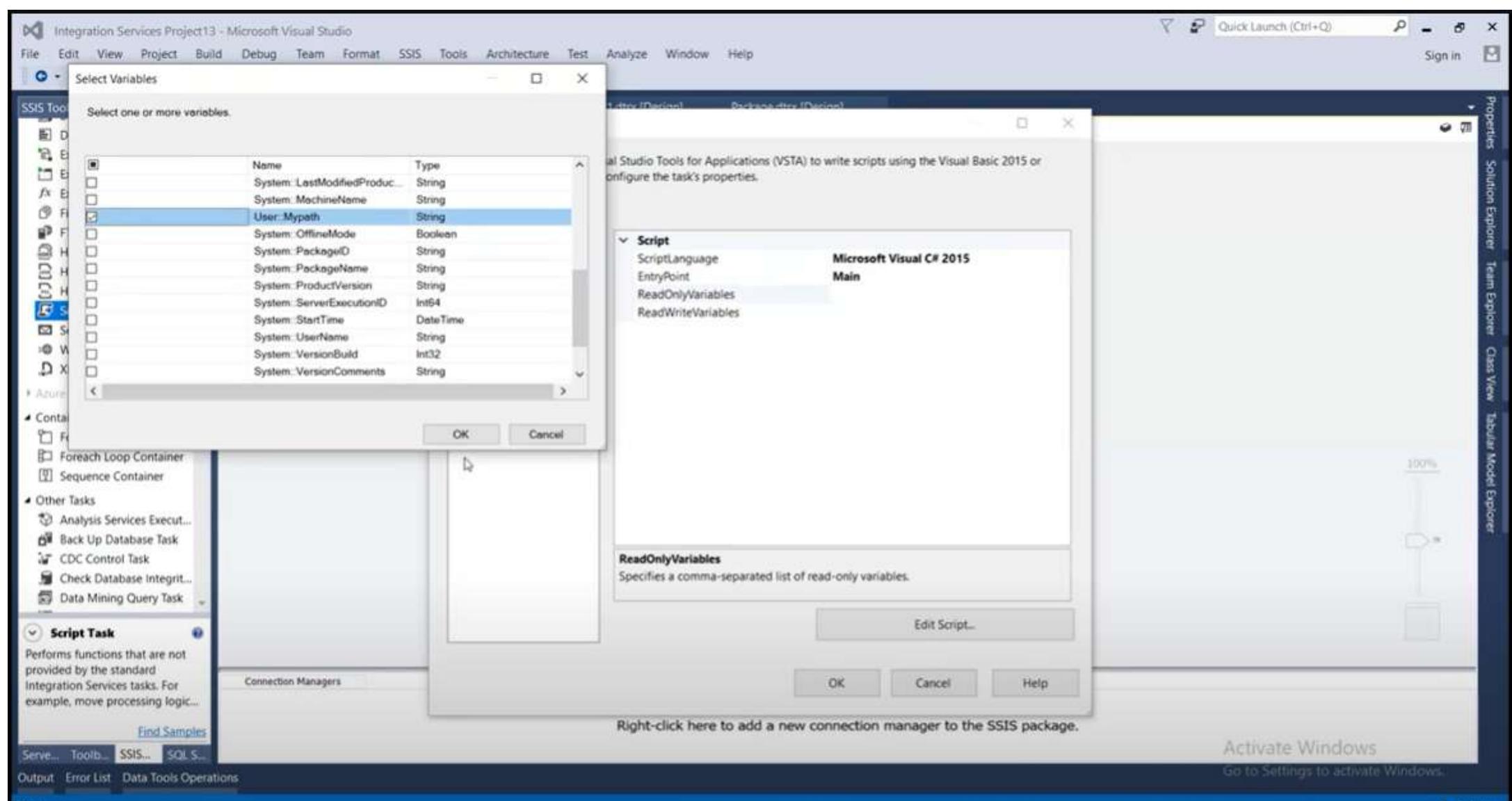
This tool window can only be used by a SQL Server Integration Services package document.

```
ST_15b8badba3004a68b99fb4c3311108ad    ST_15b8badba3004a68b99fb4c3311108ad.ScriptMain    Main()
```

25 {
26 Help: Using Integration Services variables and parameters in a script
52 Help: Firing Integration Services events from a script
66
67 Help: Using Integration Services connection managers in a script
84
85
86 /// <summary>
87 /// This method is called when this script task executes in the control flow.
88 /// Before returning from this method, set the value of Dts.TaskResult to indicate success or failure.
89 /// To open Help, press F1.
90 /// </summary>
91 0 references
92 public void Main()
93 {
94 DTS
95 DataGridTableStyle
96 DtProjectStorage
97 Dts
98 DTSBreakpointHitTest
99 DTSCheckpointUsage
100 DtsComException
101 DtsComponentException
102 DTSConfigurationType
103 }
104 }
105 }
106 }
107 }
108 }
109 }
110 }
111 }

SSIS Toolbox SQL Server Object... 150 % Activate Windows
Output Error List Data Tools Operations Go to Settings to activate Windows.





This tool window can only be used by a SQL Server Integration Services package document.

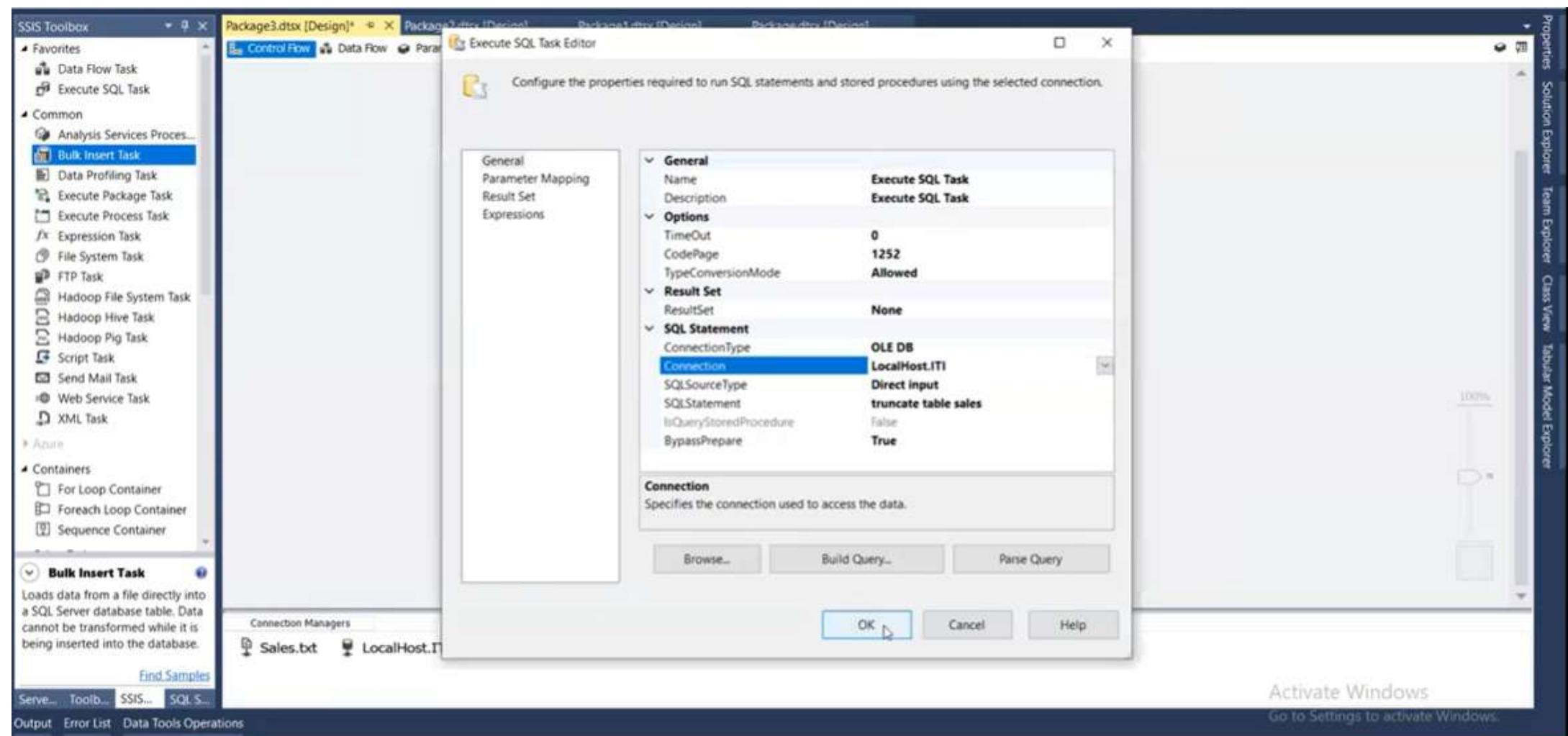
```
85
86     /// <summary>
87     /// This method is called when this script task executes in the control flow.
88     /// Before returning from this method, set the value of Dts.TaskResult to indicate success or failure.
89     /// To open Help, press F1.
90     /// </summary>
91     public void Main()
92     {
93         // TODO: Add your code here
94
95         MessageBox.Show(Dts.Variables["Mypath"].Value.ToString());
96     }
97
98     ScriptResults declaration
111
112 }
113 }
```

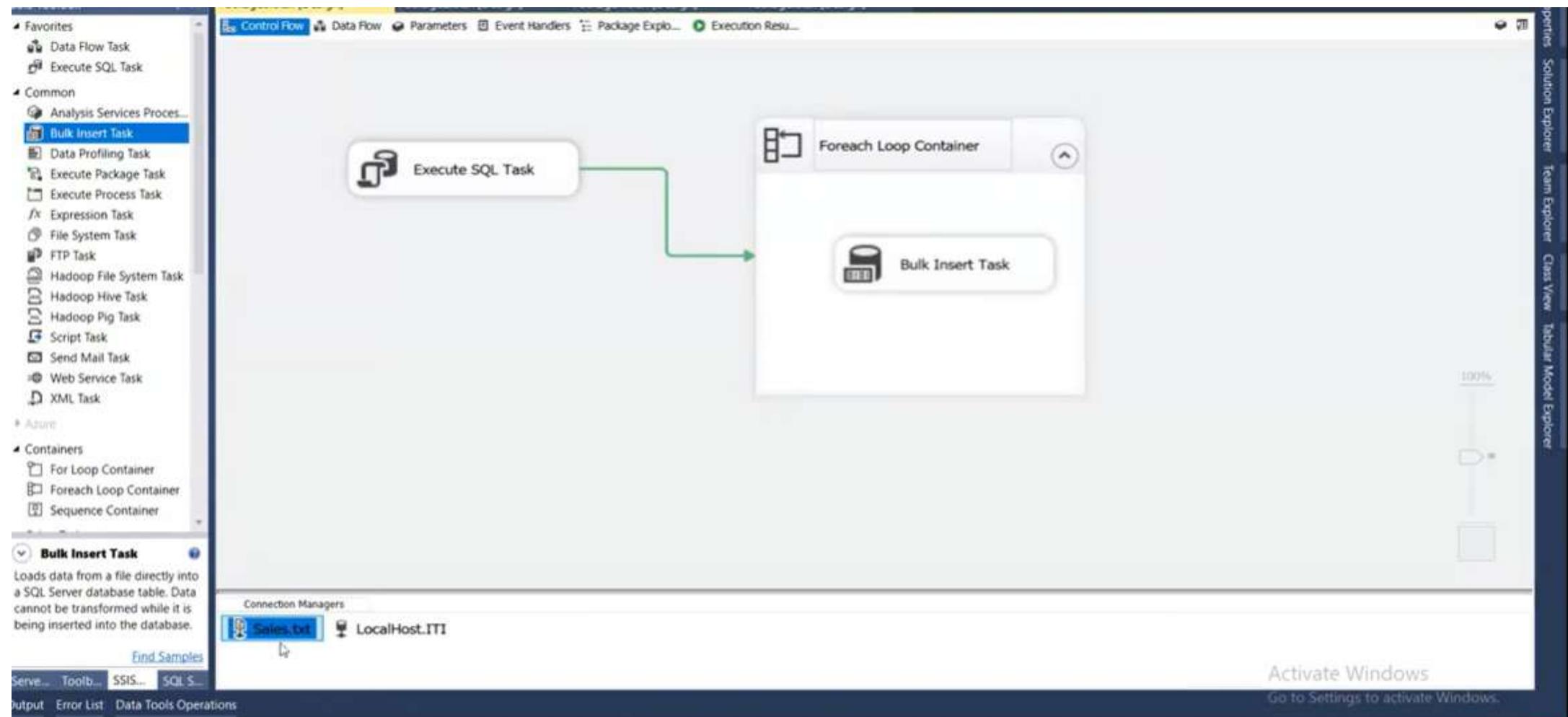
SSIS Toolbox SQL Server Object...

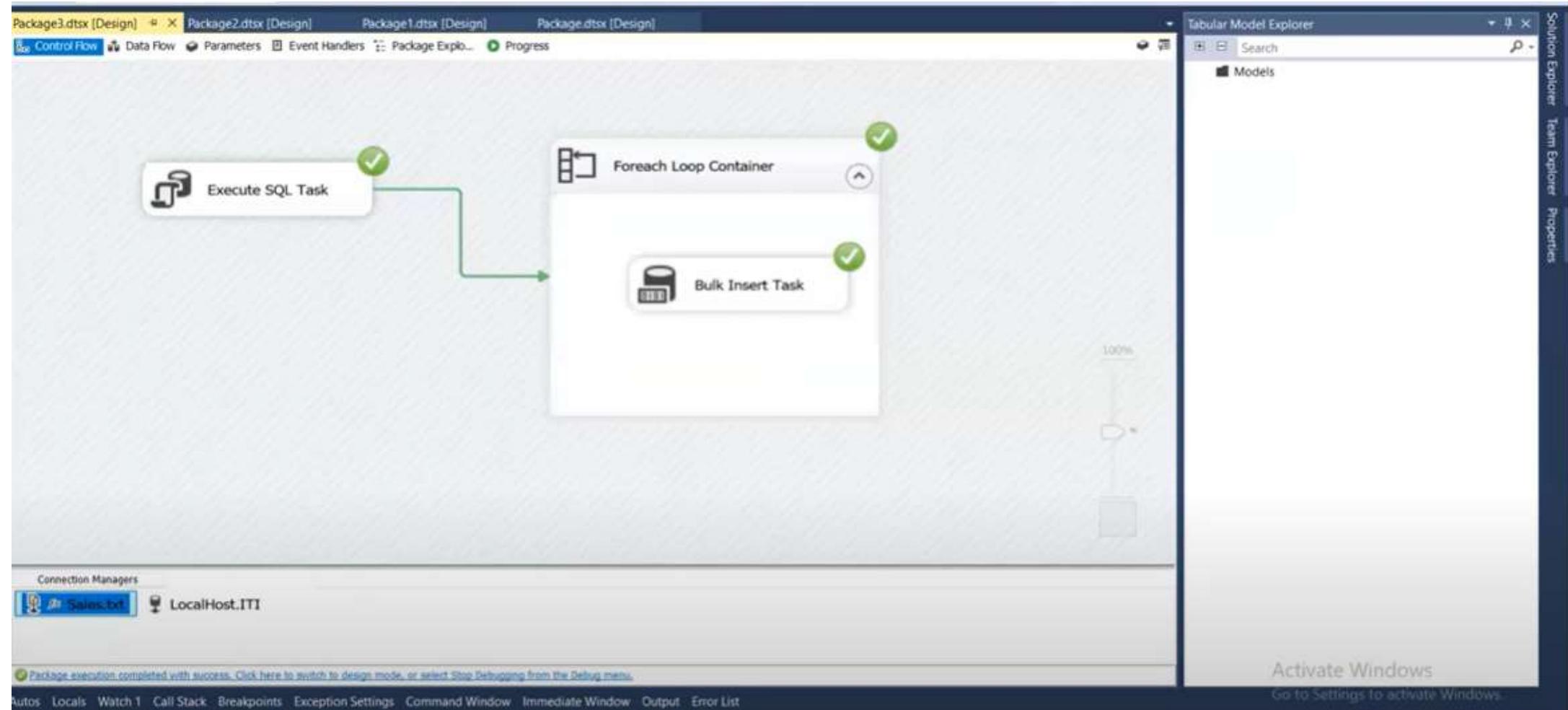
150 %

Output Error List Data Tools Operations

Activate Windows
Go to Settings to activate Windows.







File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Sign in

SSIS Toolbox

Package4.dtsx [Design]*

Develop Default

OLE DB Source Editor

Configure the properties used by a data flow to obtain data from any OLE DB provider.

Data Flow Task: Data Flow

Connection Manager

Columns

Error Output

Available External Columns

<input checked="" type="checkbox"/> Name
<input checked="" type="checkbox"/> St_Id
<input checked="" type="checkbox"/> St_Fname
<input checked="" type="checkbox"/> St_Lname
<input checked="" type="checkbox"/> St_Address
<input checked="" type="checkbox"/> St_Age
<input checked="" type="checkbox"/> Dept_Id
<input checked="" type="checkbox"/> St_super

External Column Output Column

St_Id	St_Id
St_Fname	St_Fname
St_Lname	St_Lname
St_Address	St_Address
St_Age	St_Age
Dept_Id	Dept_Id
St_super	St_super

Properties

OLE DB Source Data Flow Component

Common Properties

ComponentClassID	{657B7EBE-0A54-4C0E-A80E-7A5
ContactInfo	OLE DB Source;Microsoft Corpora
Description	OLE DB Source
ID	1
IdentificationString	OLE DB Source
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	OLE DB Source
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	?

Custom Properties

AccessMode	OpenRowset
AlwaysUseDefaultCodePage	False
CommandTimeout	0
DefaultCodePage	1252
OpenRowset	

Name
Specifies the name of the component.

Activate Windows
Go to Settings to activate Windows.

SSIS... SQL...
Output Error List Data Tools Operations

Ready

Publish

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Develop Default Start

SSIS Toolbox

Control Flow Data Flow Parameters Event Handlers Package Explorer

Package4.dtsx [Design] Package3.dtsx [Design] Package2.dtsx [Design] Package1.dtsx [Design] Package.dtsx [Design]

Favorites

- Data Flow Task
- Execute SQL Task

Common

- Analysis Services Process
- Bulk Insert Task
- Data Profiling Task
- Execute Package Task
- Execute Process Task
- Expression Task
- File System Task
- FTP Task
- Hadoop File System Task
- Hadoop Hive Task
- Hadoop Pig Task
- Script Task
- Send Mail Task
- Web Service Task
- XML Task

Azure

Containers

- For Loop Container
- Foreach Loop Container
- Sequence Container

Favorites

Provides convenient access to your favorite elements so that they are only a click away.

Connection Managers

localhost.iti

Properties

Data Flow Task Task

- DisableEventHandlers False
- FailPackageOnFailure False
- FailParentOnFailure False
- MaximumErrorCount 1

Forced Execution Value

- ForcedExecutionValue 0
- ForcedExecutionValueType Int32
- ForceExecutionValue False

Identification

- Description Data Flow Task
- ID (90CEC928-DC5A-4D10-9C5C-)
- Name Data Flow Task
- PackagePath \Package\Data Flow Task

Misc

- AutoAdjustBufferSize False
- BLOBTempStoragePath
- BufferTempStoragePath
- DefaultBufferSize 10000
- DefaultBufferMaxRows 10485760
- EngineThreads 10
- ExecValueVariable <none>

Expressions

- ForceExecutionResult None
- HasExpressions False
- LocaleID English (United Kingdom)
- LoggingMode UseParentSetting
- RunInOptimizedMode True

Transactions

- IsolationLevel Serializable
- TransactionOption Supported

Name

Specifies the name of the object.

Activate Windows Go to Settings to activate Windows.

Serve... Toolbar SSIS... SQL Server... Output Error List Data Tools Operations

The screenshot shows the Microsoft Visual Studio interface for an Integration Services Project. The title bar reads "Integration Services Project13 - Microsoft Visual Studio". The menu bar includes File, Edit, View, Project, Build, Debug, Team, Format, SSIS, Tools, Architecture, Test, Analyze, Window, and Help. The toolbar has icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The main window displays the SSIS Toolbox on the left, which contains categories like Favorites, Common, and Azure, along with specific task icons such as Data Flow Task and Execute SQL Task. The central workspace shows a single "Data Flow Task" component. To the right is the Properties window, which is currently focused on the "Data Flow Task Task" properties. It lists several properties: DisableEventHandlers (False), FailPackageOnFailure (False), FailParentOnFailure (False), MaximumErrorCount (1), Forced Execution Value (ForcedExecutionValue: 0, ForcedExecutionValueType: Int32), Identification (Description: Data Flow Task, ID: (90CEC928-DC5A-4D10-9C5C-), Name: Data Flow Task, PackagePath: \Package\Data Flow Task), Misc (AutoAdjustBufferSize: False, BLOBTempStoragePath, BufferTempStoragePath, DefaultBufferSize: 10000, DefaultBufferMaxRows: 10485760, EngineThreads: 10, ExecValueVariable: <none>), Expressions (ForceExecutionResult: None, HasExpressions: False, LocaleID: English (United Kingdom), LoggingMode: UseParentSetting, RunInOptimizedMode: True), and Transactions (IsolationLevel: Serializable, TransactionOption: Supported). The Properties window also includes sections for "Name" and "Description". At the bottom of the screen, there are tabs for "Server Explorer", "Toolbox", "SSIS...", "SQL Server...", "Output", "Error List", and "Data Tools Operations". A status bar at the bottom shows "Activate Windows Go to Settings to activate Windows.".

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Develop Default

SSIS Toolbox

Package4.dtsx [Design] Control Flow Data Flow

Data Flow Task Data Flow

Source Assistant

Favorites

Destination Assistant

Common

- Aggregate
- Balanced Data Distribut...
- Conditional Split
- Data Conversion
- Data Streaming Destin...
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimen...
- Sort
- Union All

Source Assistant

Extracts data from a variety of sources. The assistant will guide you through the steps of creating a source and associating it with...

Find Samples

Connection Managers

localhost.iti

OLE DB Source Editor

Configure the properties used by a data flow to obtain data from any OLE DB provider.

Connection Manager Columns Error Output

Available External Columns

- Name
- St_Id
- St_Fname
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_super

External Column Output Column

External Column	Output Column
St_Id	St_Id
St_Fname	St_Fname
St_Lname	St_Lname
St_Address	St_Address
St_Age	St_Age
Dept_Id	Dept_Id
St_super	St_super

Properties

OLE DB Source Data Flow Component

ComponentClassID: 165787E8E-0A54-4C0E-A80E-7A5...

ContactInfo: OLE DB Source:Microsoft Corpora...

Description: OLE DB Source

ID: 37

IdentificationString: OLE DB Source

IsDefaultLocale: True

LocaleID: English (United Kingdom)

Name: OLE DB Source

PipelineVersion: 0

UsesDispositions: True

ValidateExternalMetadata: True

Version: ?

Custom Properties

AccessMode: OpenRowset

AlwaysUseDefaultCodePage: False

CommandTimeout: 0

DefaultCodePage: 1252

OpenRowset

Name: Specifies the name of the component.

Activate Windows: Go to Settings to activate Windows.

Ready Publish

The screenshot displays the Microsoft Visual Studio interface for an Integration Services Project. The main window is the 'OLE DB Source Editor' for the package 'Package4.dtsx'. The editor is configured to obtain data from an OLE DB provider. In the center, a table maps 'External Column' names to 'Output Column' names. The 'Available External Columns' list includes Name, St_Id, St_Fname, St_Lname, St_Address, St_Age, Dept_Id, and St_super. The mappings are: St_Id to St_Id, St_Fname to St_Fname, St_Lname to St_Lname, St_Address to St_Address, St_Age to St_Age, Dept_Id to Dept_Id, and St_super to St_super. The 'Properties' window on the right lists the component's properties, such as ComponentClassID, ContactInfo, and Description. The 'Source Assistant' pane on the left provides guidance for creating a source. The bottom status bar indicates 'Ready'.

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox Default Start

Package4.dtsx [Design] * Package3.dtsx [Design] Package2.dtsx [Design] Package1.dtsx [Design] Package.dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Data Flow Task

Destination Assistant - Add New Destination

Select destination type: SQL Server, Excel, Oracle

Select connection managers: New

Show only installed destination types

Double click on 'New...' or click on OK to create a new connection

OK Cancel

Properties Sort Data Flow Component

Common Properties

ComponentClassID	{7B0346D5-E62D-4F79-AB19-688}
ContactInfo	Sort;Microsoft Corporation; Micro
Description	Sorts input data in ascending or d
ID	73
IdentificationString	Sort
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Sort
PipelineVersion	0
UsedDispositions	False
ValidateExternalMetadata	True
Version	1

Custom Properties

EliminateDuplicates	False
MaximumThreads	-1

Solution Explorer Team Explorer Class View Tabular Model Explorer

Connection Managers

localhost.ITI

Name Specifies the name of the component.

Activate Windows Go to Settings to activate Windows.

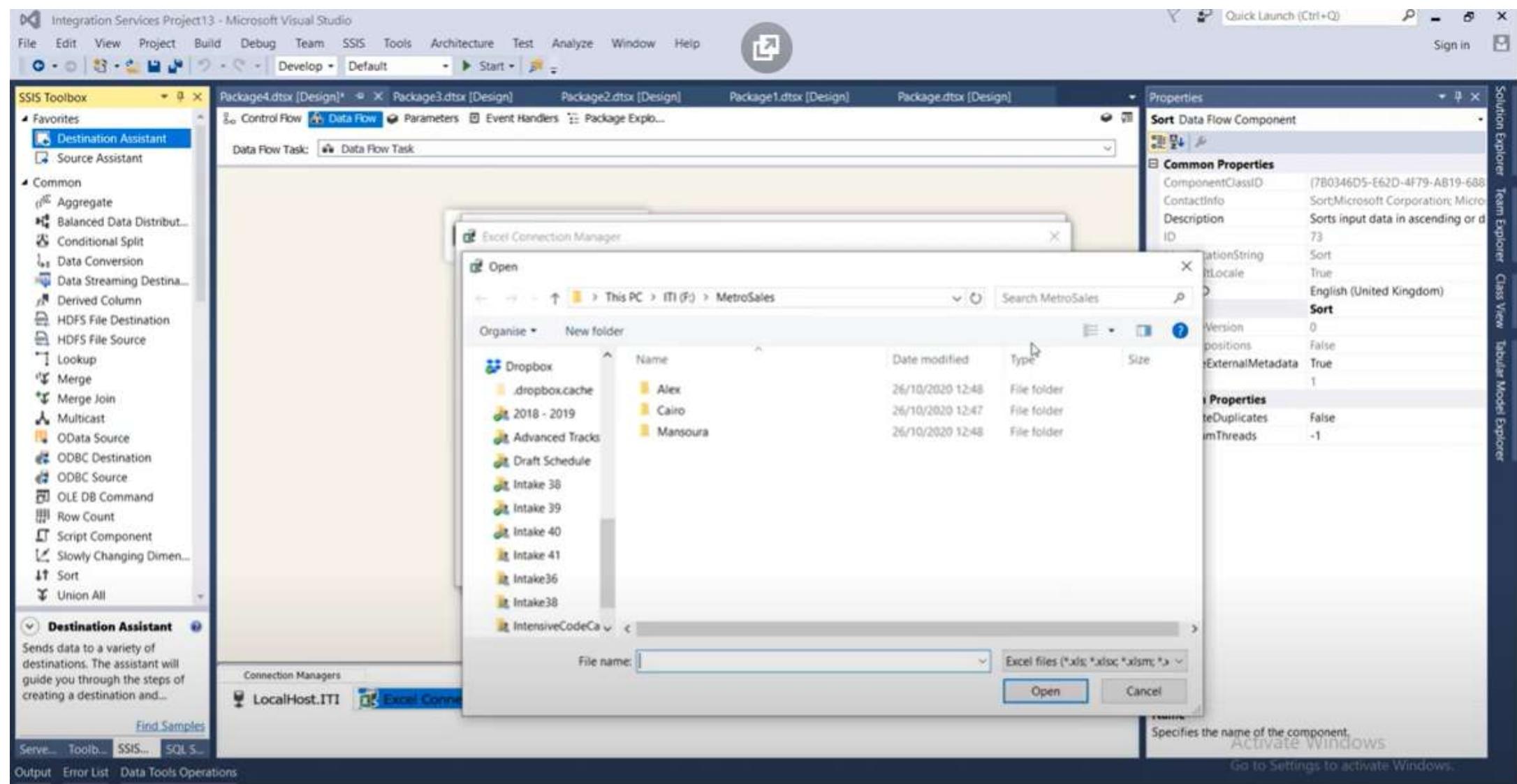
Find Samples

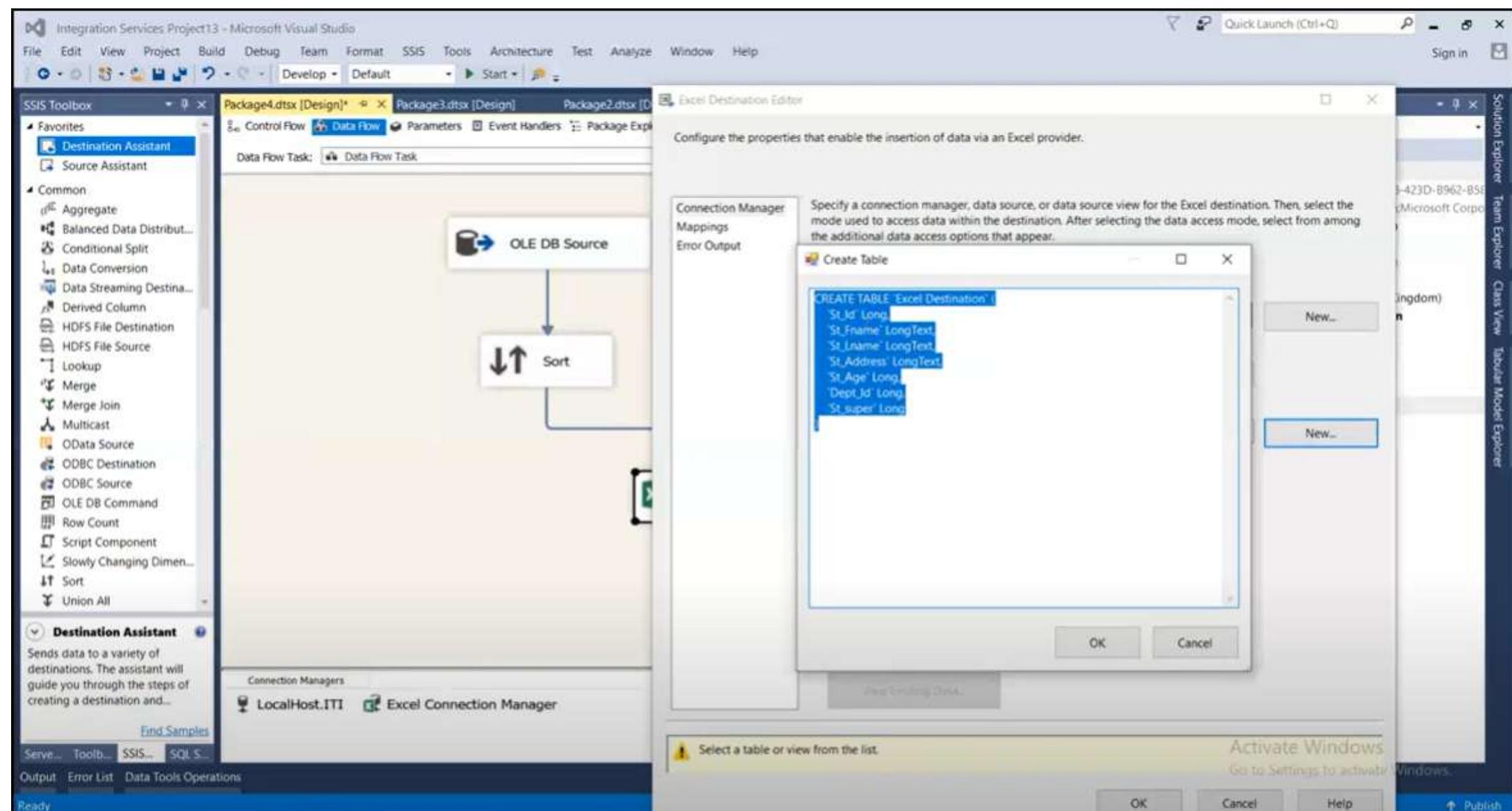
Serve... Tools... SSIS... SQL S...

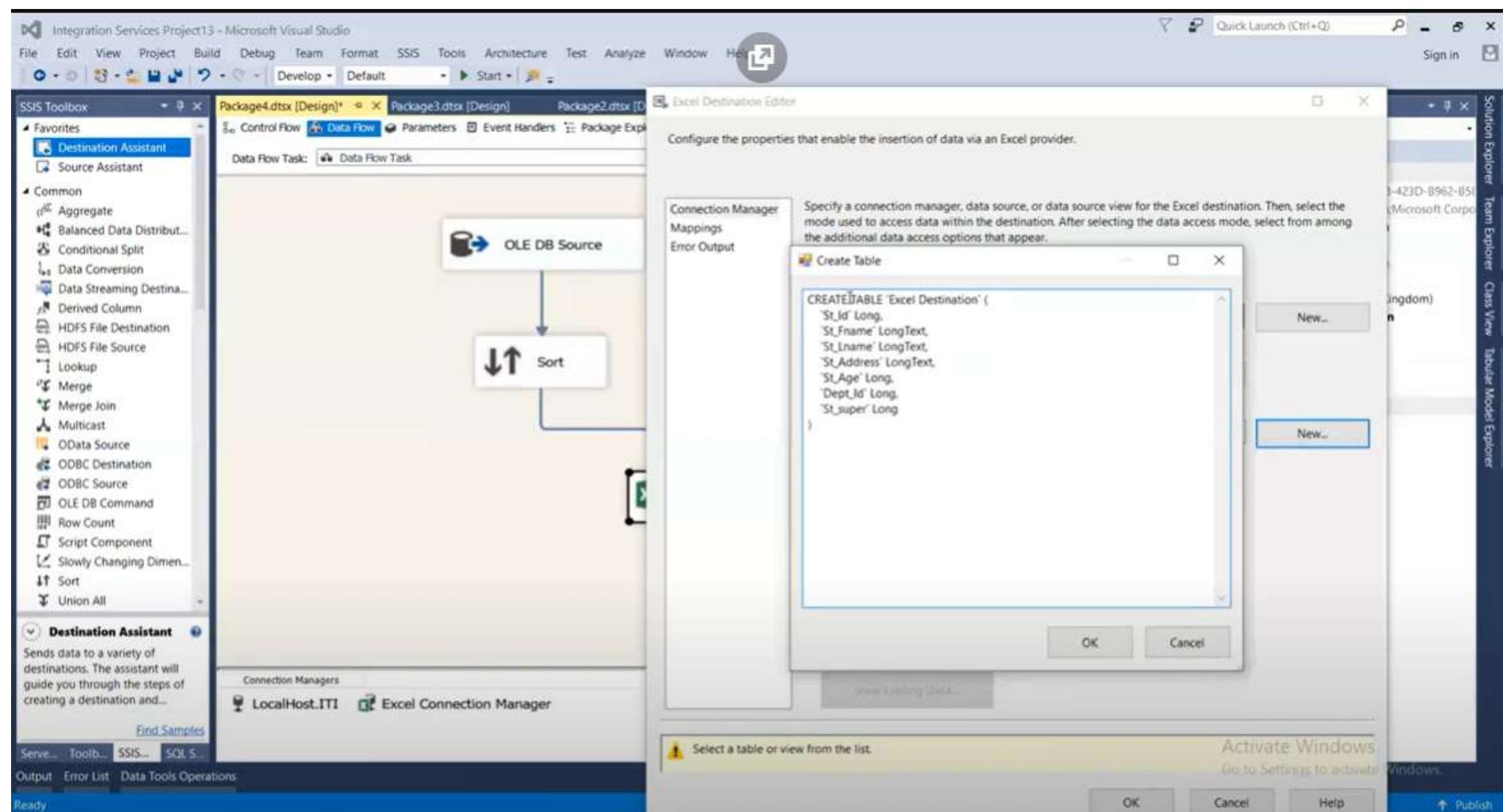
Output Error List Data Tools Operations

Ready

↑ Publish







Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl + Q)

Sign in

SSIS Toolbox

Favorites

- Destination Assistant
- Source Assistant

Common

- Aggregate
- Balanced Data Distribution
- Conditional Split
- Data Conversion
- Data Streaming Destination
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Connection Managers

- localhost.iti
- Excel Connection Manager

Output Error List Data Tools Operations

Excel Destination Editor

Configure the properties that enable the insertion of data via an Excel provider.

Connection Manager

Mappings

Error Output

Available Input...

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id

Available Dest...

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id

Input Column

St_Id	Destination Column
St_Fname	St_Fname
St_Lname	St_Lname
St_Address	St_Address
St_Age	St_Age
Dept_Id	Dept_Id
St_super	St_super

OK Cancel Help

Go to Settings to activate Windows.

Solution Explorer

Team Explorer

Class View

Tabular Model Explorer

```
graph TD; OLEDB[OLE DB Source] --> Sort[Sort]; Sort --> Excel[Excel Destination];
```

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

Package4.dtsx [Design] * Package3.dtsx [Design] Package2.dtsx [D...]

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task: Data Flow Task

OLE DB Source → Sort

Excel Destination Editor

Configure the properties that enable the insertion of data via an Excel provider.

Connection Manager Mappings Error Output

Available Input Columns

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id
St_super

Available Destination Columns

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id
St_super

Input Column Destination Column

St_Id	St_Id
St_Fname	St_Fname
St_Lname	St_Lname
St_Address	St_Address
St_Age	St_Age
Dept_Id	Dept_Id
St_super	St_super

OK Cancel Help

Solution Explorer

Team Explorer Class View Tabular Model Explorer

3-423D-B962-B50 Microsoft Corporation

Domain)

Find Samples

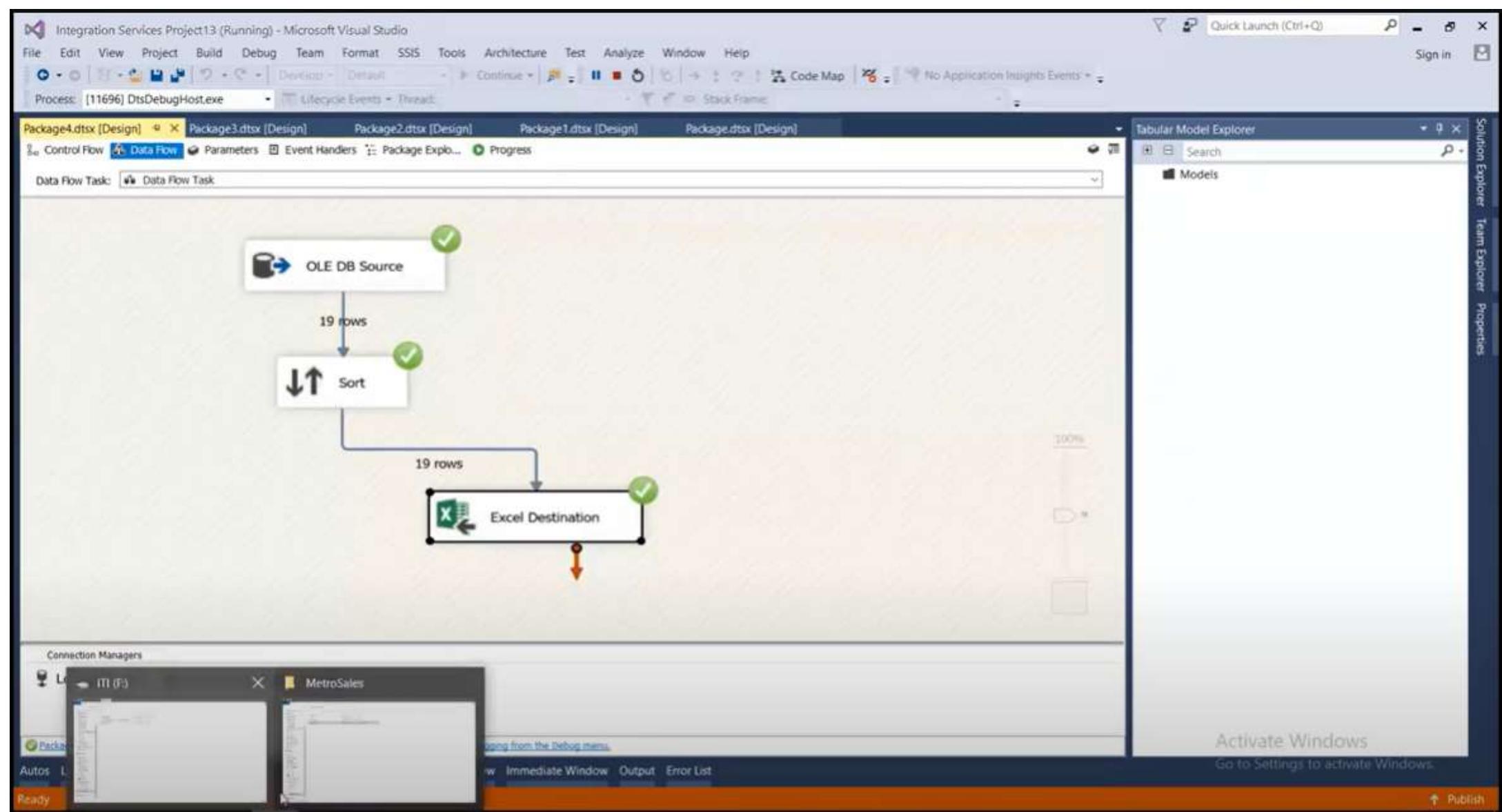
Connection Managers

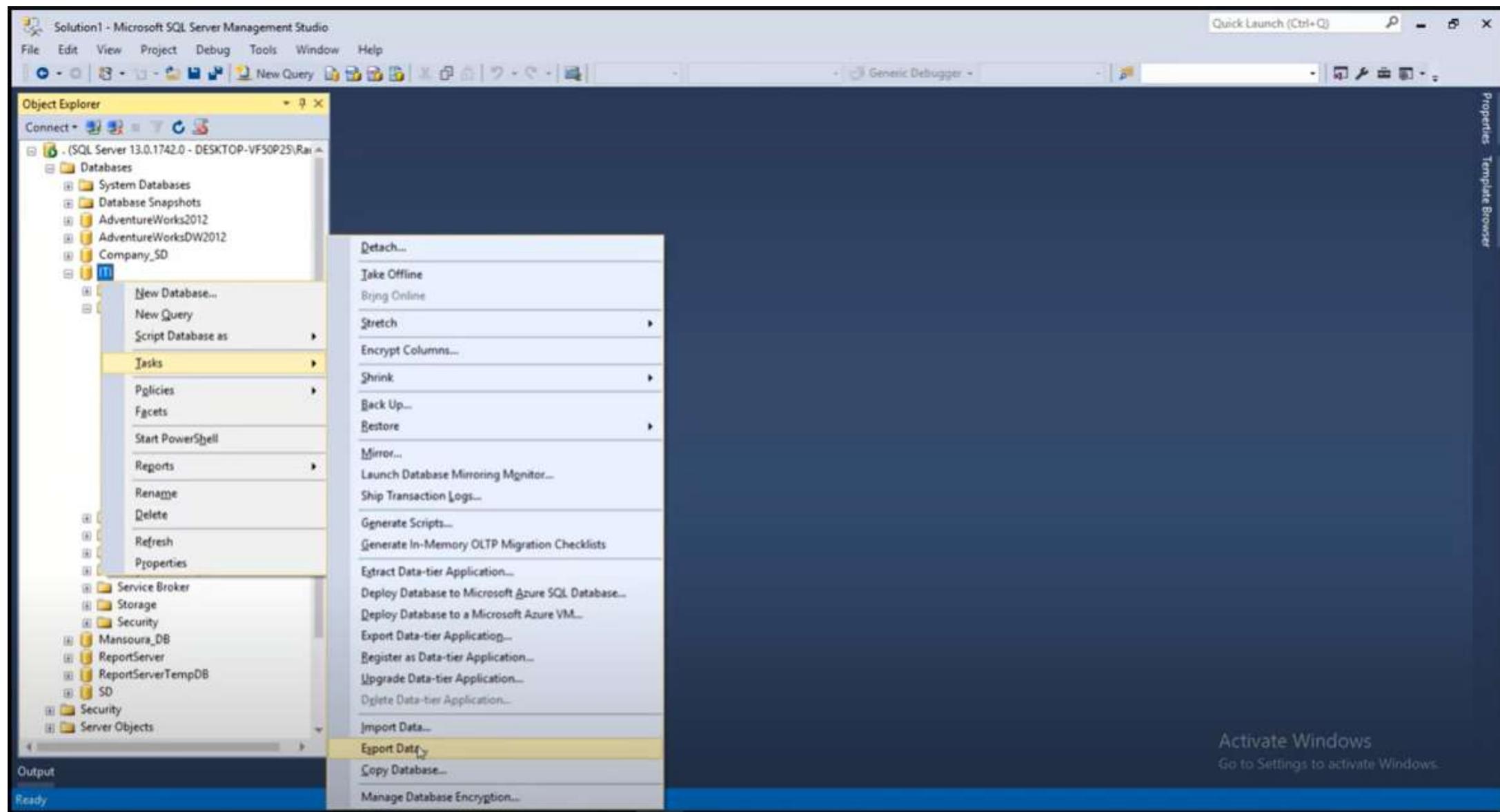
localhost.ITSI Excel Connection Manager

Server Tools SSIS SQL Server

Output Error List Data Tools Operations

```
graph TD; OLEDB[OLE DB Source] --> Sort[Sort]; Sort --> Excel[Excel Destination Editor];
```





Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

Favorites

- Destination Assistant
- Source Assistant

Common

- Aggregate
- Balanced Data Distribution
- Conditional Split
- Data Conversion
- Data Streaming Destination
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Properties

Excel Destination Data Flow Component

Common Properties

ComponentClassID	(EDFD05EC4-D128-423D-B962-B51...
ContactInfo	Excel Destination:Microsoft Corpor...
Description	Excel Destination
ID	114
IdentificationString	Excel Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Excel Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	0

Custom Properties

AccessMode	OpenRowset
CommandTimeout	0
OpenRowset	mystudents

Connection Managers

- localhost.itl
- Excel Connection Manager

Output Error List Data Tools Operations

Ready

Activate Windows
Go to Settings to activate Windows.

```
graph TD; OLE[OLE DB Source] --> Sort[Sort]; Sort --> Excel[Excel Destination]
```

The screenshot shows the Microsoft Visual Studio IDE interface for an Integration Services project. The title bar reads "Integration Services Project13 - Microsoft Visual Studio". The menu bar includes File, Edit, View, Project, Build, Debug, Team, Format, SSIS, Tools, Architecture, Test, Analyze, Window, and Help. The toolbar has icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The ribbon tabs include Develop, Default, Start, and others. The SSIS Toolbox is open on the left, showing categories like Favorites, Common, and Derived Column. The Data Flow tab is selected in the tabs at the top. The main workspace displays a Data Flow Task with three components: an OLE DB Source, a Sort component, and an Excel Destination. The OLE DB Source feeds into the Sort component, which then feeds into the Excel Destination. The Properties window on the right shows the "Excel Destination Data Flow Component" with properties like ComponentClassID, ContactInfo, Description, ID, IdentificationString, IsDefaultLocale, LocaleID, Name (set to "Excel Destination"), PipelineVersion, UsesDispositions, ValidateExternalMetadata, and Version. The Custom Properties section shows AccessMode set to OpenRowset, CommandTimeout set to 0, and OpenRowset set to "mystudents". The Connection Managers pane at the bottom shows "localhost.itl" and "Excel Connection Manager". The status bar at the bottom indicates "Ready". A tooltip for the "Name" property in the Properties window says "Specifies the name of the component". A watermark at the bottom right says "Activate Windows Go to Settings to activate Windows".

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Character Map Transformation Editor

Configure the properties used to apply string operations to columns with character data. Place the operation result in a new column or update an existing column.

Data Flow Task: Data Flow Task

Available Input Columns

- Name
- St_Id
- St_Fname**
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_Super

Input Column	Destination	Operation	Output Alias
St_Fname	New column	Uppercase	Copy of St_Fname

Character Map Data Flow Component

Common Properties

ComponentClassID	(DFC6B332-0B13-4B47-9BF0-E605A8D9E800)
ContactInfo	Character Map;Microsoft Corporation
Description	Applies string functions to character data.
ID	35
IdentificationString	Character Map
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Character Map
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	2

Properties

Name: Character Map

Specifies the name of the component.

Activate Windows: Go to Settings to activate Windows.

Solution Explorer Team Explorer Class View Tabular Model Explorer

Find Samples

Excel Connection Manager

Configure Error Output... OK Cancel Help

Serve... Toolb... SSIS... SQL S... Output Error List Data Tools Operations

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Develop Default Start

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

Properties

Data Flow Task Task

- FailPackageOnFailure False
- FailParentOnFailure False
- MaximumErrorCount 1

Forced Execution Value

- ForcedExecutionValue 0
- ForcedExecutionValueType Int32
- ForceExecutionValue False

Identification

- Description Data Flow Task
- ID 145BD42FB-2FF3-4630-B8A9-C
- Name Data Flow Task
- PackagePath \Package\Data Flow Task

Misc

- [Sort].[MaximumThreads] -1
- AutoAdjustBufferSize False
- BLOBTempStoragePath
- BufferTempStoragePath
- DefaultBufferMaxRows 10000
- DefaultBufferSize 10485760
- EngineThreads 10
- ExecValueVariable <none>

Expressions

- ForceExecutionResult None
- HasExpressions False
- LocaleID English (United Kingdom)
- LoggingMode UseParentSetting
- RunInOptimizedMode True

Transactions

- IsolationLevel Serializable
- TransactionOption Supported

Name

Specifies the name of the object.

Activate Windows Go to Settings to activate Windows.

Serve... Tools... SSIS... SQL S... Output Error List Data Tools Operations

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Character Map Transformation Editor

Configure the properties used to apply string operations to columns with character data. Place the operation result in a new column or update an existing column.

Available Input Columns

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id
St_super

Input Column Destination Operation Output Alias

St_Fname	New column	Copy of St_Fname
----------	------------	------------------

OK Cancel Help

Properties

Character Map Data Flow Component

Common Properties

ComponentClassID	IDFC6B332-0813-4B47-98F0-E609
ContactInfo	Character Map;Microsoft Corpora
Description	Applies string functions to charact
ID	35
IdentificationString	Character Map
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Character Map
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	2

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimen...
- Sort**
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

Output Error List Data Tools Operations

File Toolbar SSIS... SQL S...

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign In

Develop Default

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Columns
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

Configure Error Output...

OK Cancel Help

Character Map Transformation Editor

Configure the properties used to apply string operations to columns with character data. Place the operation result in a new column or update an existing column.

Available Input Columns

- Name
- St_Id
- St_Fname**
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_super

Input Column	Destination	Operation	Output Alias
St_Fname	New column	Uppercase	Copy of St_Fname

OK Cancel

Properties

Character Map Data Flow Component

Common Properties

ComponentClassID	IDFC6B332-0813-4B47-9BF0-E605
ContactInfo	Character Map:Microsoft Corporation
Description	Applies string functions to character data.
ID	35
IdentificationString	Character Map
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Character Map
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	2

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

Configure Error Output... OK Cancel Help

Character Map Transformation Editor

Configure the properties used to apply string operations to columns with character data. Place the operation result in a new column or update an existing column.

Available Input Columns

- Name
- St_Id
- St_Fname
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_super

Input Column	Destination	Operation	Output Alias
St_Fname	New column	Uppercase	Copy of St_Fname

OK Cancel

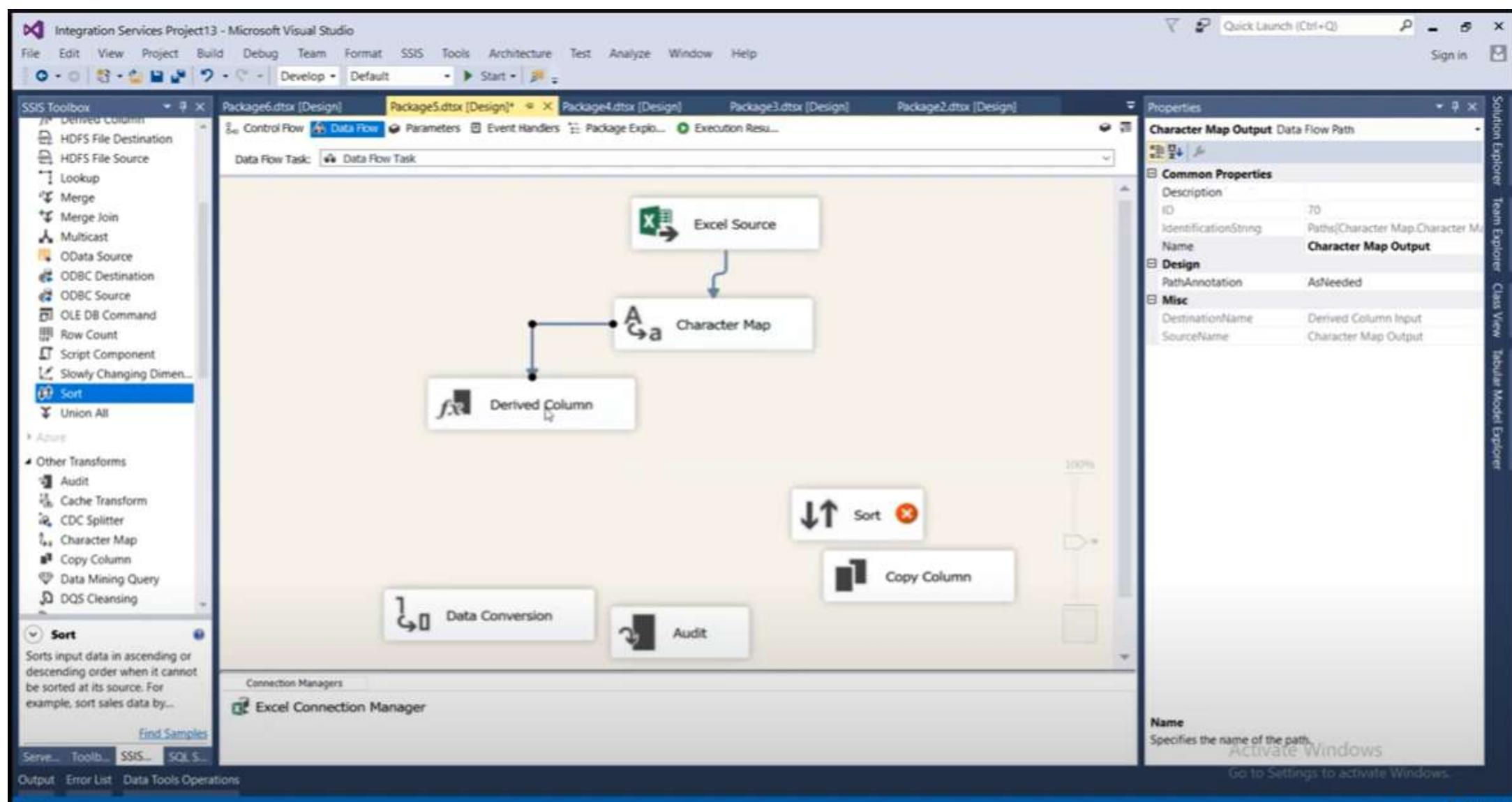
Properties

Character Map Data Flow Component

Common Properties

ComponentClassID	IDFC6B332-0013-4B47-9BF0-E605
ContactInfo	Character Map:Microsoft Corporation
Description	Applies string functions to character data.
ID	35
IdentificationString	Character Map
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Character Map
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	2

Name
Specifies the name of the component.
Activate Windows
Go to Settings to activate Windows.



Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

Configure Error Output...

OK Cancel Help

Derived Column Transformation Editor

Specify the expressions used to create new column values, and indicate whether the values update existing columns or populate new columns.

Variables and Parameters

Columns

- St_Id
- St_Fname
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_super
- Copy of St_Fname

Mathematical Functions

String Functions

Date/Time Functions

NULL Functions

Type Casts

Operators

Description:

Derived Column Name	Derived Column	Expression	Data Type	Length
Fullname	<add as new column>	[St_Fname]+[St_Lname]	Unicode string [DT_WSTR]	50

Properties

Derived Column Data Flow Component

Common Properties

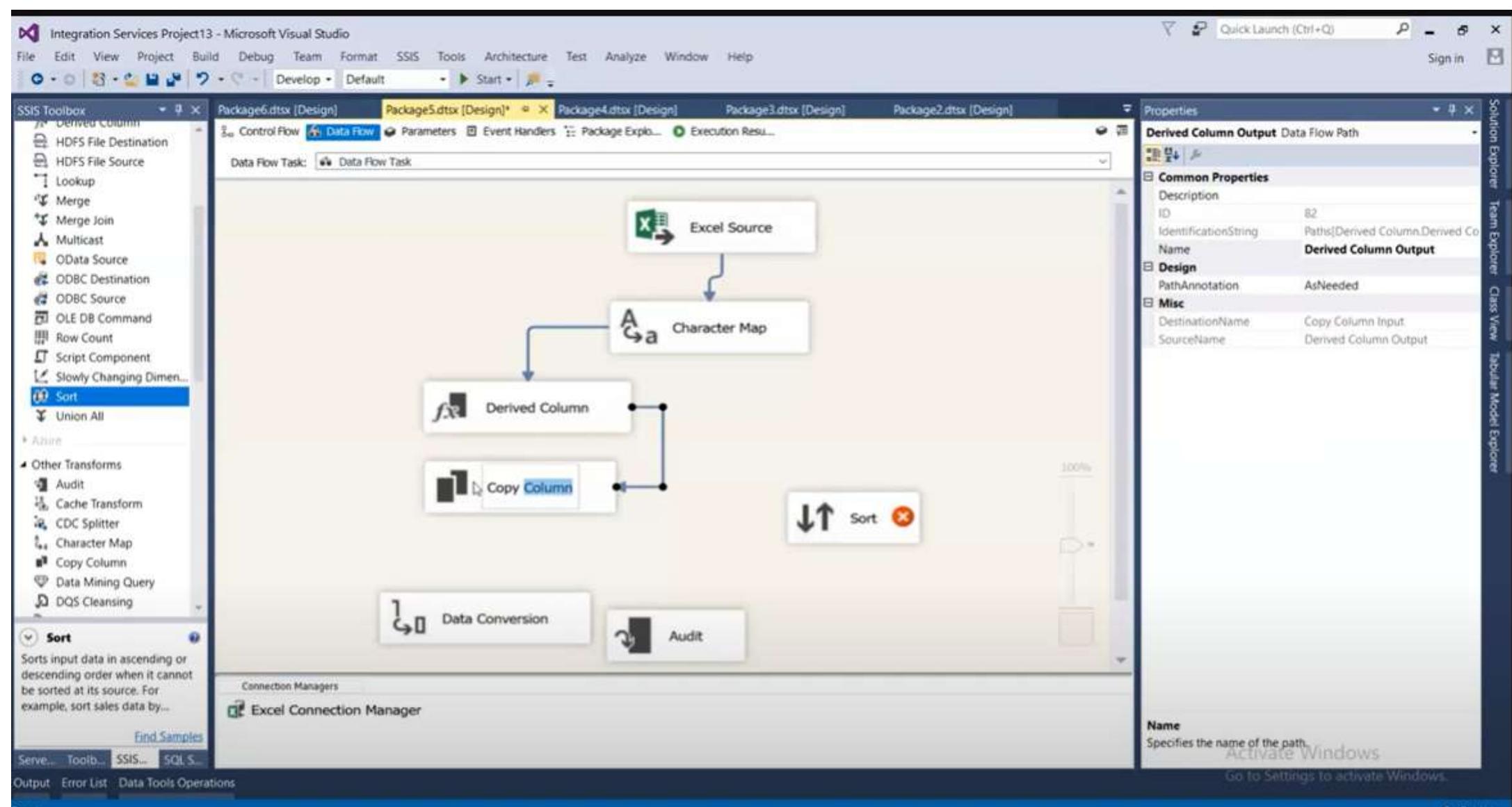
ComponentClassID	(A2034F5D-D283-421B-A4AF-AE147)
ContactInfo	Derived Column;Microsoft Corporation
Description	Creates new column values by applying expressions to existing columns.
ID	47
IdentificationString	Derived Column
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Derived Column
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	0

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.



Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Azure

- Other Transforms
- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column**
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

OK Cancel Help

Properties

Copy Column Data Flow Component

Common Properties

ComponentClassID	(ICE5AAA24-EF2F-4453-BCE6-505)
ContactInfo	Copy Column;Microsoft Corporation
Description	Copies input columns to new column
ID	41
IdentificationString	Copy Column
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Copy Column
PipelineVersion	0
UsesDispositions	False
ValidateExternalMetadata	True
Version	0

Name
Specifies the name of the component.

Activate Windows
Go to Settings to activate Windows.

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Solution Explorer

Team Explorer

Class View

Tabular Model Explorer

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox Package5.dtsx [Design] Control Flow Data Flow Data Flow Task Data Flow

Available Input Columns

Name
St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id
St_super

Input Column Output Alias Data Type Length Precision Scale Code Page

St_Id	Copy of St_Id	double-precision float [D...]				
-------	---------------	-------------------------------	--	--	--	--

Configure Error Output... OK Cancel Help

Properties Data Conversion Data Flow Component

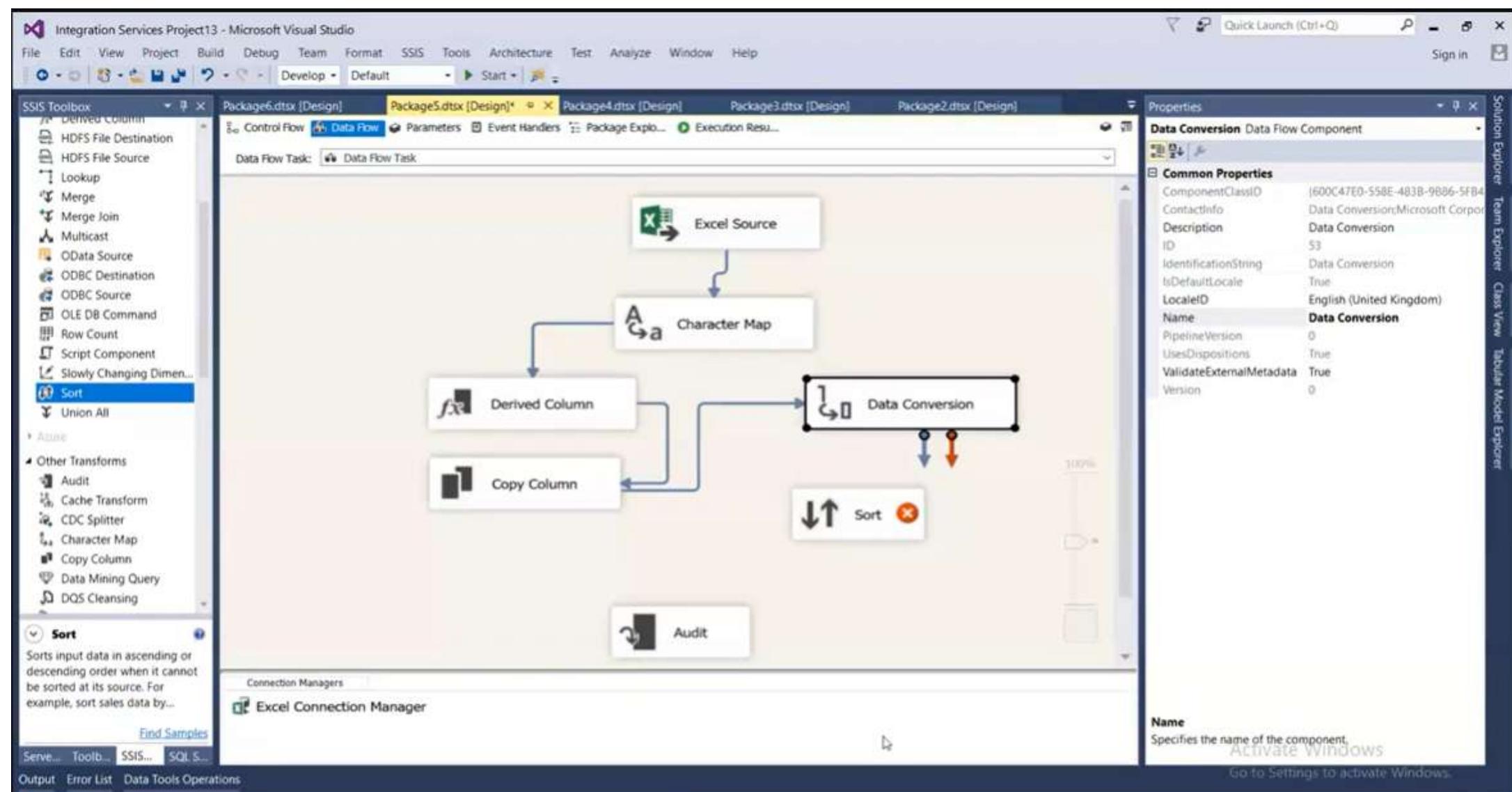
Common Properties

ComponentClassID	(600C47ED-558E-483B-9B86-5F84)
ContactInfo	Data Conversion/Microsoft Corpor
Description	Data Conversion
ID	53
IdentificationString	Data Conversion
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Data Conversion
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	0

Name Specifies the name of the component.

Activate Windows Go to Settings to activate Windows.

SSIS SQL Server Tools Output Error List Data Tools Operations



Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Azure

Other Transforms

- Audit
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Find Samples

Connection Managers

Excel Connection Manager

OK Cancel Help

Remove rows with duplicate sort values

Properties

Sort Data Flow Component

Common Properties

ComponentClassID	{7B0346D5-E62D-4F79-AB19-688
ContactInfo	SortMicrosoft Corporation; Micro
Description	Sorts input data in ascending or d
ID	59
IdentificationString	Sort
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Sort
PipelineVersion	0
UsesDispositions	False
ValidateExternalMetadata	True
Version	1

Custom Properties

EliminateDuplicates	False
MaximumThreads	-1

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Serve... Toolbar SSIS... SQL S... Output Error List Data Tools Operations

The screenshot shows the Microsoft Visual Studio interface for an Integration Services project named "Integration Services Project13". The main window displays the "Sort Transformation Editor" for a package named "Package6.dtsx". The editor allows specifying columns to sort, their sort type (e.g., ascending), and sort order. In the current view, the column "Dept_Id" is selected for sorting with an ascending order. The "Available Input Columns" list includes "Name", "St_Id", "St_Fname", "St_Lname", "St_Address", "St_Age", "Dept_Id", and "St_Super". The "Properties" pane on the right shows the "Sort" component's properties, including its ID, name ("Sort"), and various configuration settings like SortType and SortOrder. The "SSIS Toolbox" on the left lists various transformation components, and the "Connection Managers" pane shows an "Excel Connection Manager". The bottom navigation bar includes links for "Server Explorer", "Toolbox", "SSIS", "SQL Server", "Output", "Error List", "Data Tools", and "Operations".

Solution Explorer Team Explorer Class View Tabular Model Explorer

SSIS Toolbox

- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort**
- Union All

Azure

Other Transforms

- Audit**
- Cache Transform
- CDC Splitter
- Character Map
- Copy Column
- Data Mining Query
- DQS Cleansing

Sort

Sorts input data in ascending or descending order when it cannot be sorted at its source. For example, sort sales data by...

Connection Managers

Excel Connection Manager

Find Samples

SSIS... SQL S...

Output Error List Data Tools Operations

Package6.dtsx [Design] Package5.dtsx [Design]* Package4.dtsx [Design] Package3.dtsx [Design] Package2.dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer Execution Results

Audit Transformation Editor

Configure the properties used to insert audit information into the data flow.

Output Column Name	Audit Type
User name	User name

OK Cancel Help

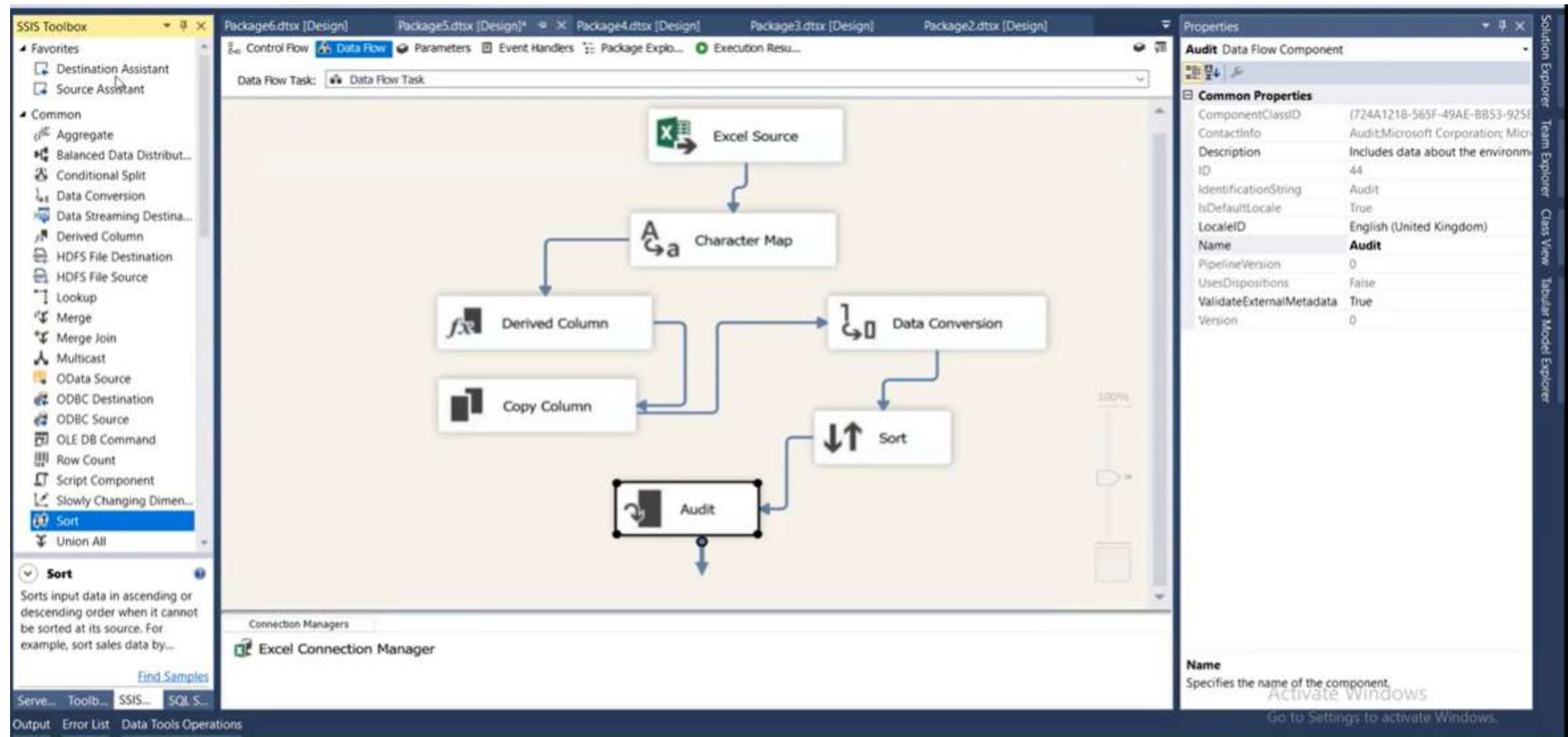
Properties

Audit Data Flow Component

Common Properties

ComponentClassID	{724A121B-565F-49AE-8B53-925E...
ContactInfo	Audit;Microsoft Corporation; Micr...
Description	Includes data about the environment
ID	44
IdentificationString	Audit
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Audit
PipelineVersion	0
UsesDispositions	False
ValidateExternalMetadata	True
Version	0

Name
Specifies the name of the component.
Activate Windows
Go to Settings to activate Windows.



SSIS Toolbox

Package6.dtsx [Design] Package5.dtsx [Design]* Package4.dtsx [Design] Package3.dtsx [Design] Package2.dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explorer Execution Results

Data Flow Task: Data Flow Task

SSIS Toolbox

- Favorites
- Destination Assistant
- Source Assistant
- Common
 - Aggregate
 - Balanced Data Distribution
 - Conditional Split
 - Data Conversion
 - Data Streaming Destination
 - Derived Column
 - HDFS File Destination
 - HDFS File Source
 - Lookup
 - Merge
 - Merge Join
 - Multicast
 - OData Source
 - ODBC Destination
 - ODBC Source
 - OLE DB Command
 - Row Count
 - Script Component
 - Slowly Changing Dimension
 - Sort
 - Union All
- Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Server... Toolbars SSIS... SQL Server

Output Error List Data Tools Operations

Excel Source

Destination Assistant - Add New Destination

Select destination type:

- SQL Server
- Excel
- Oracle

Select connection managers

New...

Show only installed destination types

First, select the type of destination for the data. Second, click New or OK to create a connection or select an existing connection to the destination.

OK Cancel

Connection Managers

Excel Connection Manager

Properties

Audit Data Flow Component

Common Properties

ComponentClassID	{724A121B-565F-49AE-BB53-925E}
ContactInfo	Audit;Microsoft Corporation; Micr
Description	Includes data about the environm
ID	44
IdentificationString	Audit
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Audit
PipelineVersion	0
UsesDispositions	False
ValidateExternalMetadata	True
Version	0

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Solution Explorer Team Explorer Class View Tabular Model Explorer

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

Package6.dtsx [Design] Package5.dtsx [Design] Package4.dtsx [Design] Package3.dtsx [Design] Package2.dtsx [Design]

Control Flow Data Flow Parameters Event Handlers Package Explor... Execution Resu...

Data Flow Task: Data Flow Task

Connection Manager

Provider: Native OLE DB|SQL Server Native Client 11.0

Connection

Server name: Refresh

Log on to the server

Authentication: Windows Authentication

User name: Password: Save my password

Connect to a database

Select or enter a database name: MyDW

Attach a database file: Browse Logical name:

Test Connection OK Cancel Help

Connection Managers

Excel Connection Manager

Find Samples

Serve... Toolb... SSIS... SQL S...

Output Error List Data Tools Operations

Properties

Audit Data Flow Component

Common Properties

ComponentClassID	{724A1218-565F-49AE-BB53-925E}
ContactInfo	Audit;Microsoft Corporation; Micr
Description	Includes data about the environm
ID	44
IdentificationString	Audit
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Audit
PipelineVersion	0
UsesDispositions	False
ValidateExternalMetadata	True
Version	0

Name
Specifies the name of the component.

Activate Windows
Go to Settings to activate Windows.

Solution Explorer Team Explorer Class View Tabular Model Explorer

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Develop Default

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager: LocalHost.MyDW

Data access mode: Table or view - fast load

Name of the table or the view: (dropdown menu)

Keep identity: Table lock:

Keep nulls: Check constraints:

Rows per batch: (dropdown menu)

Maximum insert commit size: 2147483647

View Existing Data... (button)

Select a table or view from the list. (warning message)

Properties

OLE DB Destination Data Flow Component

Common Properties

ComponentClassID	{7B729B0A-4EAS-4A0D-B71A-B61...
ContactInfo	OLE DB Destination;Microsoft Cor...
Description	OLE DB Destination
ID	150
IdentificationString	OLE DB Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	OLE DB Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	4

Custom Properties

AccessMode	OpenRowset Using FastLoad
AlwaysUseDefaultCodePage	False
CommandTimeout	0
DefaultCodePage	1252
OpenRowset	

SSIS Toolbox

Favorites

- Destination Assistant
- Source Assistant

Common

- Aggregate
- Balanced Data Distribution
- Conditional Split
- Data Conversion
- Data Streaming Destination
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Connection Managers

Excel Connection Manager

Server... Toolb... SSIS... SQL S...

Output Error List Data Tools Operations

Ready

Quick Launch (Ctrl+Q) Sign in

Solution Explorer Team Explorer Class View Tabular Model Explorer

Activate Windows Go to Settings to activate Windows. Publish

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox Default

Package6.dtsx [Design]

Control Flow Data Flow

Data Flow Task Data Flow

Destination Assistant

Source Assistant

Common

- Aggregate
- Balanced Data Distributor
- Conditional Split
- Data Conversion
- Data Streaming Destination
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Connection Managers

Excel Connection Manager

SSIS... SQLS...

Output Error List Data Tools Operations

Ready

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager

Mappings

Error Output

Create Table

```
CREATE TABLE [OLE DB Destination] (
    [St_Id] float,
    [St_Fname] nvarchar(255),
    [St_Lname] nvarchar(255),
    [St_Address] nvarchar(255),
    [St_Age] float,
    [Dept_Id] float,
    [St_Super] float,
    [Copy of St_Fname] nvarchar(255),
    [Fullname] nvarchar(510),
    [Did2] float,
    [Copy of St_Id] real,
    [User name] nvarchar(64)
)
```

New...

New...

OK Cancel

View Existing Data

Select a table or view from the list.

OK Cancel Help

Properties

OLE DB Destination Data Flow Component

Common Properties

ComponentClassID	(78729B0A-4E45-4A0D-871A-861...
ContactInfo	OLE DB Destination/Microsoft Cor...
Description	OLE DB Destination
ID	150
IdentificationString	OLE DB Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	OLE DB Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	4

Custom Properties

AccessMode	OpenRowset Using FastLoad
AlwaysUseDefaultCodePage	False
CommandTimeout	0
DefaultCodePage	1252
OpenRowset	

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Published

Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

Package6.dtsx [Design]

Control Flow Data Flow

SSIS Toolbox

Favorites

- Destination Assistant
- Source Assistant

Common

- Aggregate
- Balanced Data Distributor
- Conditional Split
- Data Conversion
- Data Streaming Destination
- Derived Column
- HDFS File Destination
- HDFS File Source
- Lookup
- Merge
- Merge Join
- Multicast
- OData Source
- ODBC Destination
- ODBC Source
- OLE DB Command
- Row Count
- Script Component
- Slowly Changing Dimension
- Sort
- Union All

Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Connection Managers

Excel Connection Manager

Server Tools SSIS SQL Server

Output Error List Data Tools Operations

Ready

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager

Mappings

Error Output

Specify an OLE DB connection manager, a data source, or a data source view, and select the data access mode. If using the SQL command access mode, specify the SQL command either by typing the query or by using Query Builder. For fast-load data access, set the table update options.

OLE DB connection manager:

localhost.MyDW

New...

Data access mode:

Table or view - fast load

Name of the table or the view:

[FullStudData]

New...

Keep identity Table lock

Keep nulls Check constraints

Rows per batch:

Maximum insert commit size:

2147483647

View Existing Data...

Map the columns on the Mappings page.

OK Cancel Help

Properties

OLE DB Destination Data Flow Component

Common Properties

ComponentClassID	(7B729B0A-4EAS-4A0D-871A-861...
ContactInfo	OLE DB Destination;Microsoft Cor...
Description	OLE DB Destination
ID	150
IdentificationString	OLE DB Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	OLE DB Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	4

Custom Properties

AccessMode	OpenRowset Using FastLoad
AlwaysUseDefaultCodePage	False
CommandTimeout	0
DefaultCodePage	1252
OpenRowset	

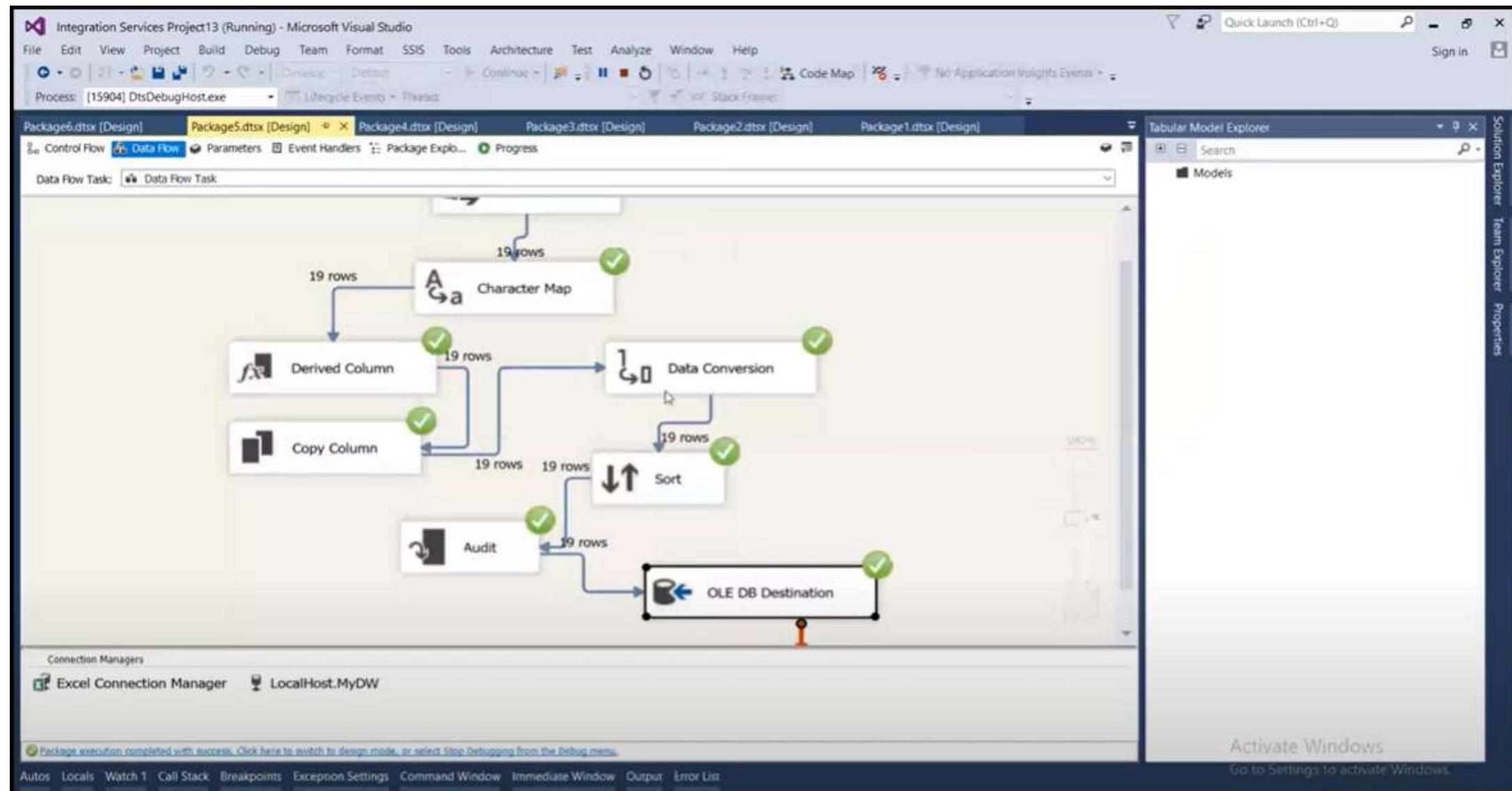
Name

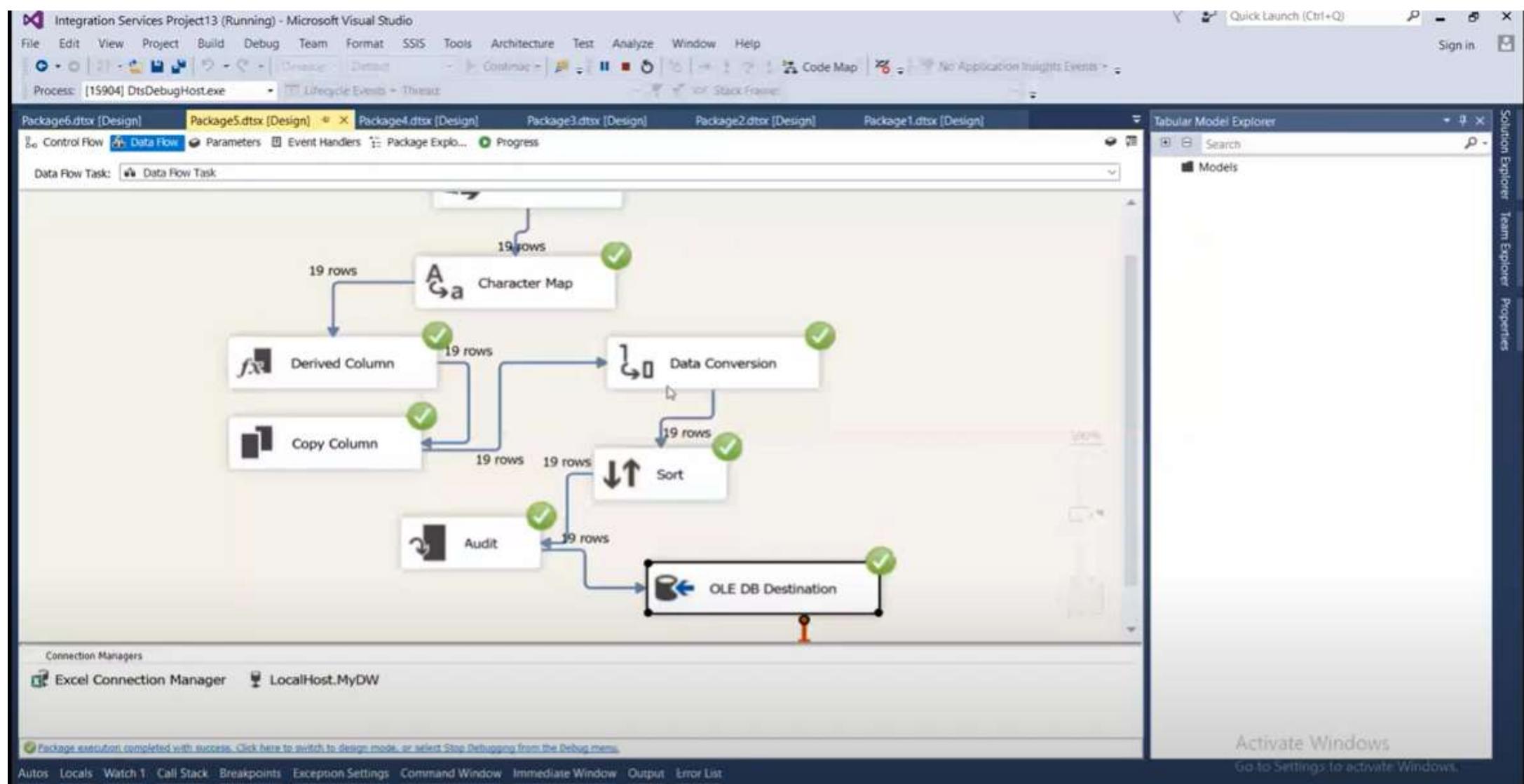
Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Publish





Object Explorer

Connect - DESKTOP-VF50P25.M...dbo.FullStudData

Properties Template Browser

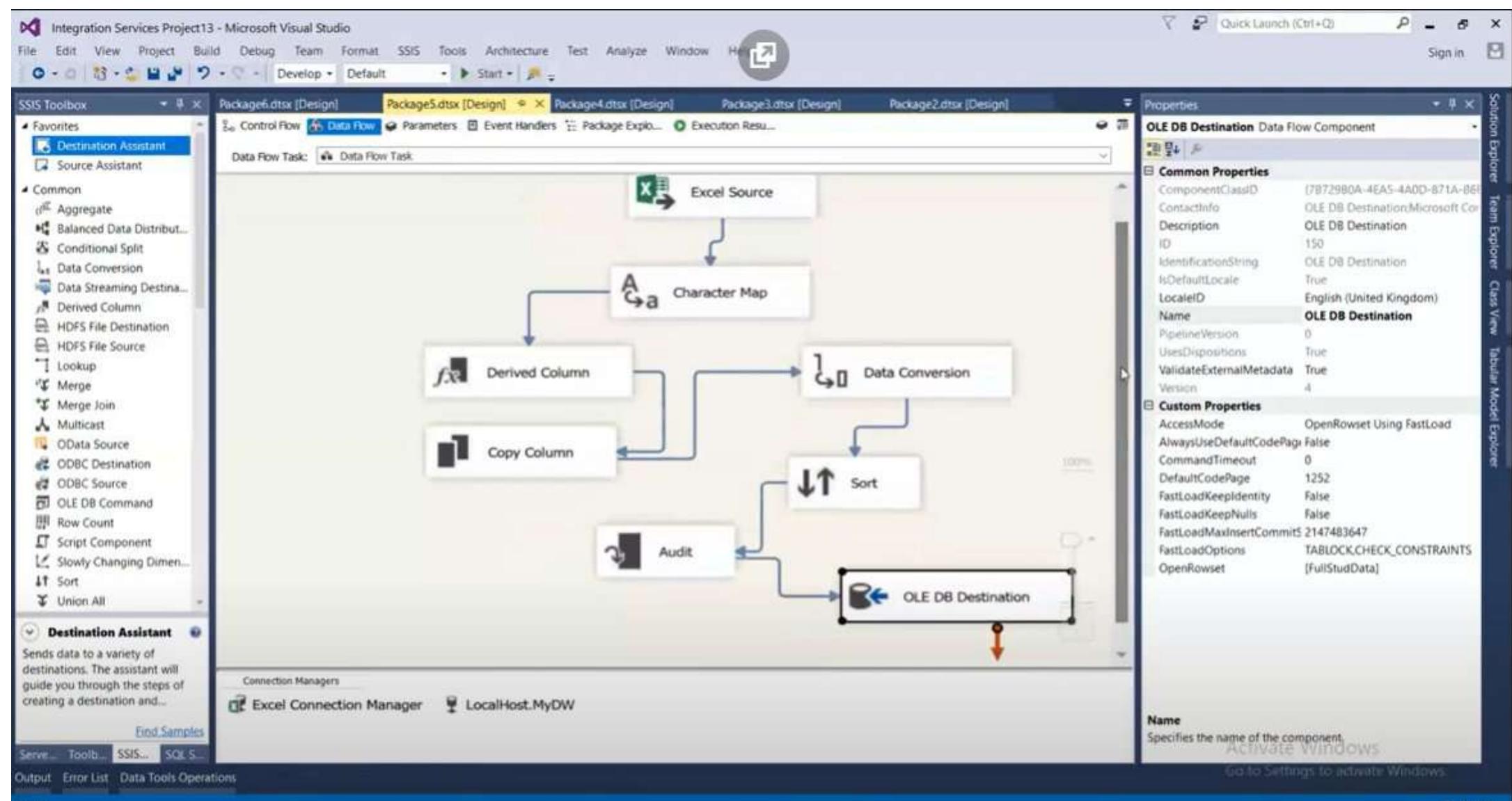
St_Id St_Fname St_Lname St_Address St_Age Dept_Id St_super Copy of St_Fn... Fullname Did2 Copy of St_Id User

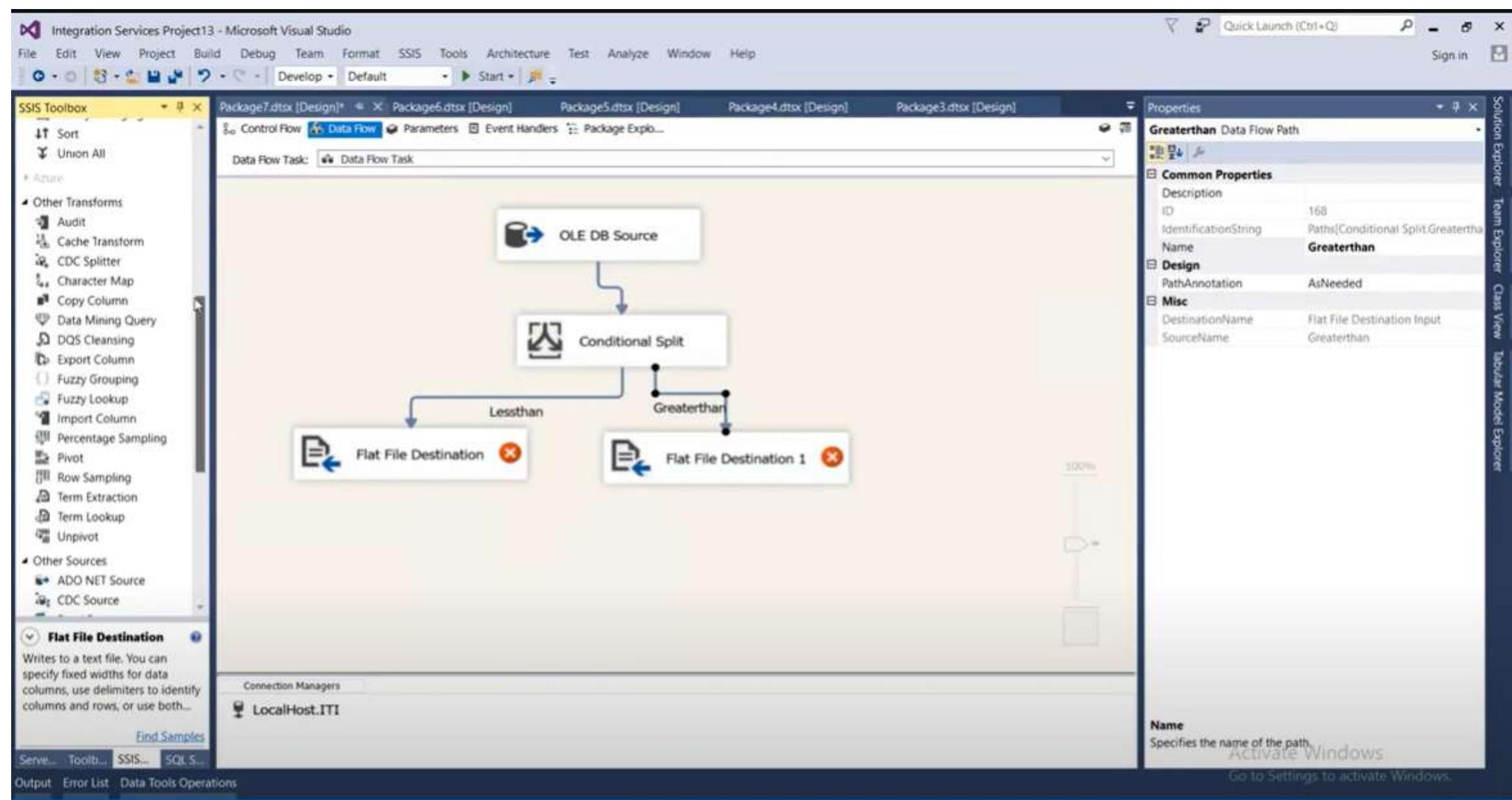
St_Id	St_Fname	St_Lname	St_Address	St_Age	Dept_Id	St_super	Copy of St_Fn...	Fullname	Did2	Copy of St_Id	User
100	omar	NULL	NULL	NULL	NULL	NULL	OMAR	NULL	NULL	100	DESM
2	Amr	Magdy	Cairo	21	10	1	AMR	AmrMagdy	10	2	DESM
4	NULL	Mohamed	Alex	23	10	1	NULL	NULL	10	4	DESM
1	Ahmed	Hassan	Cairo	20	10	NULL	AHMED	AhmedHassan	10	1	DESM
5	NULL	Moahmed	Alex	24	10	1	NULL	NULL	10	5	DESM
3	Mona	Saleh	Cairo	28	10	1	MONA	MonaSaleh	10	3	DESM
8	NULL	NULL	Alex	28	20	6	NULL	NULL	20	8	DESM
10	Fady	Ali	Alex	24	20	9	FADY	FadyAli	20	10	DESM
6	Heba	Farouk	Mansoura	25	20	NULL	HEBA	HebaFarouk	20	6	DESM
11	mohamed ali	Ahmed	Cairo	24	20	9	MOHAMED ALI	mohamed alia...	20	11	DESM
7	Ali	Hussien	Cairo	25	20	6	ALI	AliHussien	20	7	DESM
9	Saly	Ahmed	Mansoura	24	20	NULL	SALY	SalyAhmed	20	9	DESM
44	NULL	NULL	NULL	25	30	NULL	NULL	NULL	30	44	DESM
16	NULL	NULL	NULL	25	30	NULL	NULL	NULL	30	16	DESM
13	Said	NULL	NULL	22	30	12	SAID	NULL	30	13	DESM
14	omar	Saleh	Tanta	22	30	NULL	OMAR	omarSaleh	30	14	DESM
15	X	NULL	NULL	22	30	NULL	X	NULL	30	15	DESM
12	Noha	Omar	Cairo	21	30	NULL	NOHA	NohaOmar	30	12	DESM
17	Y	NULL	NULL	25	30	NULL	Y	NULL	30	17	DESM
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

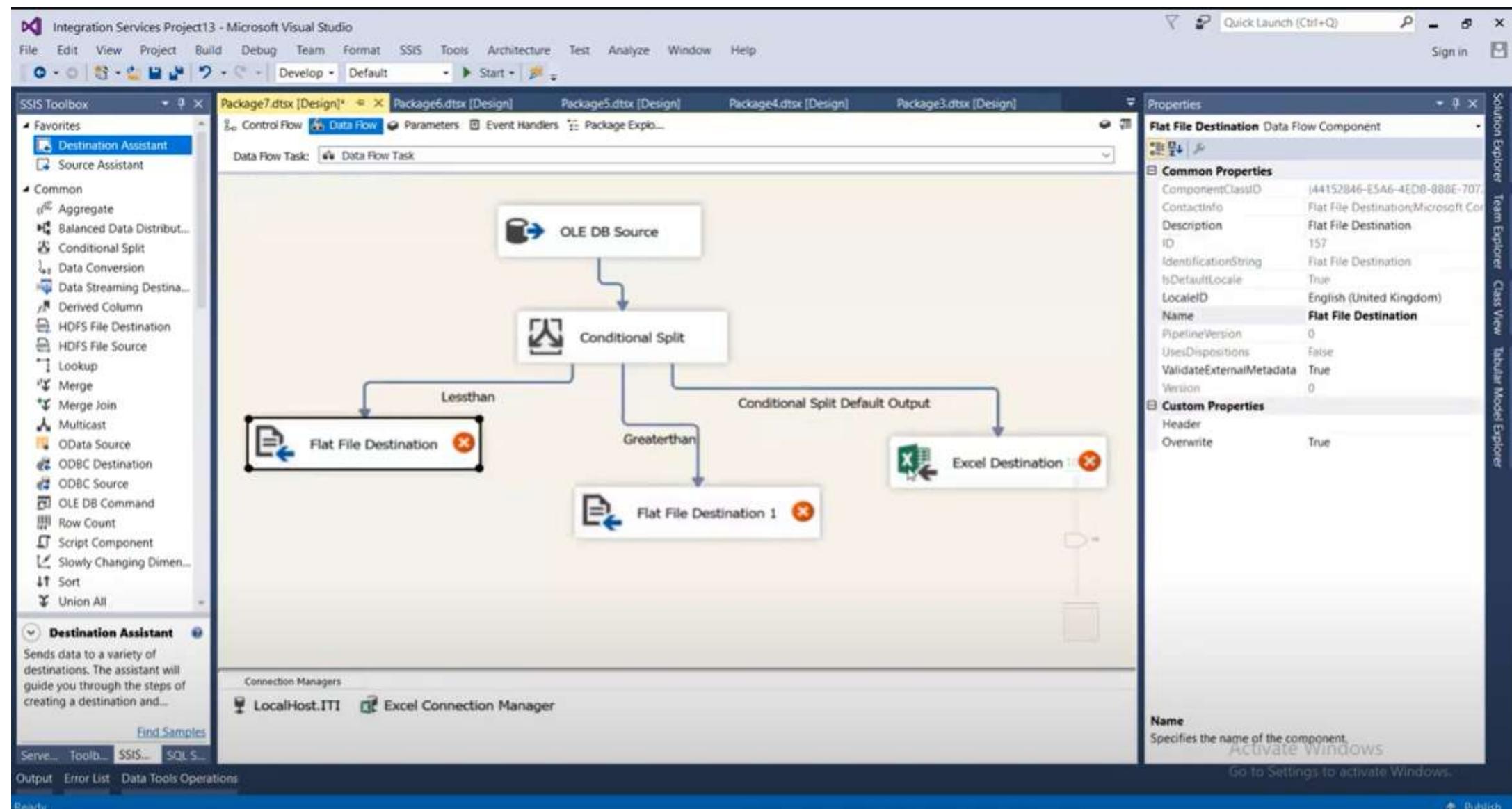
Activate Windows | Go to Settings to activate Windows.

Output

Ready







Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Favorites
 - Destination Assistant
 - Source Assistant
- Common
 - Aggregate
 - Balanced Data Distributor
 - Conditional Split
 - Data Conversion
 - Data Streaming Destination
 - Derived Column
 - HDFS File Destination
 - HDFS File Source
 - Lookup
 - Merge
 - Merge Join
 - Multicast
 - OData Source
 - ODBC Destination
 - ODBC Source
 - OLE DB Command
 - Row Count
 - Script Component
 - Slowly Changing Dimension
 - Sort
 - Union All
- Destination Assistant
 - Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Server... Toolbars... SSIS... SQL Server... Output: Error List Data Tools Operations Ready

Package7.dtsx [Design]*

Control Flow Data Flow

Data Flow Task Data Flow

Excel Destination Editor

Configure the properties that enable the insertion of data via an Excel provider.

Connection Manager
Mappings
Error Output

Create Table

```
CREATE TABLE 'Excel Destination'(
    'St_Id' Long,
    'St_Fname' LongText,
    'St_Lname' LongText,
    'St_Address' LongText,
    'St_Age' Long,
    'Dept_Id' Long,
    'St_super' Long)
```

New... New... OK Cancel

Select a table or view from the list.

Properties

Excel Destination Data Flow Component

Common Properties

ComponentClassID	(EDFDSEC4-D128-423D-8962-85E
ContactInfo	Excel Destination;Microsoft Corp
Description	Excel Destination
ID	169
IdentificationString	Excel Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	Excel Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	0

Custom Properties

AccessMode	OpenRowset
CommandTimeout	0
OpenRowset	

Name

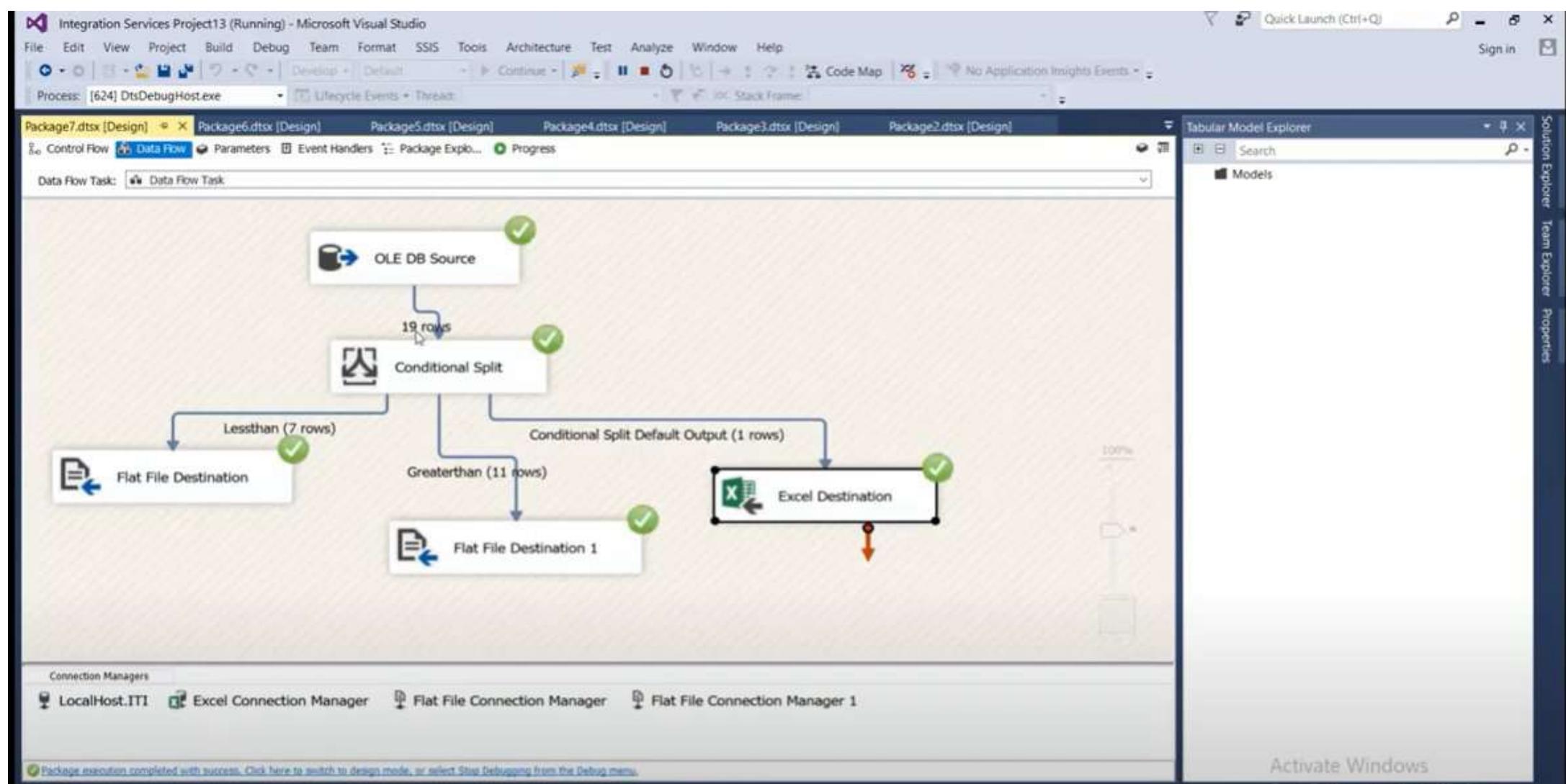
Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Published

Solution Explorer Team Explorer Class View Tabular Model Explorer



Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Favorites
 - Destination Assistant
 - Source Assistant
- Common
 - Aggregate
 - Balanced Data Distribution
 - Conditional Split
 - Data Conversion
 - Data Streaming Destination
 - Derived Column
 - HDFS File Destination
 - HDFS File Source
 - Lookup
 - Merge
 - Merge Join
 - Multicast
 - OData Source
 - ODBC Destination
 - ODBC Source
 - OLE DB Command
 - Row Count
 - Script Component
 - Slowly Changing Dimension
 - Sort
 - Union All
- Destination Assistant

Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Find Samples

Connection Managers

Flat File Connection Manager Flat File Connection Manager 1

Control Flow Data Flow Parameters Event Handlers Package Explorer

Data Flow Task

Properties

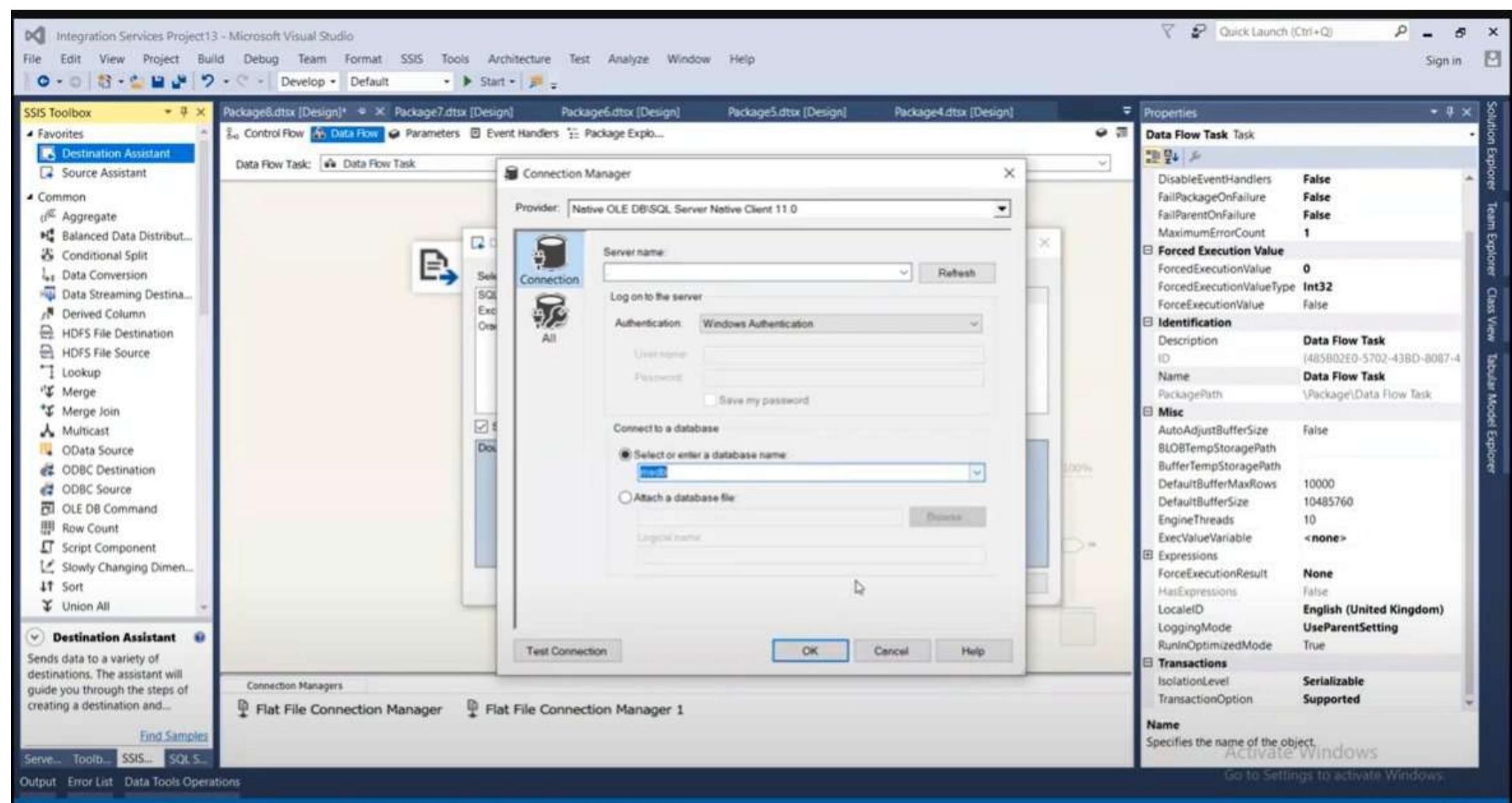
Data Flow Task Task

- DisableEventHandlers False
- FailPackageOnFailure False
- FailParentOnFailure False
- MaximumErrorCount 1
- Forced Execution Value
 - ForcedExecutionValue 0
 - ForcedExecutionValueType Int32
 - ForceExecutionValue False
- Identification
 - Description Data Flow Task
 - ID 148502E0-5702-43BD-8087-4
 - Name Data Flow Task
 - PackagePath \Package\Data Flow Task
- Misc
 - AutoAdjustBufferSize False
 - BLOTTempStoragePath
 - BufferTempStoragePath
 - DefaultBufferMaxRows 10000
 - DefaultBufferSize 10485760
 - EngineThreads 10
 - ExecValueVariable <none>
- Expressions
 - ForceExecutionResult None
 - HasExpressions False
 - LocaleID English (United Kingdom)
 - LoggingMode UseParentSetting
 - RunInOptimizedMode True
- Transactions
 - IsolationLevel Serializable
 - TransactionOption Supported

Name Specifies the name of the object.

Activate Windows
Go to Settings to activate Windows.

```
graph TD; FFS[Flat File Source] --> UAU[Union All]; FFS1[Flat File Source 1] --> UAU
```



Integration Services Project13 - Microsoft Visual Studio

File Edit View Project Build Debug Team Format SSIS Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SSIS Toolbox

- Favorites
 - Destination Assistant
 - Source Assistant
- Common
 - Aggregate
 - Balanced Data Distributor
 - Conditional Split
 - Data Conversion
 - Data Streaming Destination
 - Derived Column
 - HDFS File Destination
 - HDFS File Source
 - Lookup
 - Merge
 - Merge Join
 - Multicast
 - OData Source
 - ODBC Destination
 - ODBC Source
 - OLE DB Command
 - Row Count
 - Script Component
 - Slowly Changing Dimension
 - Sort
 - Union All
- Destination Assistant
 - Sends data to a variety of destinations. The assistant will guide you through the steps of creating a destination and...

Package8.dtsx [Design] Control Flow Data Flow

Develop Default

OLE DB Destination Editor

Configure the properties used to insert data into a relational database using an OLE DB provider.

Connection Manager Mappings Error Output

Create Table

```
CREATE TABLE [OLE DB Dest] (
    [St_Id] varchar(50),
    [St_Fname] varchar(50),
    [St_Lname] varchar(50),
    [St_Address] varchar(50),
    [St_Age] varchar(50),
    [Dept_Id] varchar(50),
    [St_super] varchar(50)
)
```

New... New... OK Cancel

View Existing Data

Select a table or view from the list.

OK Cancel Help

Properties

OLE DB Destination Data Flow Component

Common Properties

ComponentClassID	{7B729B0A-4EA5-4A0D-871A-B61E8A8A8A8A}
ContactInfo	OLE DB Destination;Microsoft Corporation
Description	OLE DB Destination
ID	117
IdentificationString	OLE DB Destination
IsDefaultLocale	True
LocaleID	English (United Kingdom)
Name	OLE DB Destination
PipelineVersion	0
UsesDispositions	True
ValidateExternalMetadata	True
Version	4

Custom Properties

AccessMode	OpenRowset Using FastLoad
AlwaysUseDefaultCodePage	False
CommandTimeout	0
DefaultCodePage	1252
OpenRowset	

Name

Specifies the name of the component.

Activate Windows

Go to Settings to activate Windows.

Ready

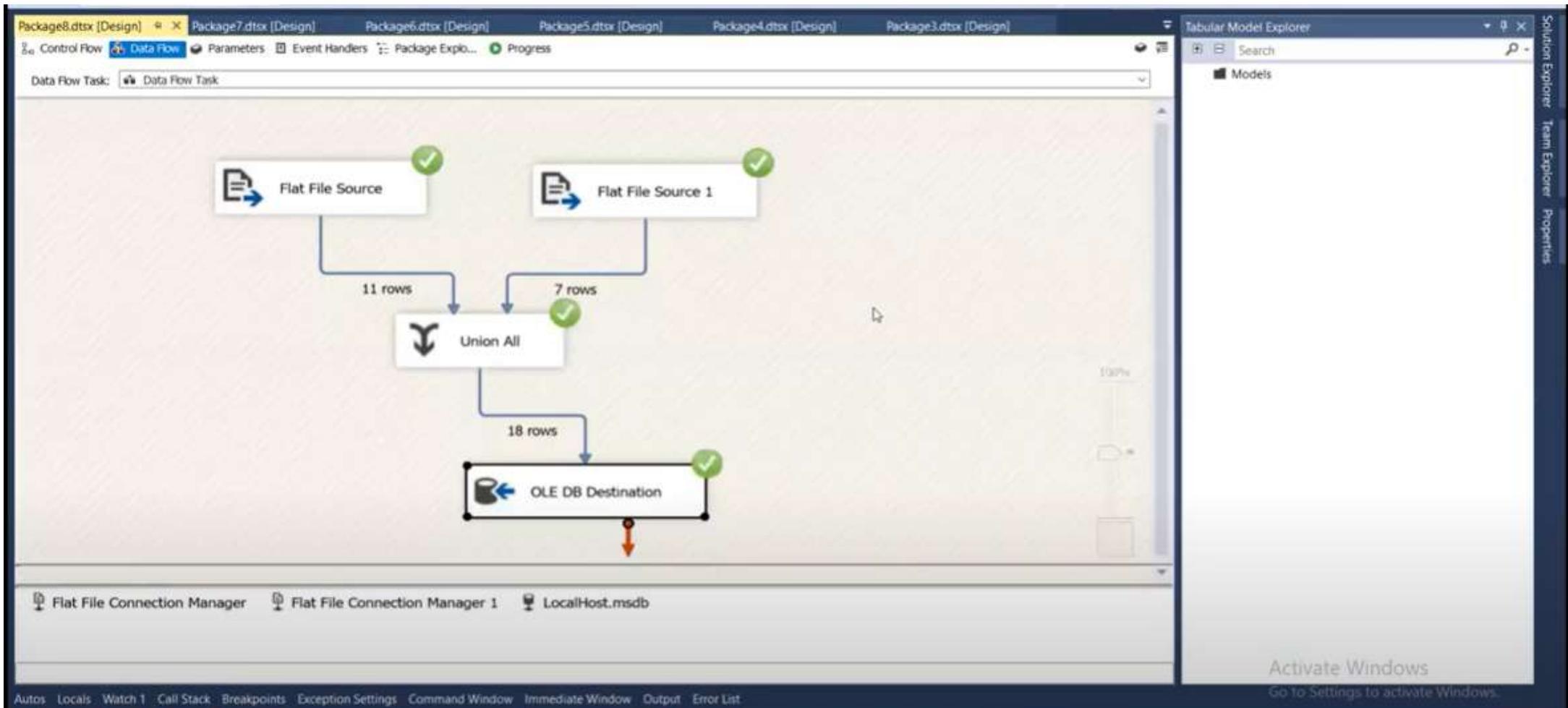
Output Error List Data Tools Operations

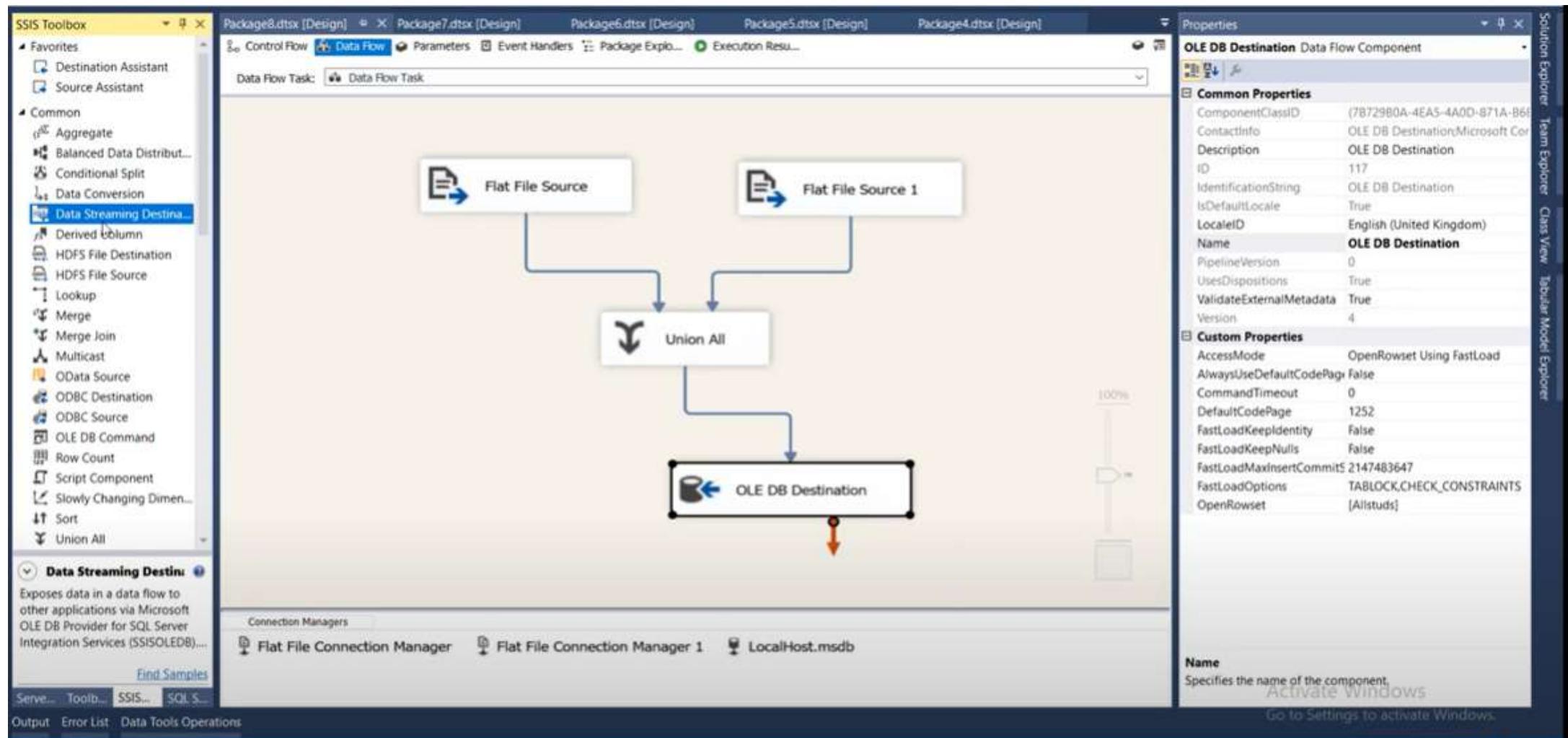
Find Samples

SSIS... SQL...

Server... Toolbars

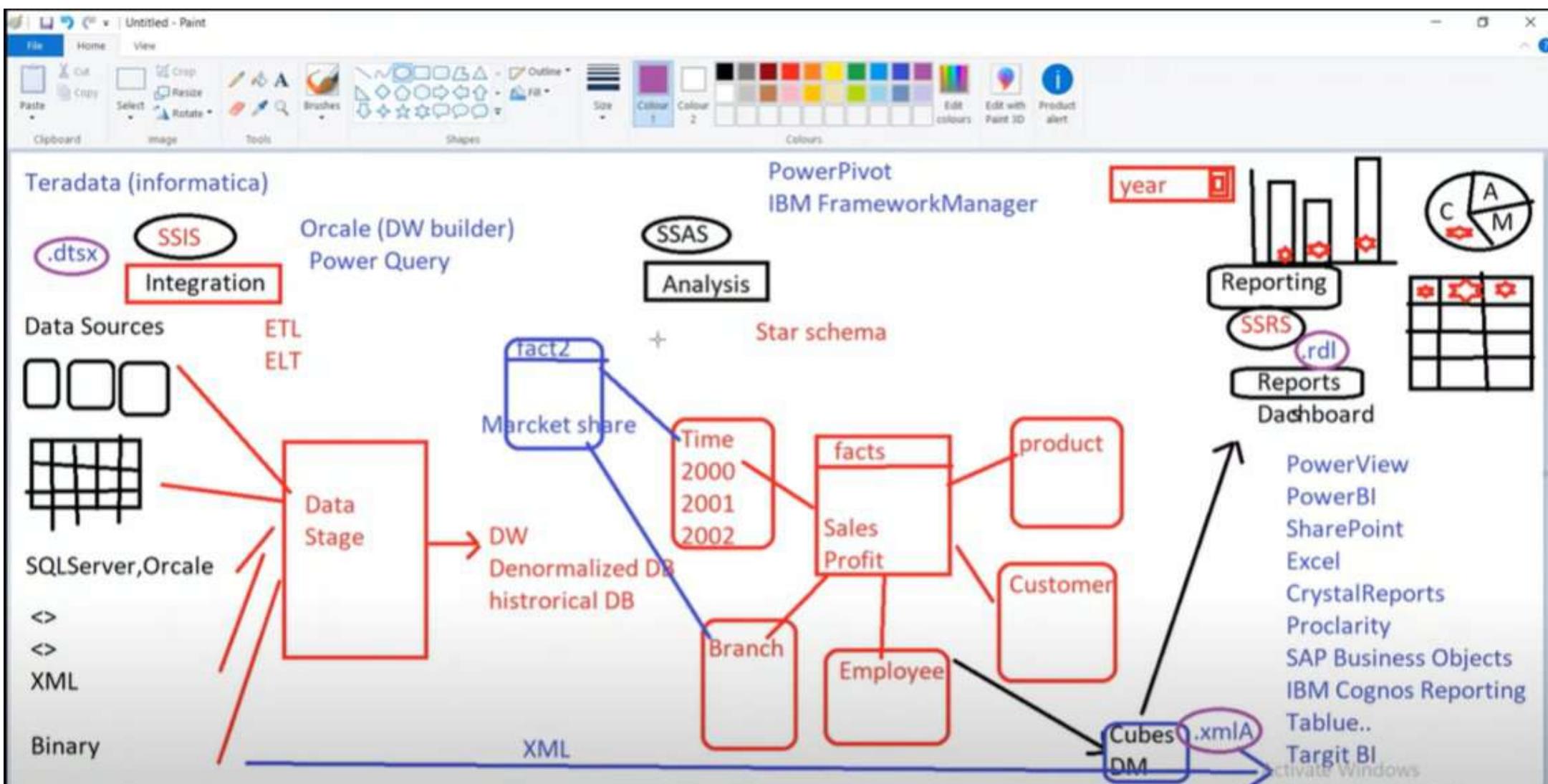
Publish

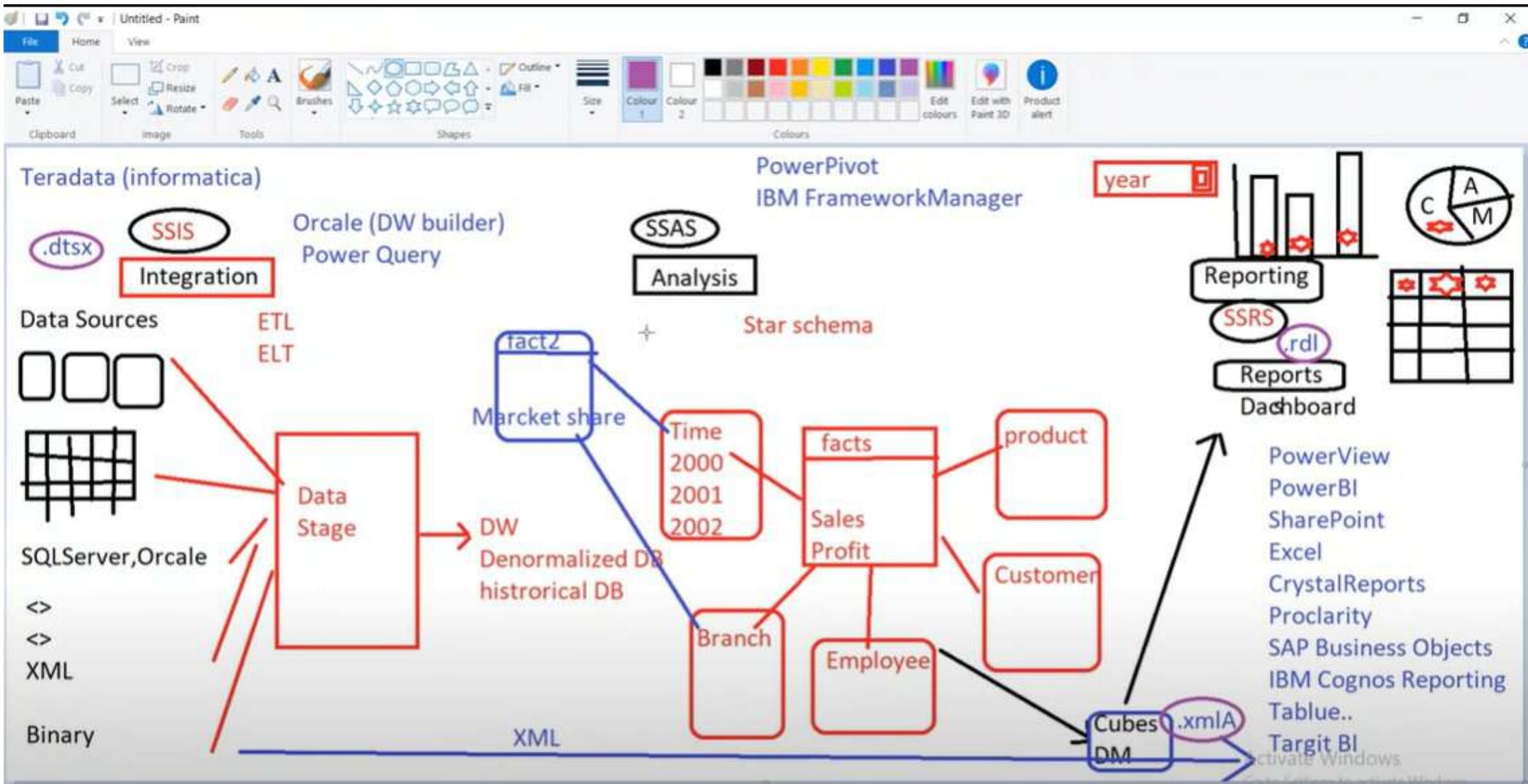




Open Businesses in countries that has
Skyscrapers.

افتح مشاريعك التجارية في البلدان التي يوجد بها ناطحات
سحاب.





Introduction to Data Warehousing

Business Intelligence

- "Set of tools and technologies for gathering, analyzing and providing access to data as they enterprise users make better decisions."

DW

A data warehouse is for consolidation:

- A temporary holding area to integrate heterogeneous data for management and decision support analysis. The information is often denormalized, extracted over time and may be stored at various degrees of completeness.

Data Warehouse

- A data warehouse is a De-Normalized DB (data-oriented, integrated, time-varying, non-

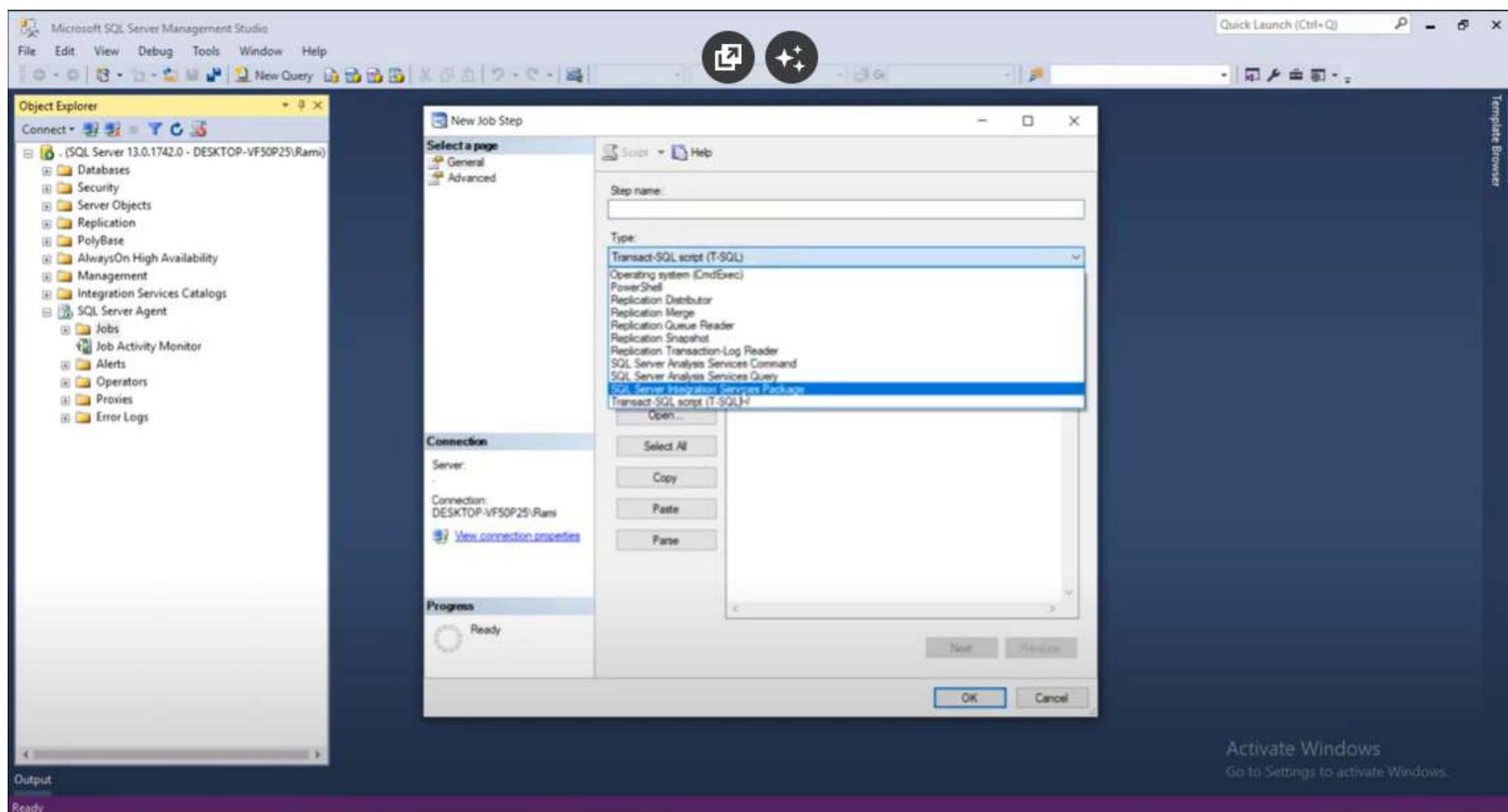
Introduction to Data Warehousing

Click to add notes

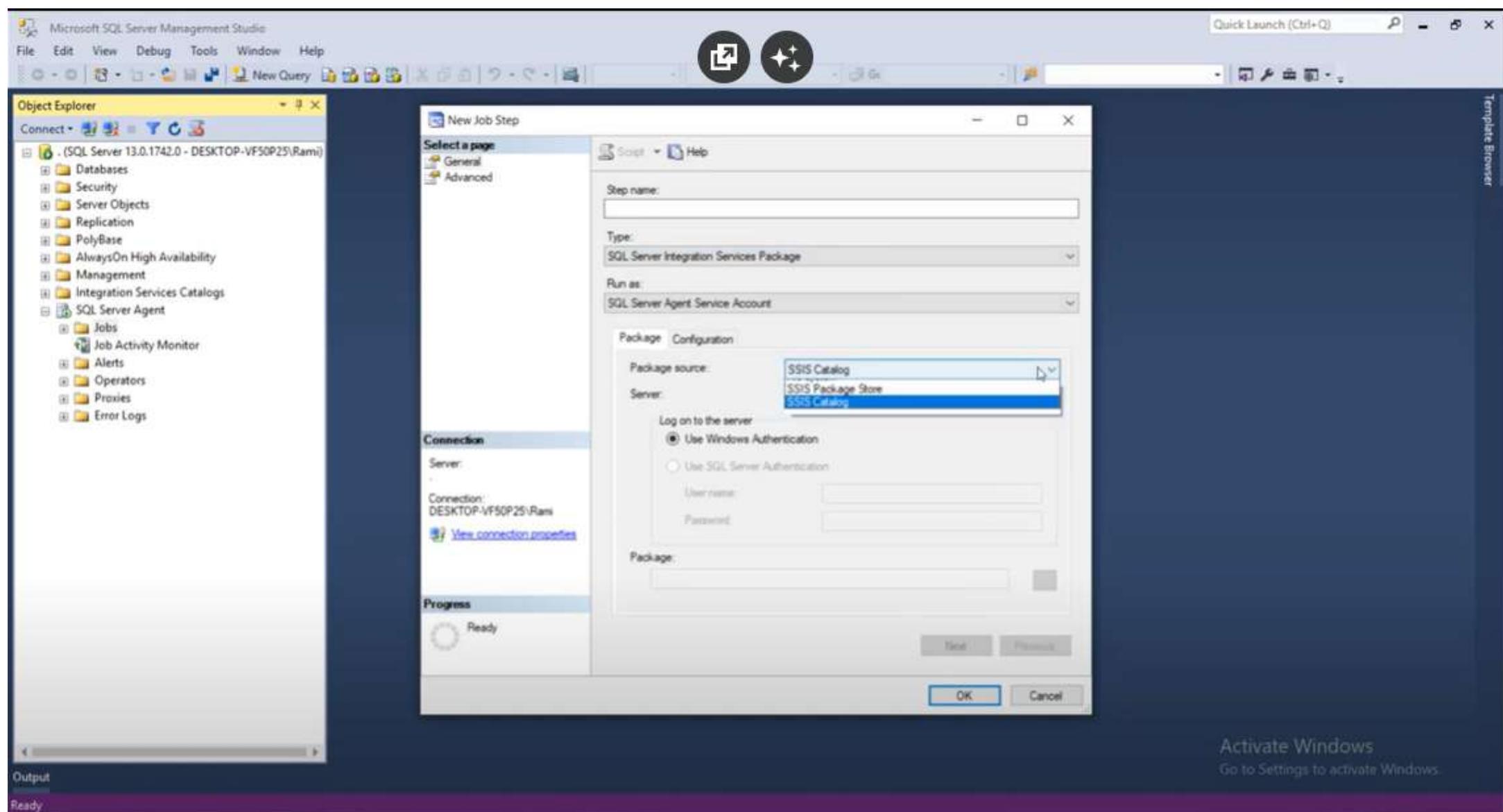
Activate Windows
Go to Settings to activate Windows

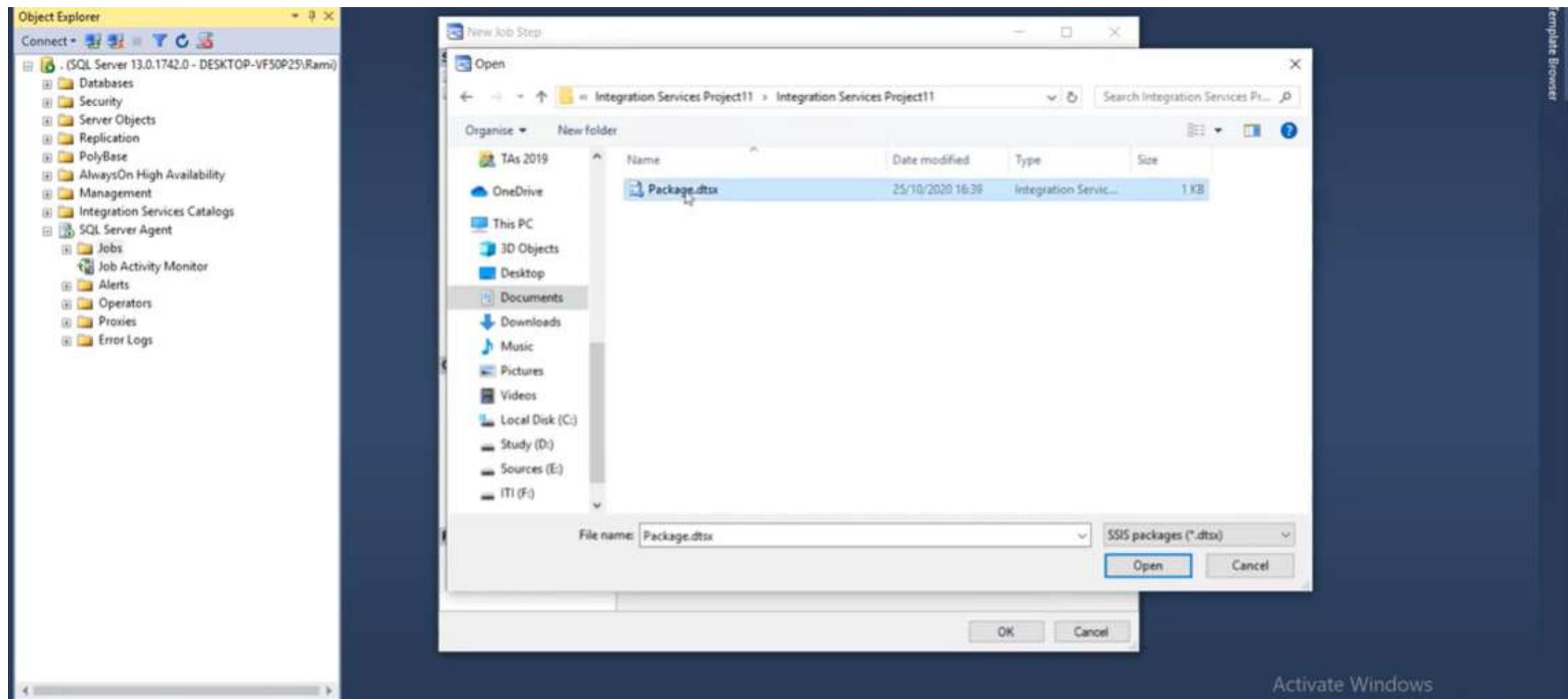
Data Warehouse

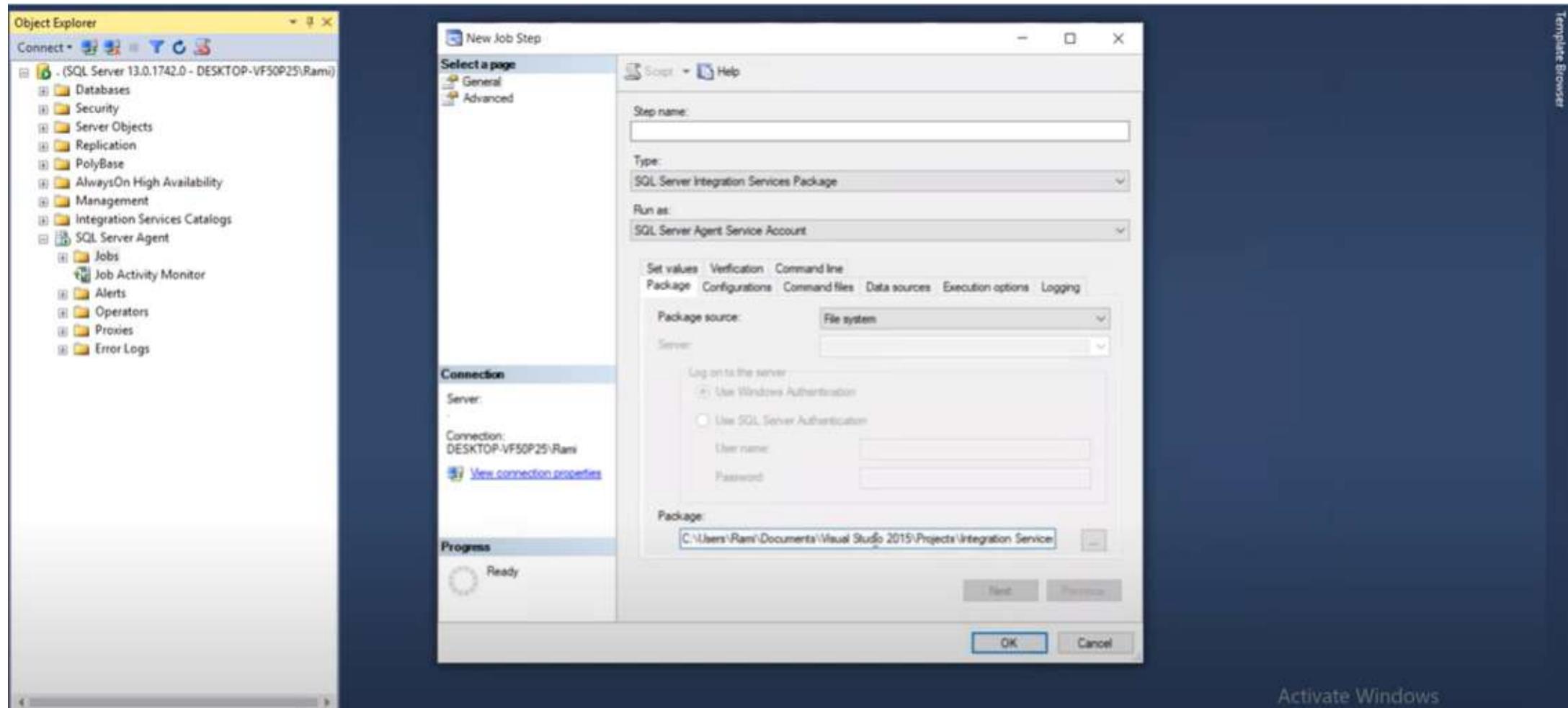
- A data warehouse is a De-Normalized DB
“subject-oriented, integrated, time-varying, non-volatile collection of data in support of the management's decision-making process.”

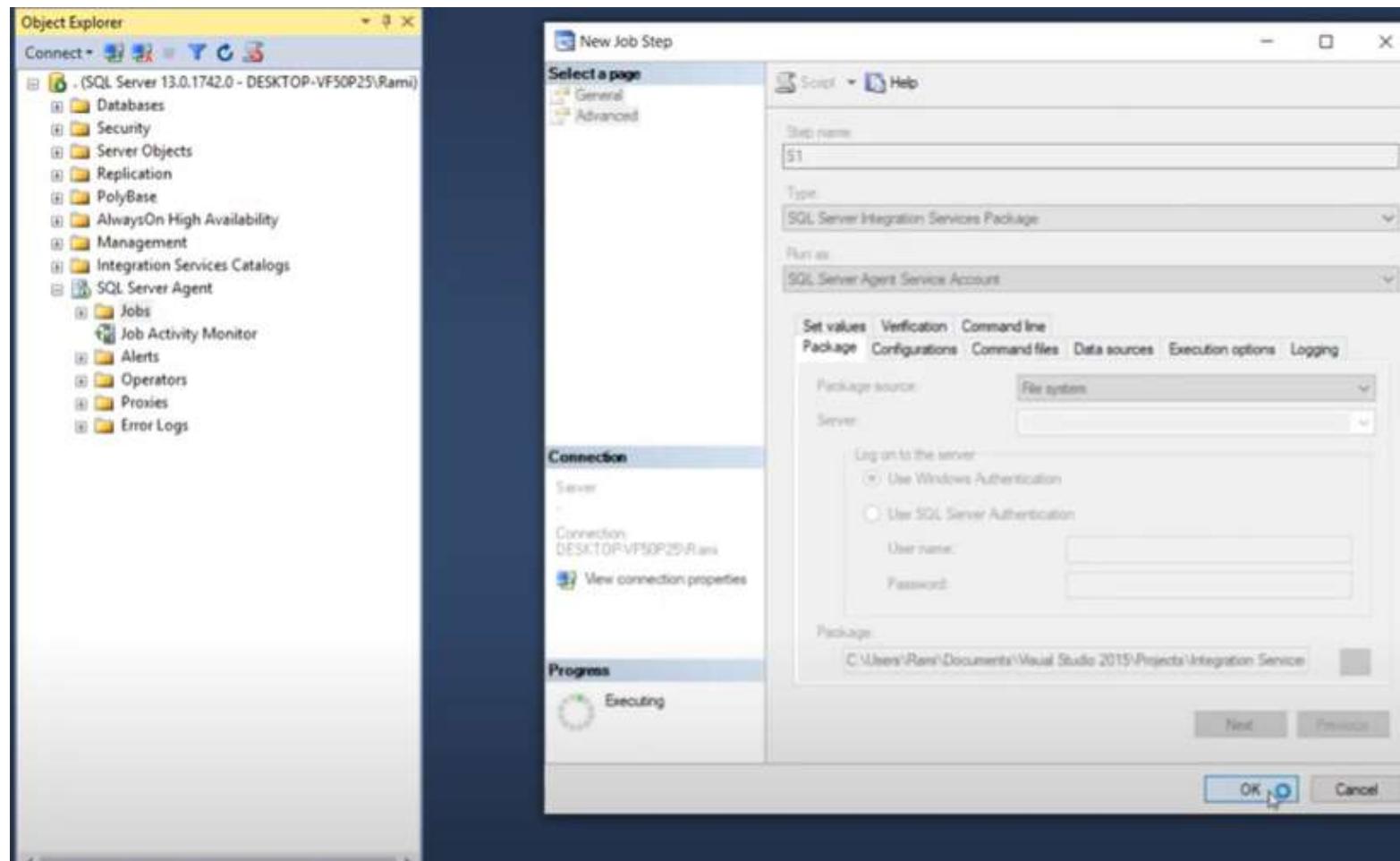


Activate Windows
Go to Settings to activate Windows.

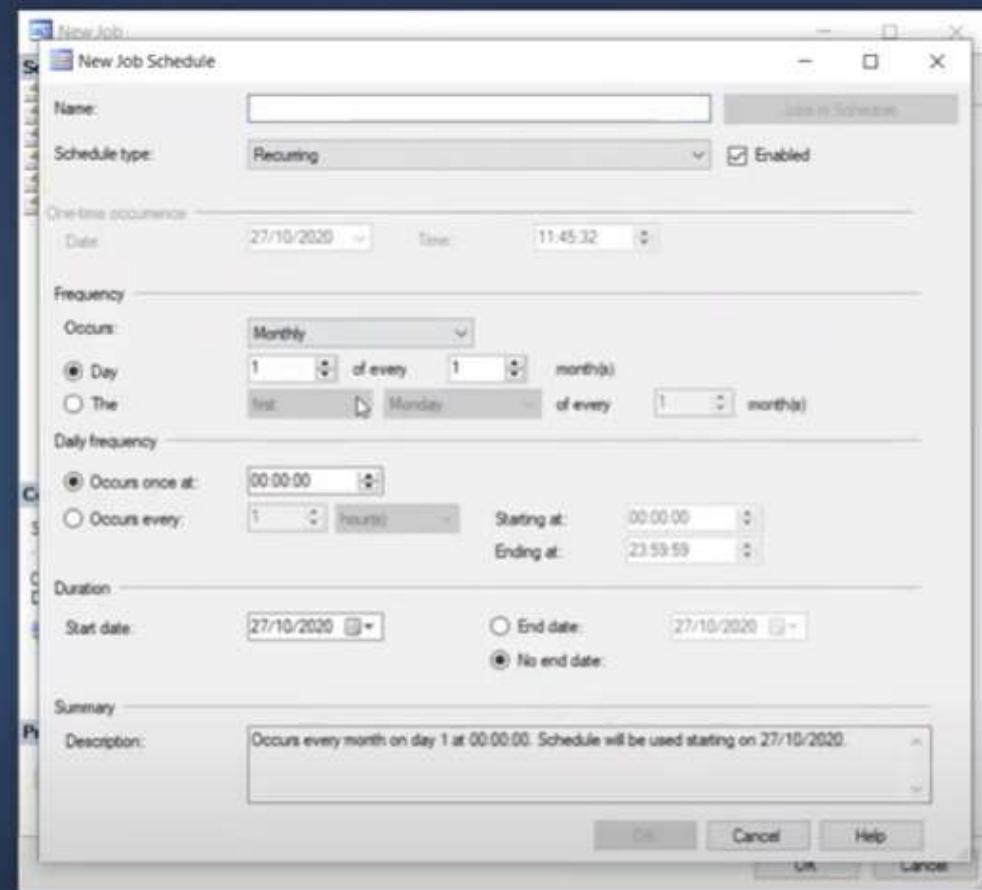
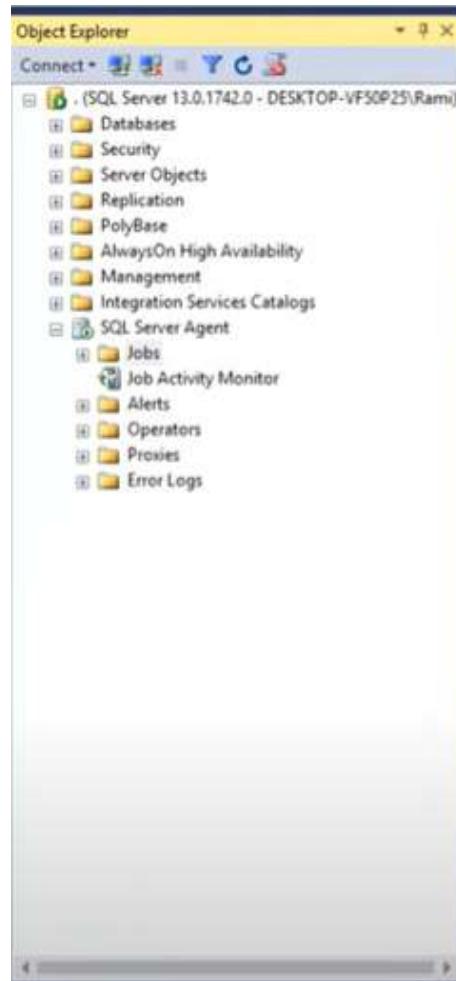




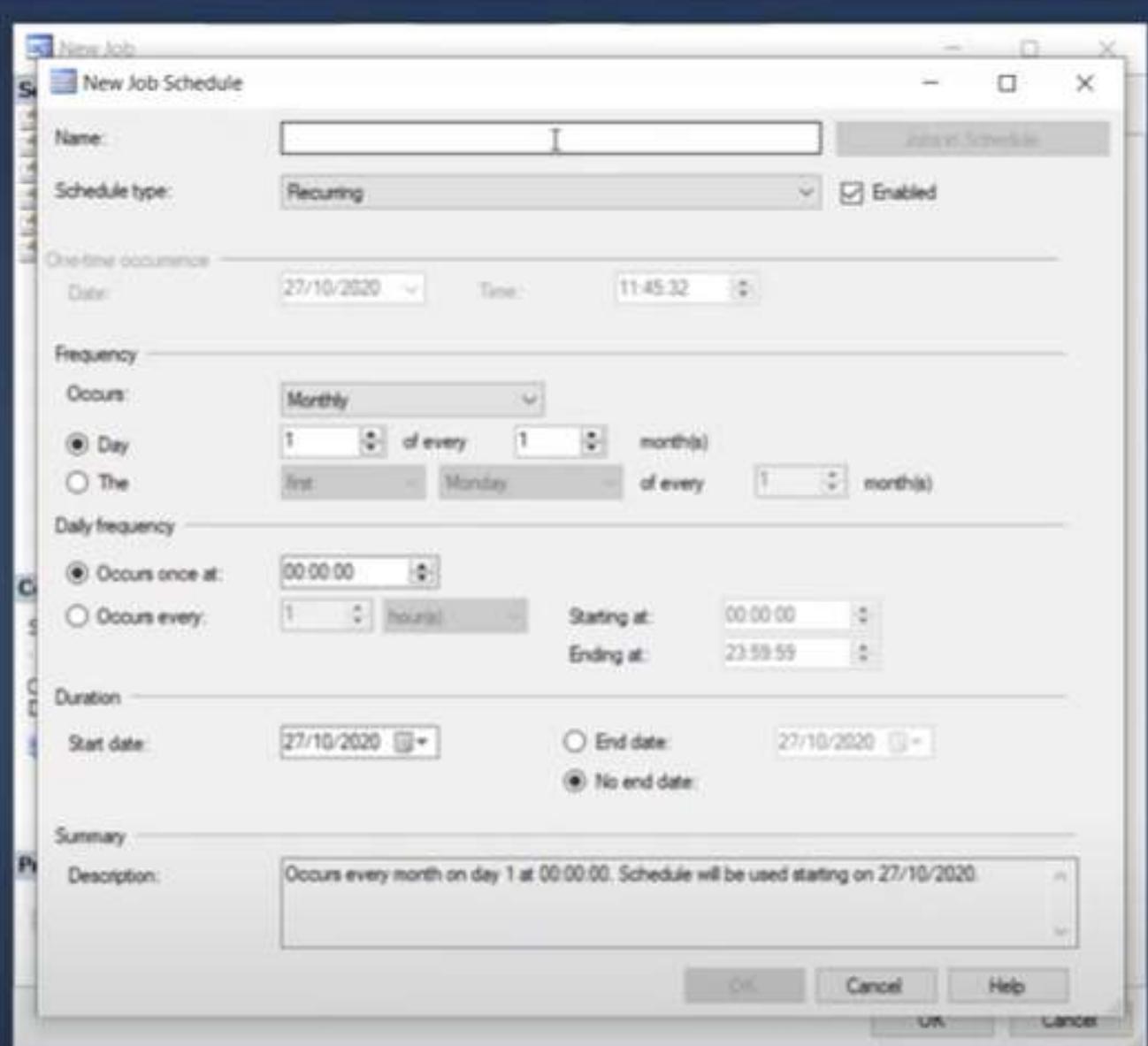




Activate Windows



Activate Windows



Object Explorer

Connect +

- (SQL Server 13.0.1742.0 - DESKTOP-VF50P25\Ram)
- Databases
- Security
- Server Objects
- Replication
- PolyBase
- AlwaysOn High Availability
- Management
- Integration Services Catalogs
- SQL Server Agent
 - Jobs
 - Job Activity Monitor
 - Alerts
 - Operators
 - Proxies
 - Error Logs

New Job

Select a page:

- General
- Steps
- Schedules
- Alerts
- Notifications
- Targets

Script Help

Schedule list:

ID	Name	Enabled	Description
New	Sch	Yes	Occurs every month on day 1 at 00:00

Connection:

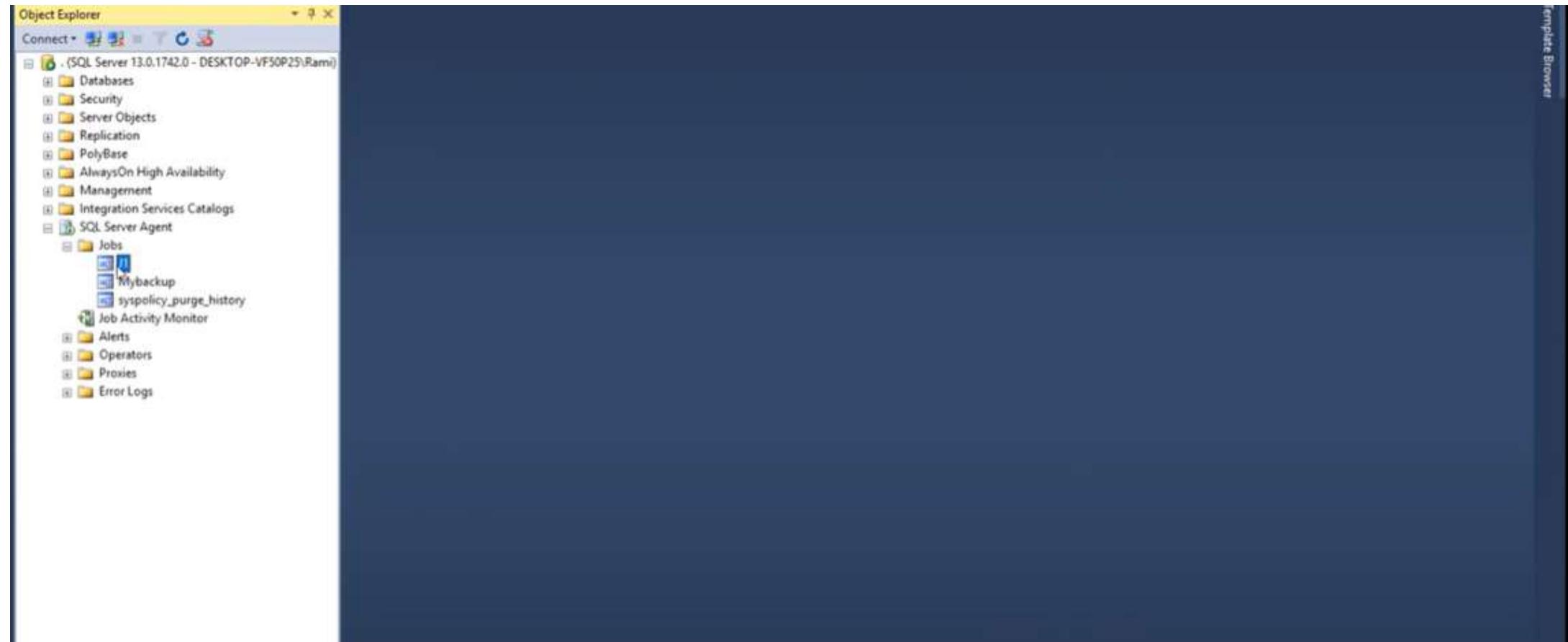
Server: DESKTOP-VF50P25\Ram

View connection properties

Progress:

Ready

Output





Data Warehouse V's OLTP Summary

Data Warehouse	OLTP
Works with Enterprise Wide information	Works with small pieces of information
Updated on a schedule	Updated in real-time
De-Normalised	Normalised
Large to Very Large Database	Small to Large Database
Read Queries	Update, Insert Queries
Non-Volatile	Volatile Data
Applications that analyse the business	Applications that run the business

To summarize ...

- OLTP Systems are used to “*run*” a business



- The Data Warehouse helps to “*optimize*” the business

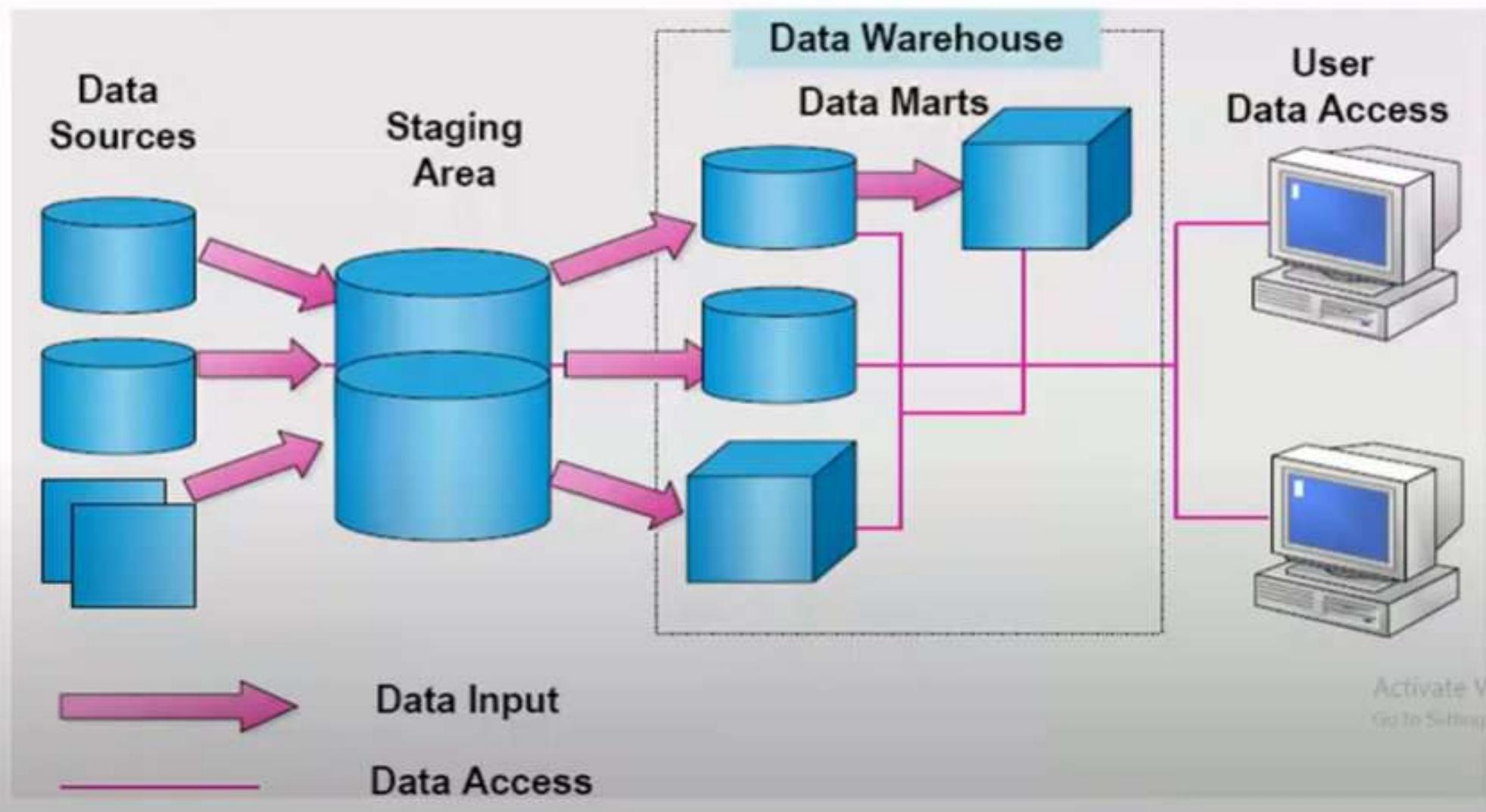
Why OLAP

- Slow-to-execute queries (0.1%)
- General system slowdowns(Locking)
- Manual query writing
- Disparate data sources
- Data is not available to all users

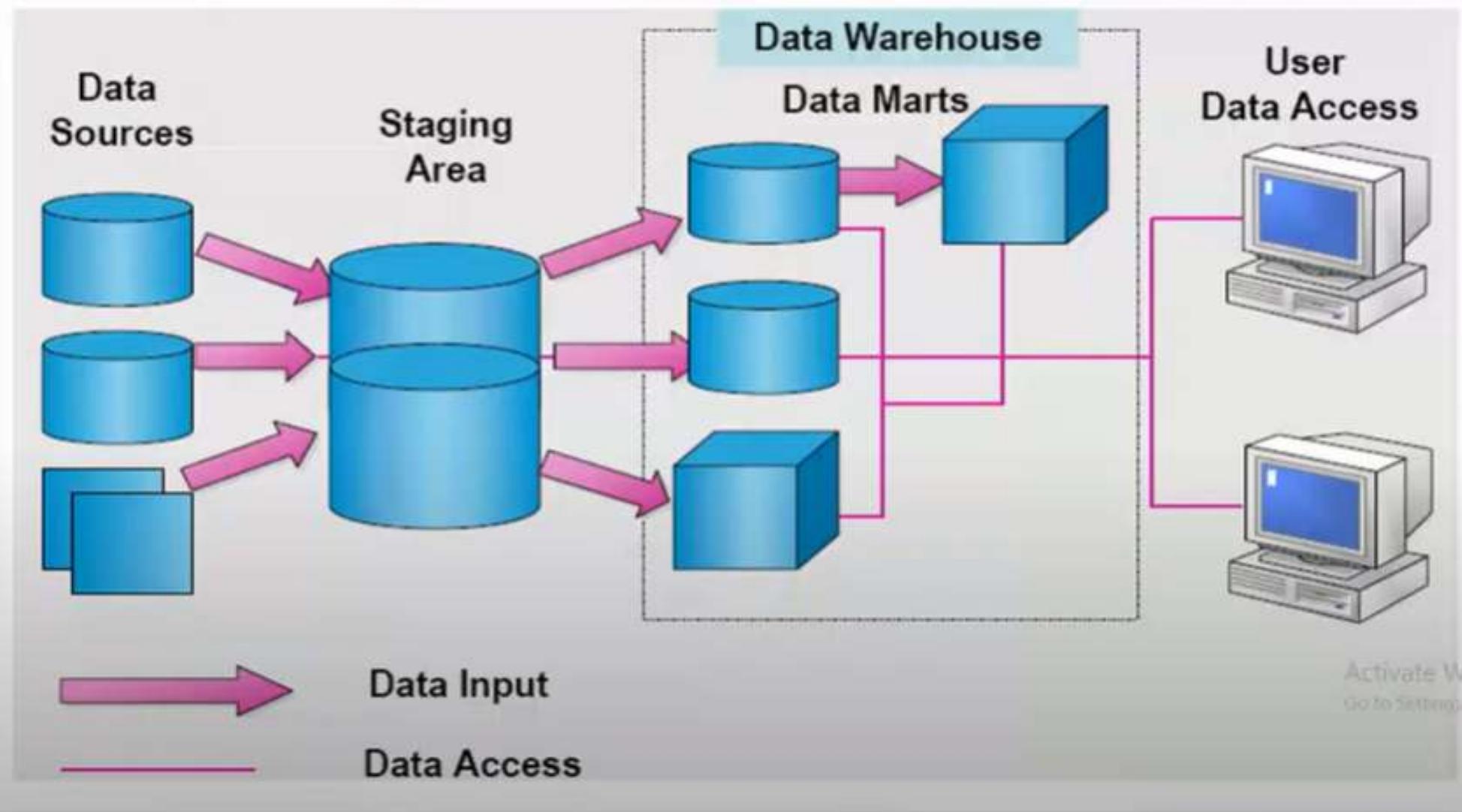
Data Warehousing and BI – Dimensional Modeling

- Dimensional modeling is the design concept used by many data warehouse designers to build their data warehouse especially when BI is being planned
- Dimensional Modeling is based on the **star schema** with a centralized **fact table** surrounded by smaller **dimensional tables** representing key scientific objects

Data Warehouse System Components

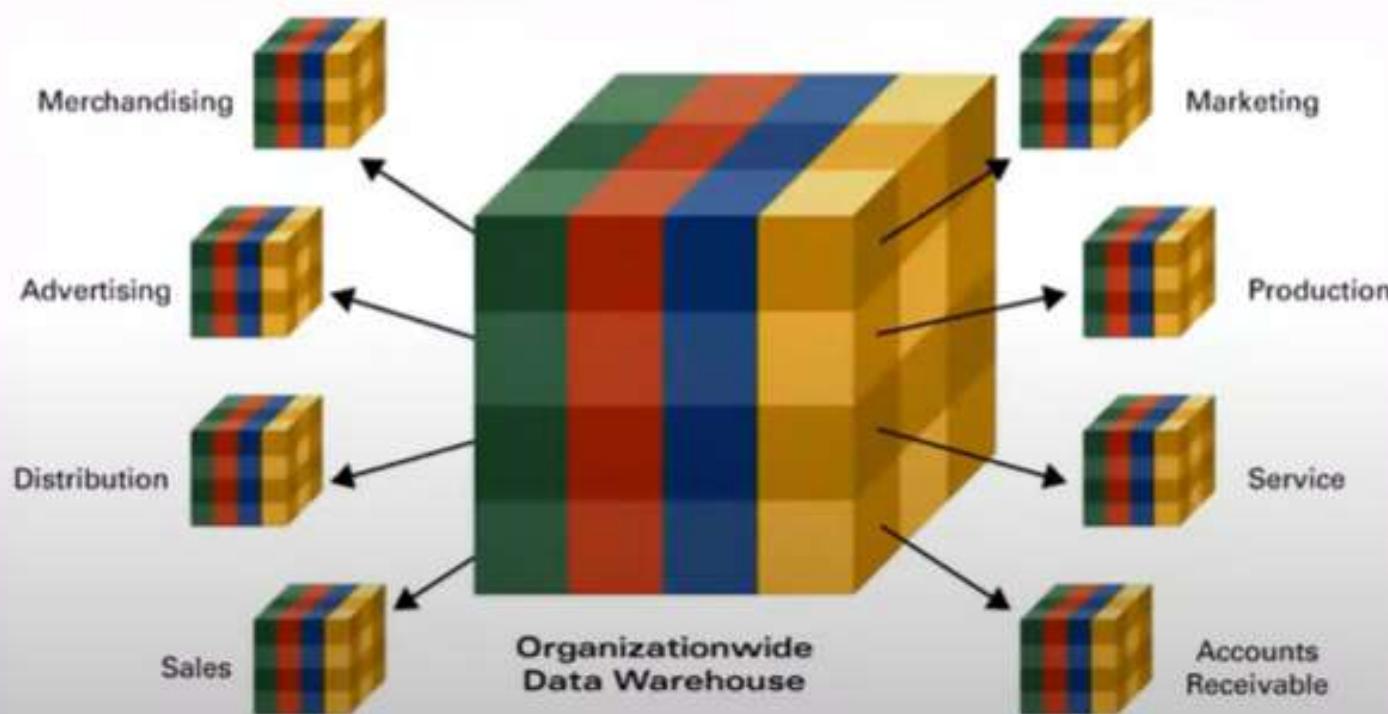


Data Warehouse System Components

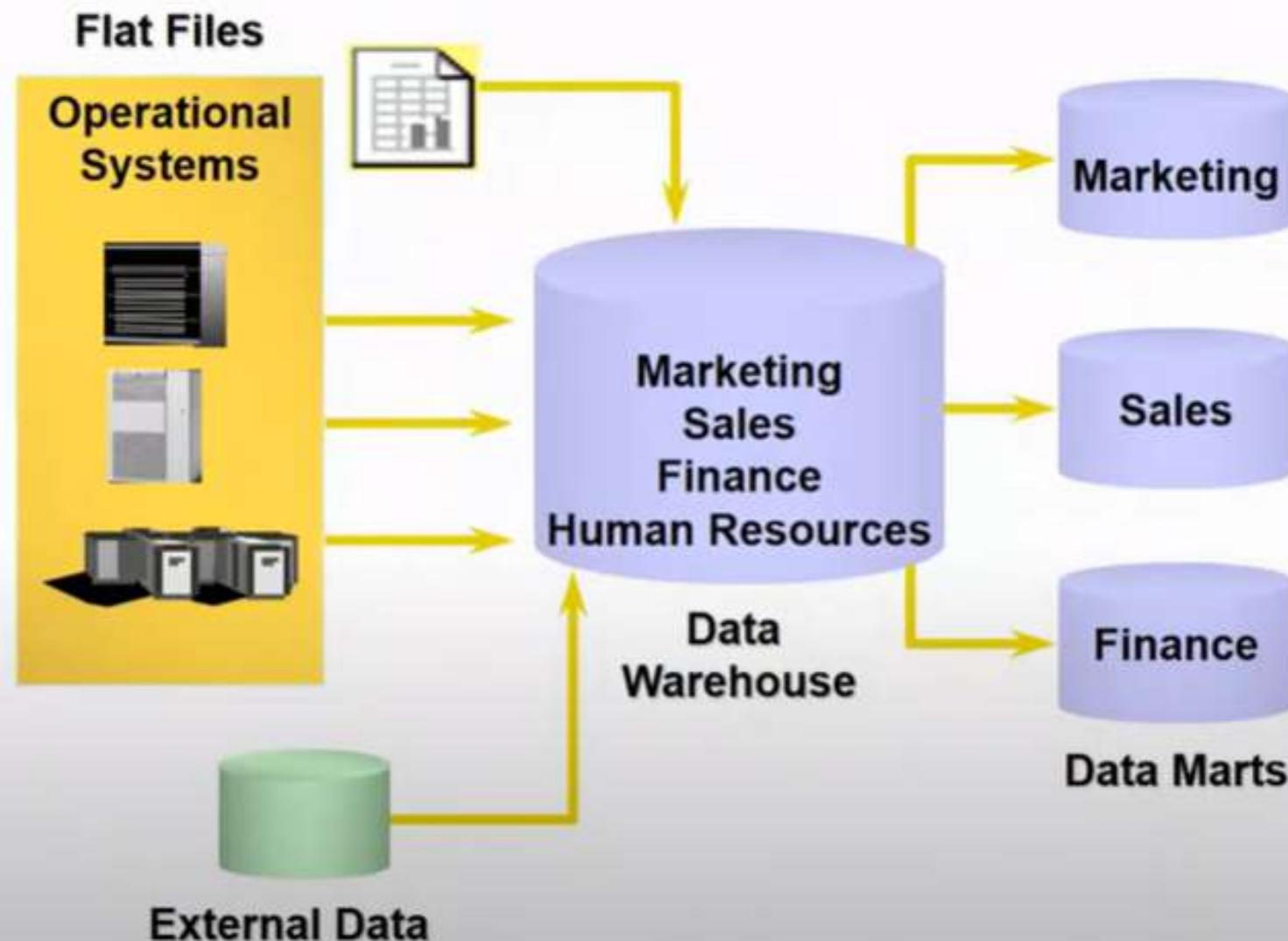


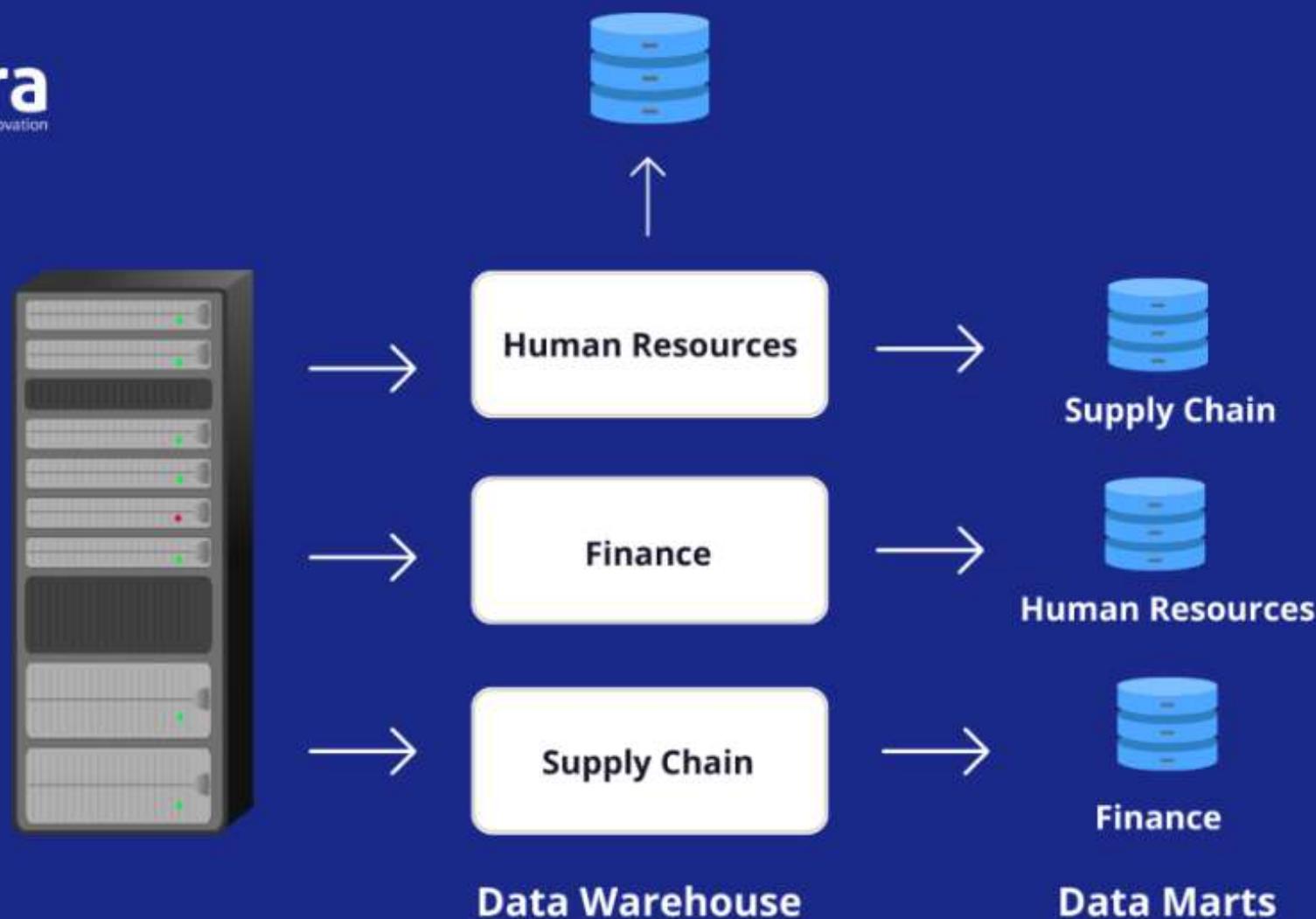
Data Marts

- Miniature data warehouse
- Has a special focus
- Subset of a data warehouse
- Aids decision making in a specific focus area



Dependent Data Mart

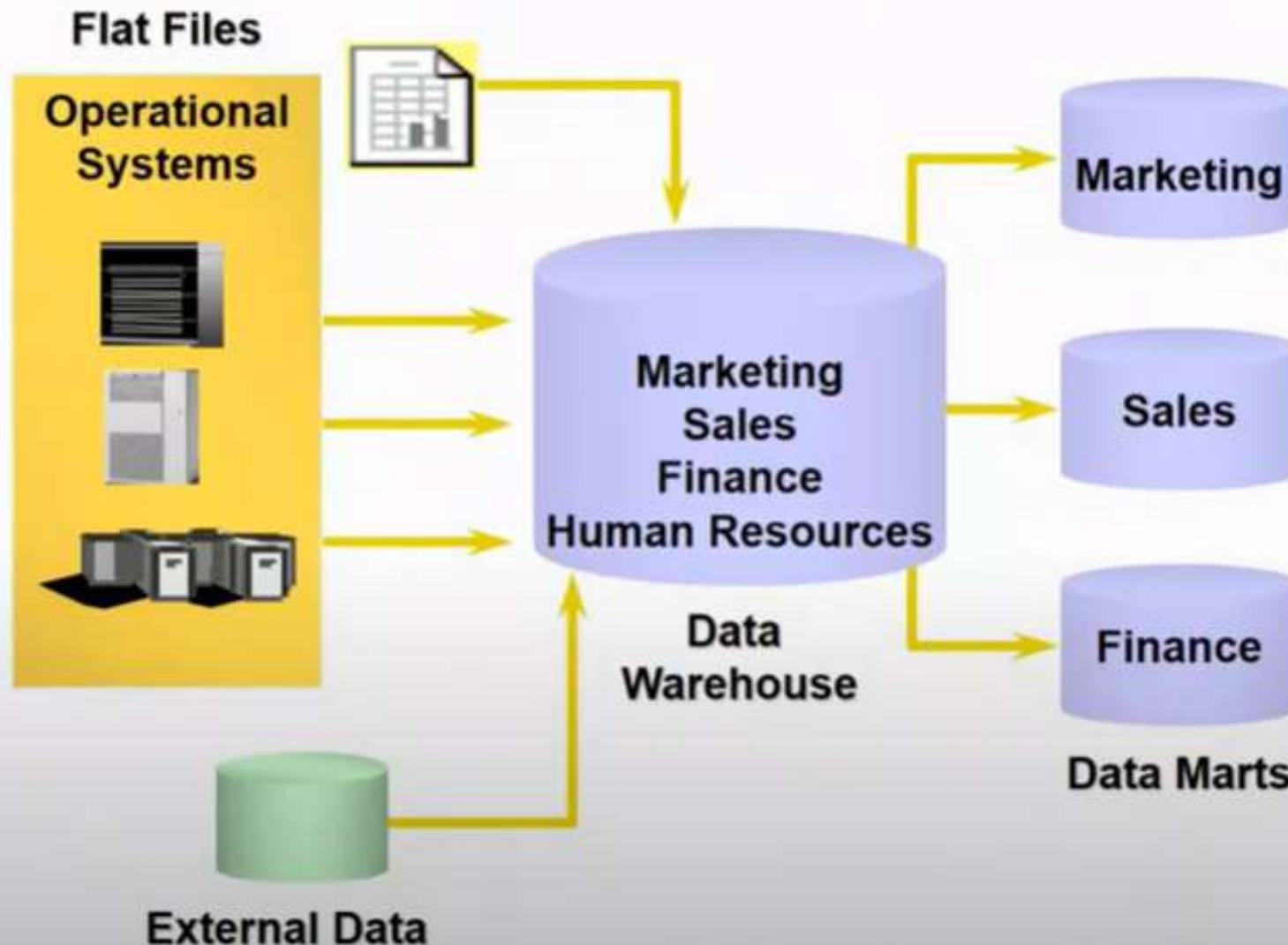




Data Marts Explained



Dependent Data Mart



Independent Data Mart



Independent Data Mart



Data Marts

- Miniature data warehouse
- Has a special focus
- Subset of a data warehouse
- Aids decision making in a specific focus area

A diagram illustrating the concept of a Data Mart. At the center is a large, multi-colored cube labeled "Organizationwide Data Warehouse". Eight arrows point from this central cube to eight smaller, multi-colored cubes arranged in a circle around it. These smaller cubes are labeled with business functions: Merchandising, Marketing, Production, Service, Accounts Receivable, Sales, Distribution, and Advertising.

Activate Windows
Go to Settings to activate Windows
Notes Comments

15 Data Warehouse System Components

16 Data Marts

- Miniature data warehouses
- Has a special focus
- Subset of a data warehouse
- Aids decision making in a specific focus area

17 Dependent Data Mart

18 Independent Data Mart

*A **data mart** is a miniature data warehouse with a special focus.
*It's essentially a data warehouse in the sense that it gathers information from various locations, but it's smaller and focuses on a particular area like regional customer analysis.

Power BI Project | power bi & tab | (29) falcom-co | DeepLearning.A | ملخص كتاب رامي الحرامي | 521545624_1204 | Screenshot(620) | iti-1 (4).pdf | 2 SQL Server Analysis Serv | Google Translate | + | X

www.youtube.com/watch

YouTube EG

Search

Data Warehouse.pptx (Computer Model) - Post (Product Activation Failed)

File Home Insert Design Transitions Animations Slide Show Review View Storyboarding To do... New Reset Slide Layouts Font Paragraph Drawing Editing

Clipboard Cut Copy Paste Format Painter New Reset Slide Layouts Font Paragraph Drawing Editing

15 Data Warehouse System Components

16 Data Mart

17 Dependent Data Mart

18 Independent Data Mart

Data Marts

- Miniature data warehouse
- Has a special focus
- Subset of a data warehouse
- Aids decision making in a specific focus area

Merchandising
Advertising
Distribution
Sales
Marketing
Production
Service
Accounts Receivable
Organizationwide Data Warehouse

A *data mart* is a miniature data warehouse with a special focus.
It's essentially a data moshroom. In the sense that it collects information from various locations, but it's smaller, and focuses on one particular area like financial statement analysis.

Slide 16 of 44 English (United States)

Activate Windows

51:06 / 2:57:03

S A A A A HM M G OB D A R

ITI Business Intelligence

Activate Windows
Go to Settings to activate Windows.

Abdallah Gamal - 2 / 3

17 | Share | Download | ...

34°C 2:16 PM 7/24/2025



Dependent Data Mart

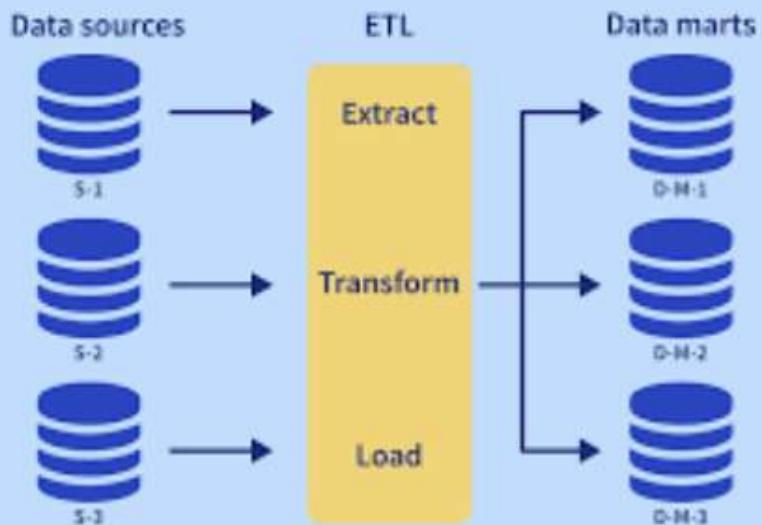


Independent Data Mart

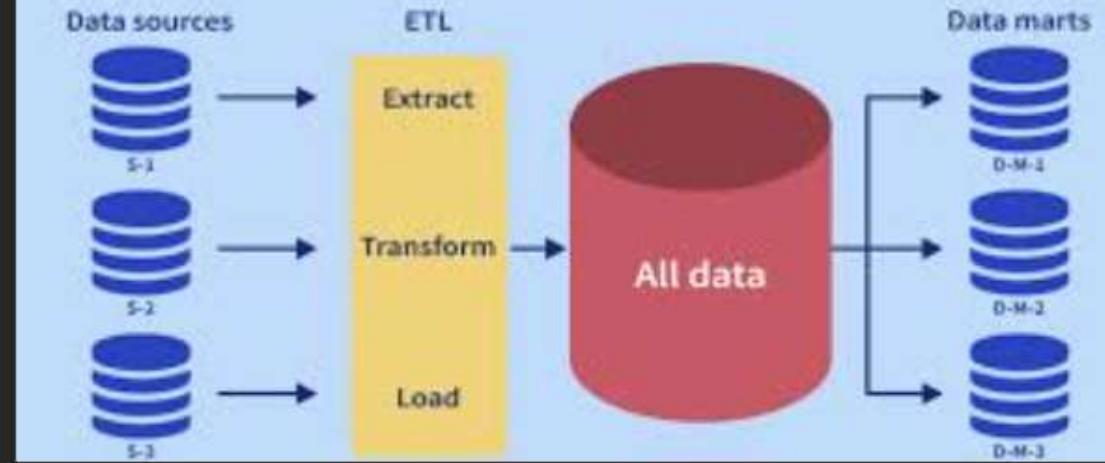


Activate W
Go to Settings

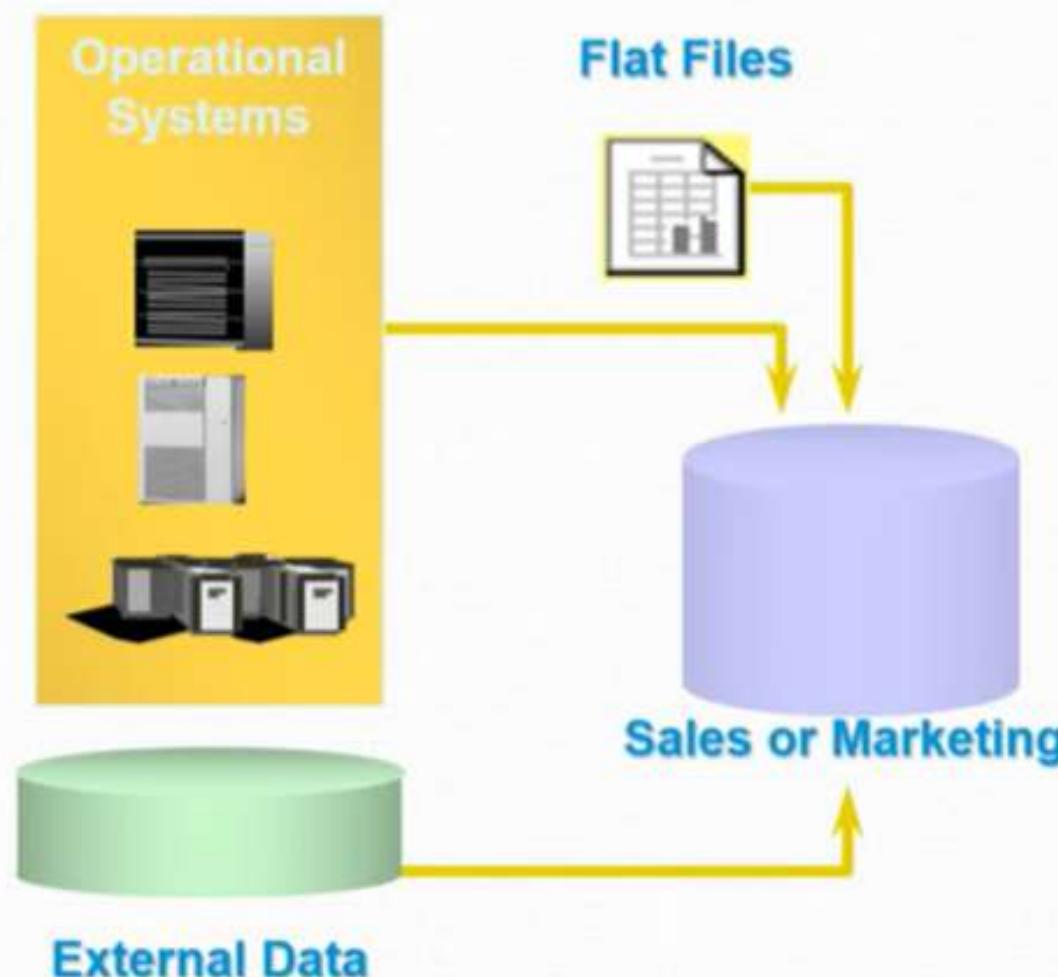
Independent Data Marts



Dependent Data Marts

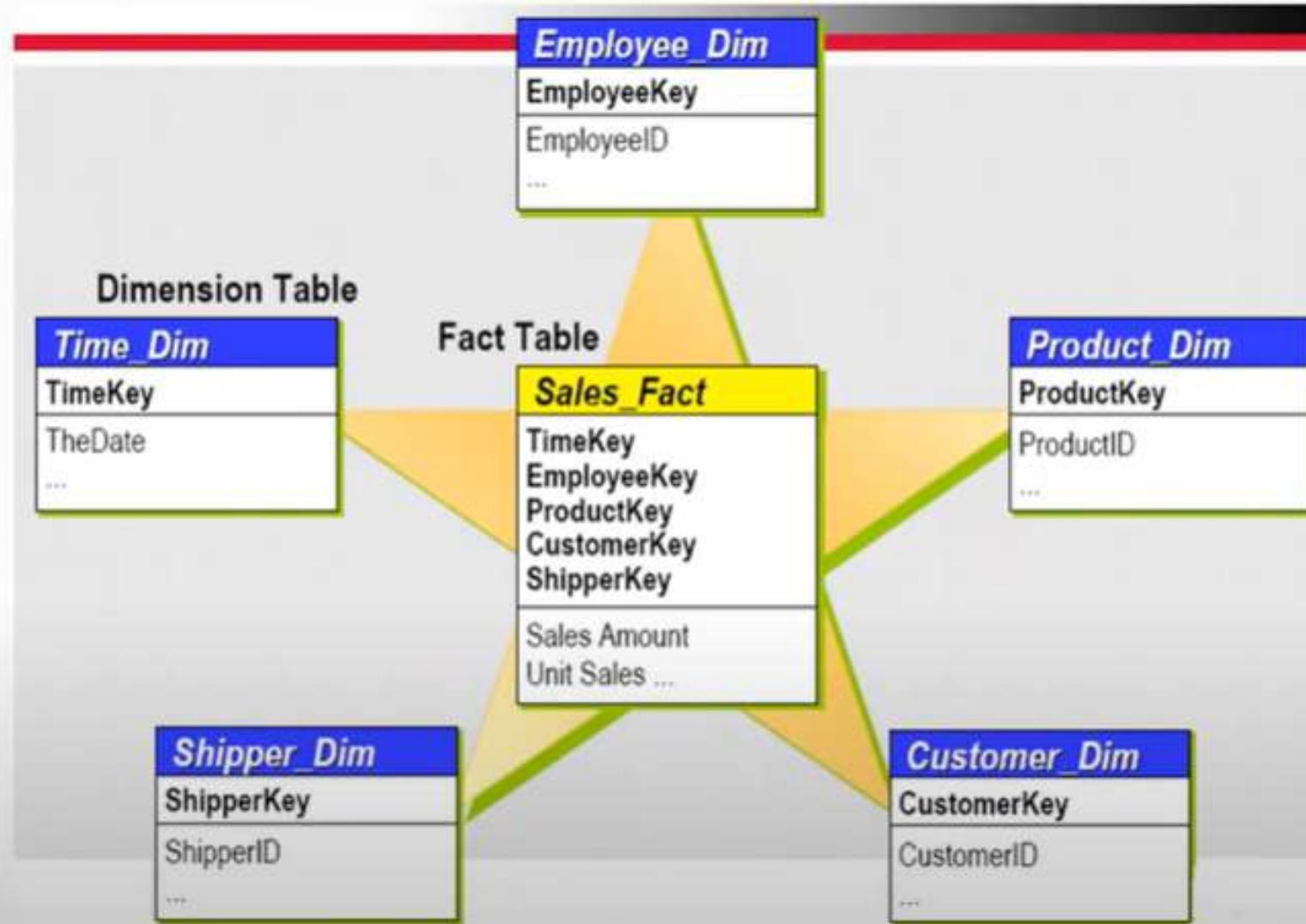


Independent Data Mart

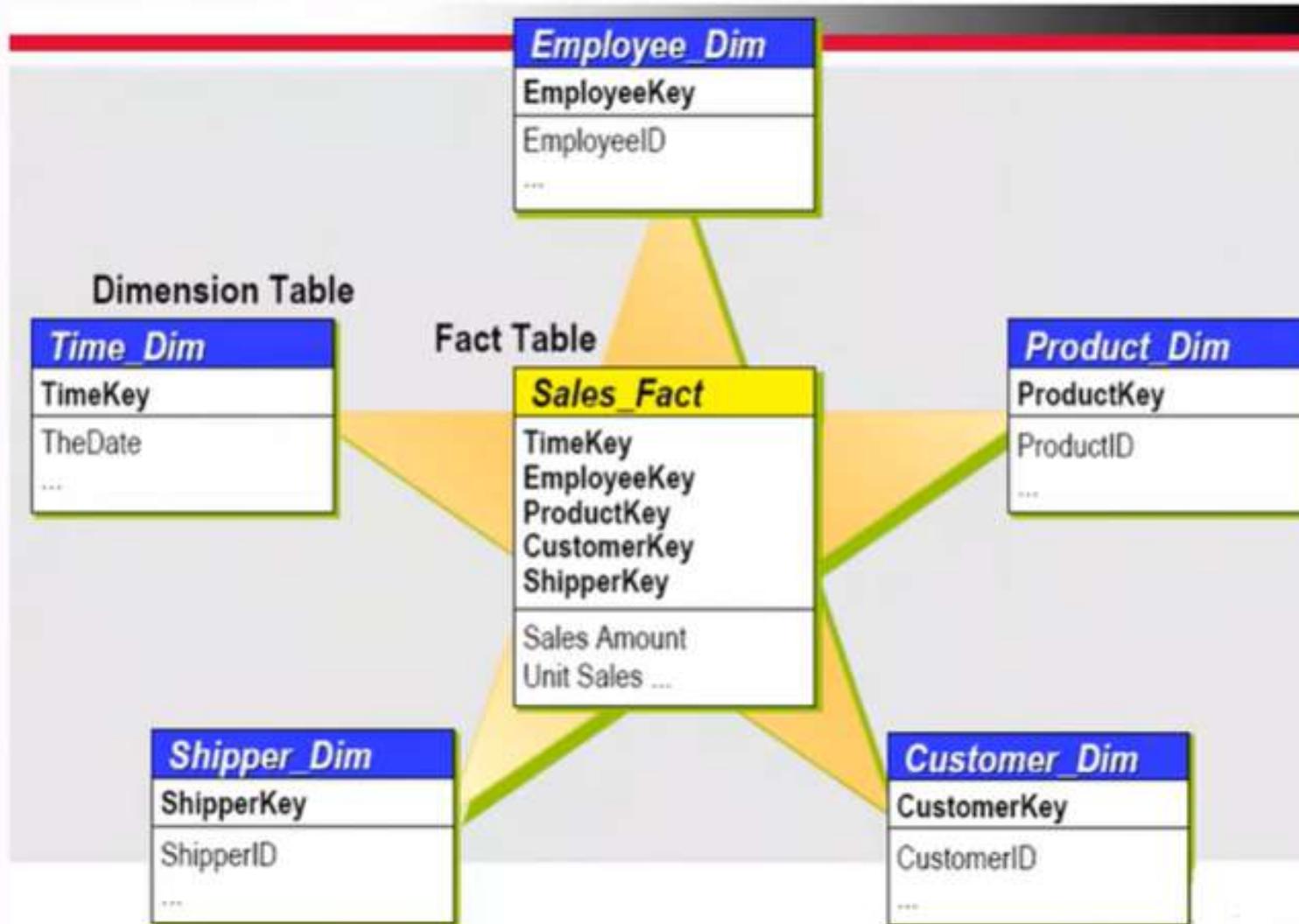




The Star Schema



The Star Schema





Fact Table Components

Dimension Tables

customer_dim

201	ALFI	Alfreds

product_dim

25	123	Chai

time_dim

134	1/1/2000

sales_fact Table

Foreign Keys

Measures

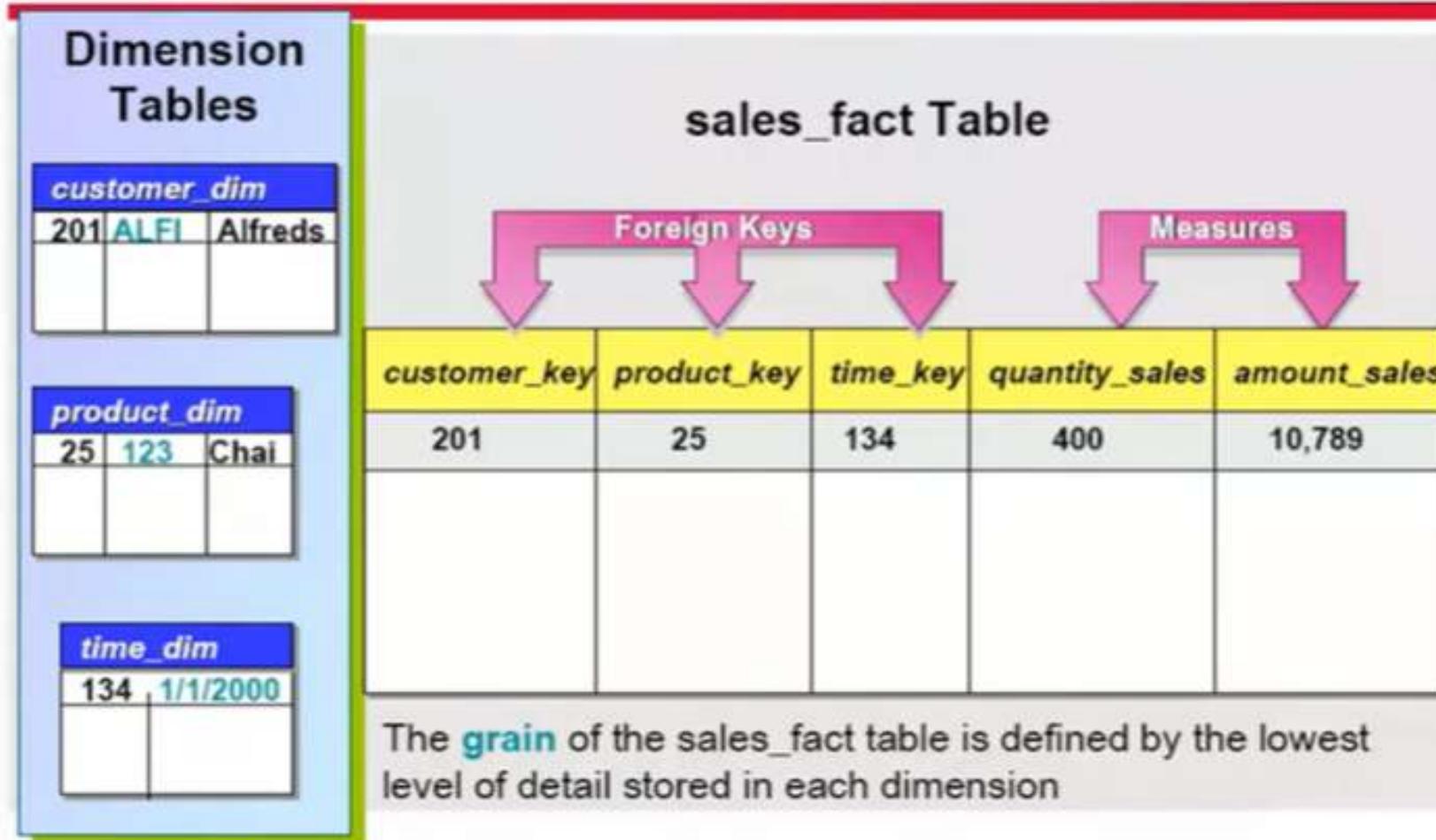
<i>customer_key</i>	<i>product_key</i>	<i>time_key</i>	<i>quantity_sales</i>	<i>amount_sales</i>
201	25	134	400	10,789

The **grain** of the sales_fact table is defined by the lowest level of detail stored in each dimension

Activate Wi

Go to Settings

Fact Table Components



Dimension Fundamentals

Level of Granularity

TIME	← time dimension
● Year	← year level
1999	← members
2000	
2001	
● ● Quarter	← quarter level
Q1	← members
Q2	
Q3	
Q4	
● ● ● Month	← month level
Jan	← members
Feb	
Mar	
etc.	

Dimension Fundamentals

Level of Granularity

TIME	← time dimension
● Year	← year level
1999	← members
2000	
2001	
● ● Quarter	← quarter level
Q1	← members
Q2	
Q3	
Q4	
● ● ● Month	← month level
Jan	← members
Feb	
Mar	
etc.	



-- Multi-dimensional Schemas ...

- Modeling data warehouses: dimensions & measures
 - Star schema: A fact table in the middle connected to a set of dimension tables
 - Snowflake schema: A refinement of star schema where some dimensional hierarchy is normalized into a set of smaller dimension tables, forming a shape similar to snowflake
 - Fact constellations: Multiple fact tables share dimension tables, viewed as a collection of stars, therefore called galaxy schema or fact constellation

--- Example of Star Schema

time

time_key
day
day_of_the_week
month
quarter
year

Sales Fact Table

time_key
item_key
branch_key
location_key
units_sold
dollars_sold
avg_sales

item

item_key
item_name
brand
type
supplier_type

branch

branch_key
branch_name
branch_type

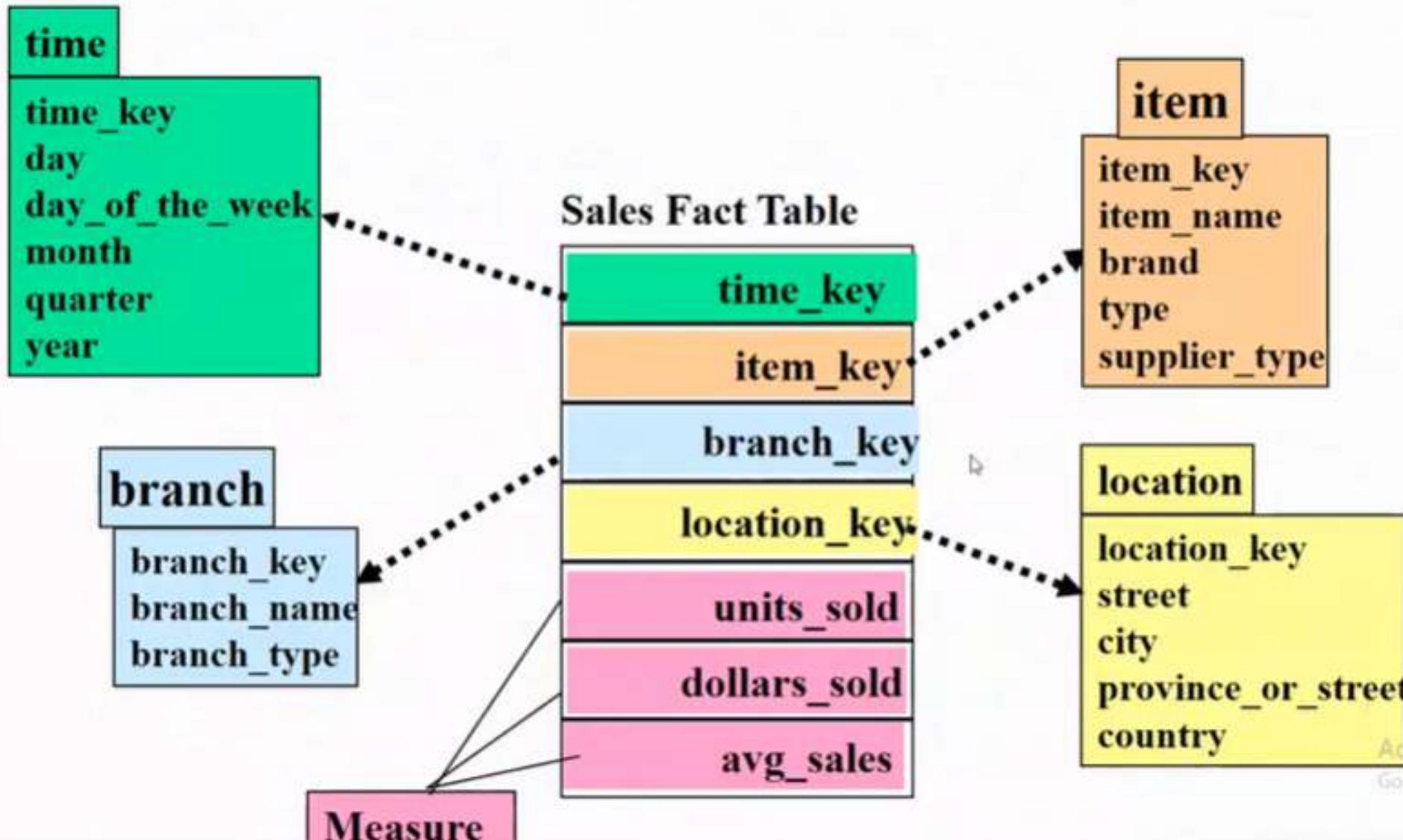
location

location_key
street
city
province_or_state
country

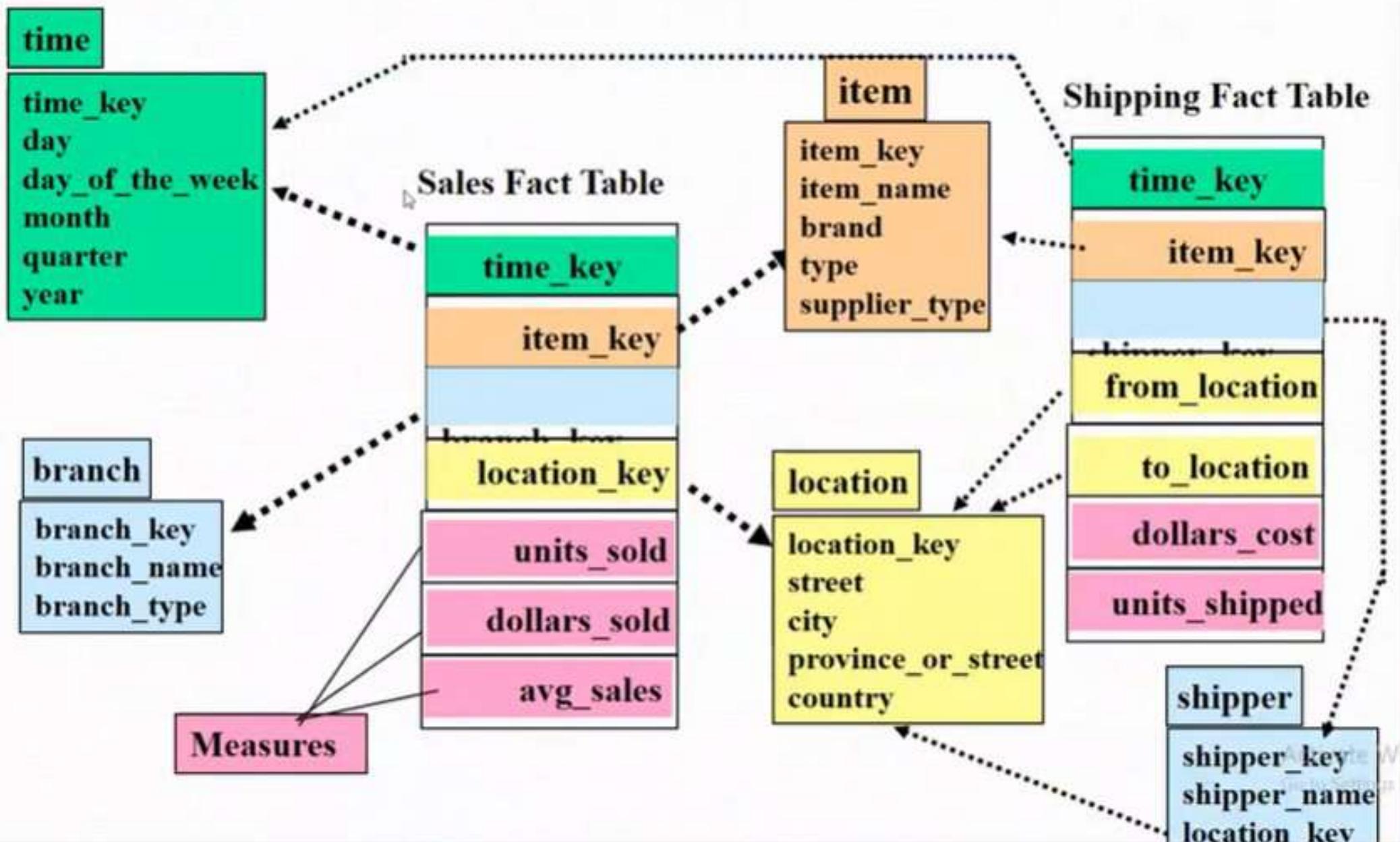
Measure

Power BI Project | power bi & tab | (29) falcom-co | DeepLearning.A | ملخص كتاب رami الحرام | 521545624_1204 | Screenshot(620) | iti-1 (4).pdf | 2 SQL Server Analysis | Google Translate | + | Search | YouTube EG | Search | Sign in | www.youtube.com/watch | ... | 8 | X | ... | Sign in | BI DAY 2 | 01:09:26 | A | Activate Windows | Go to Settings to activate Windows | ClickUp | The everything app for work. | Activate Windows | Go to Settings to activate Windows. | 34°C | 2:23 PM | ENG | 7/24/2025 | 1

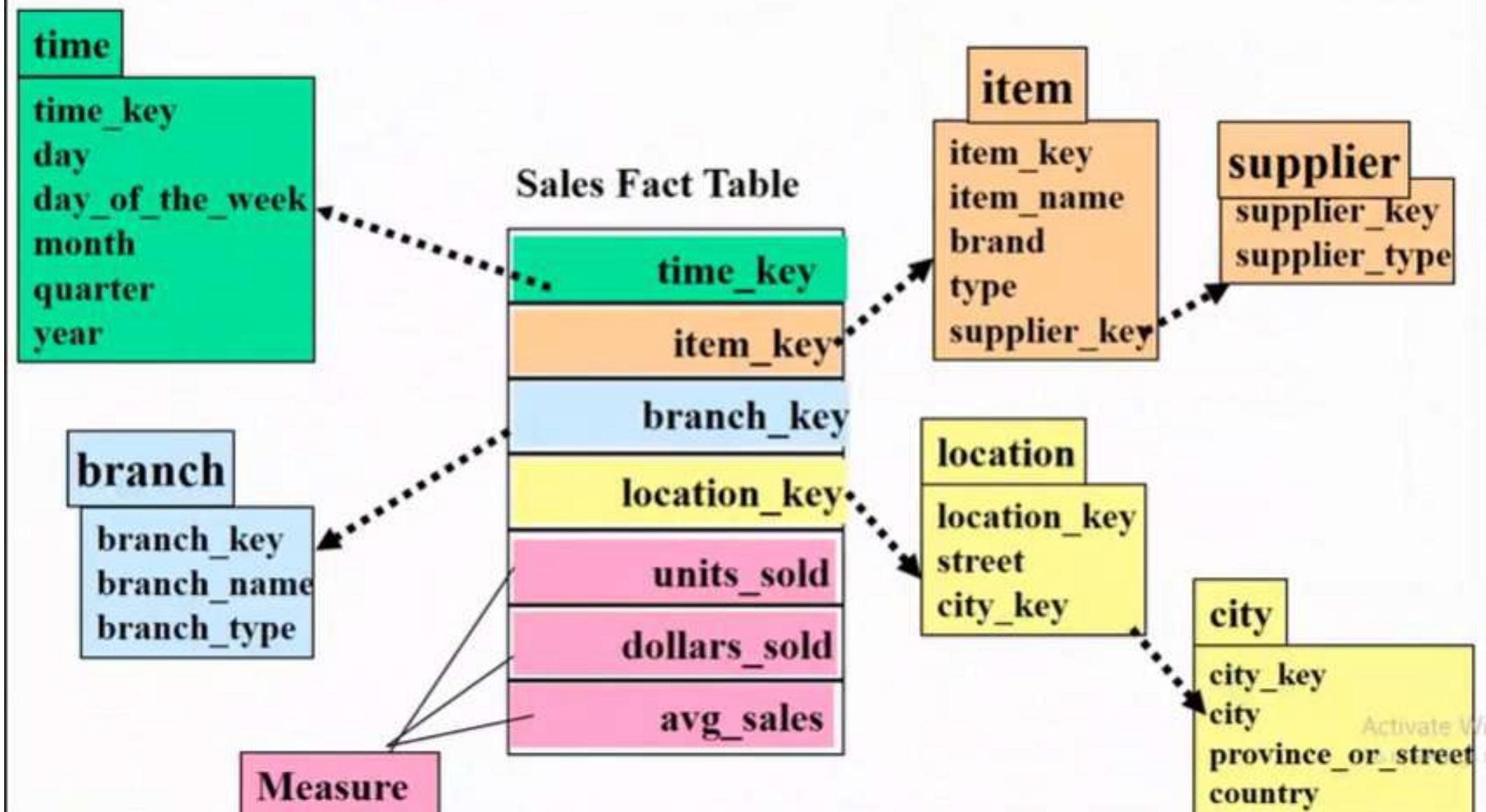
--- Example of Star Schema



--- Example of Galaxy Schema

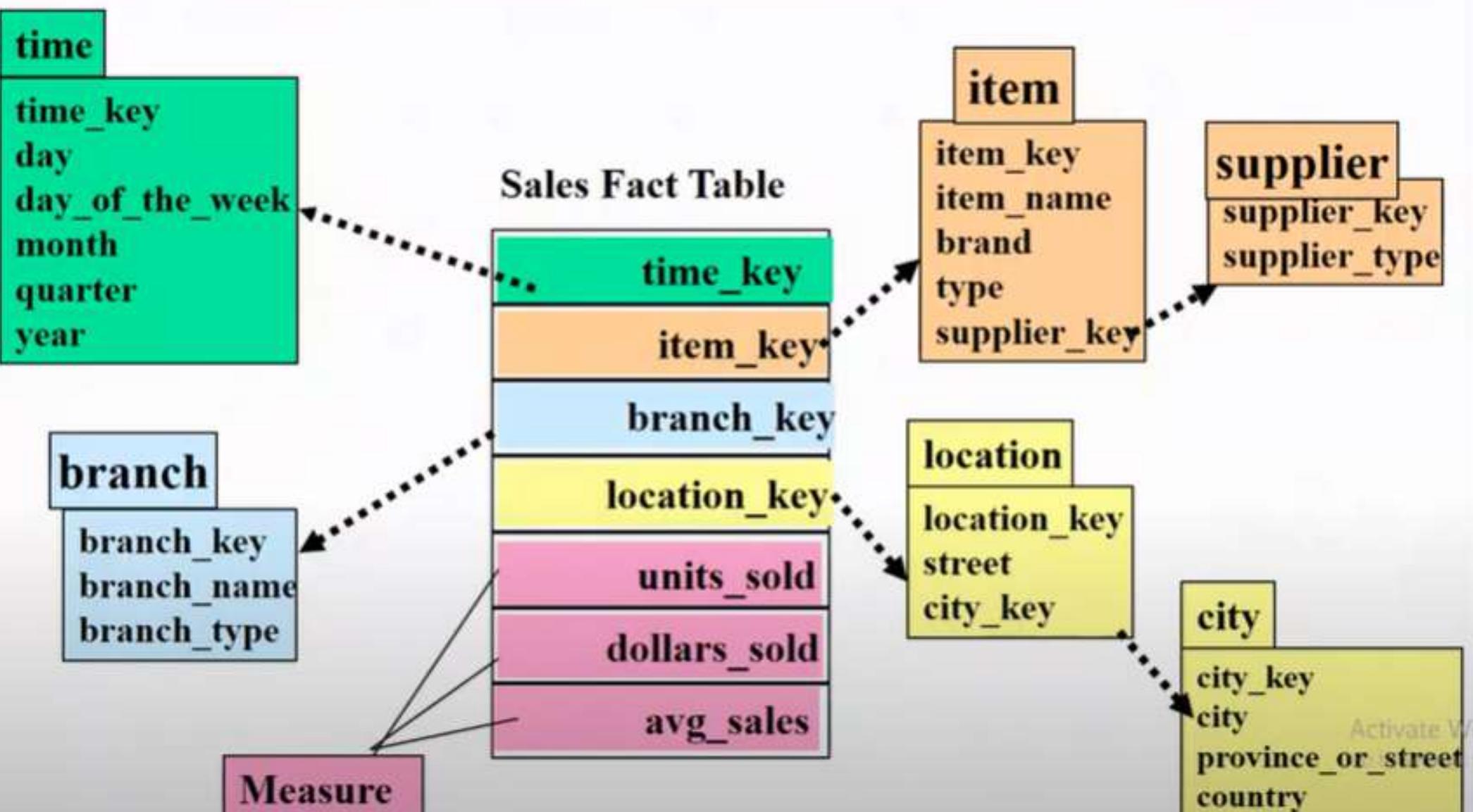


--- Example of Snowflake Schema

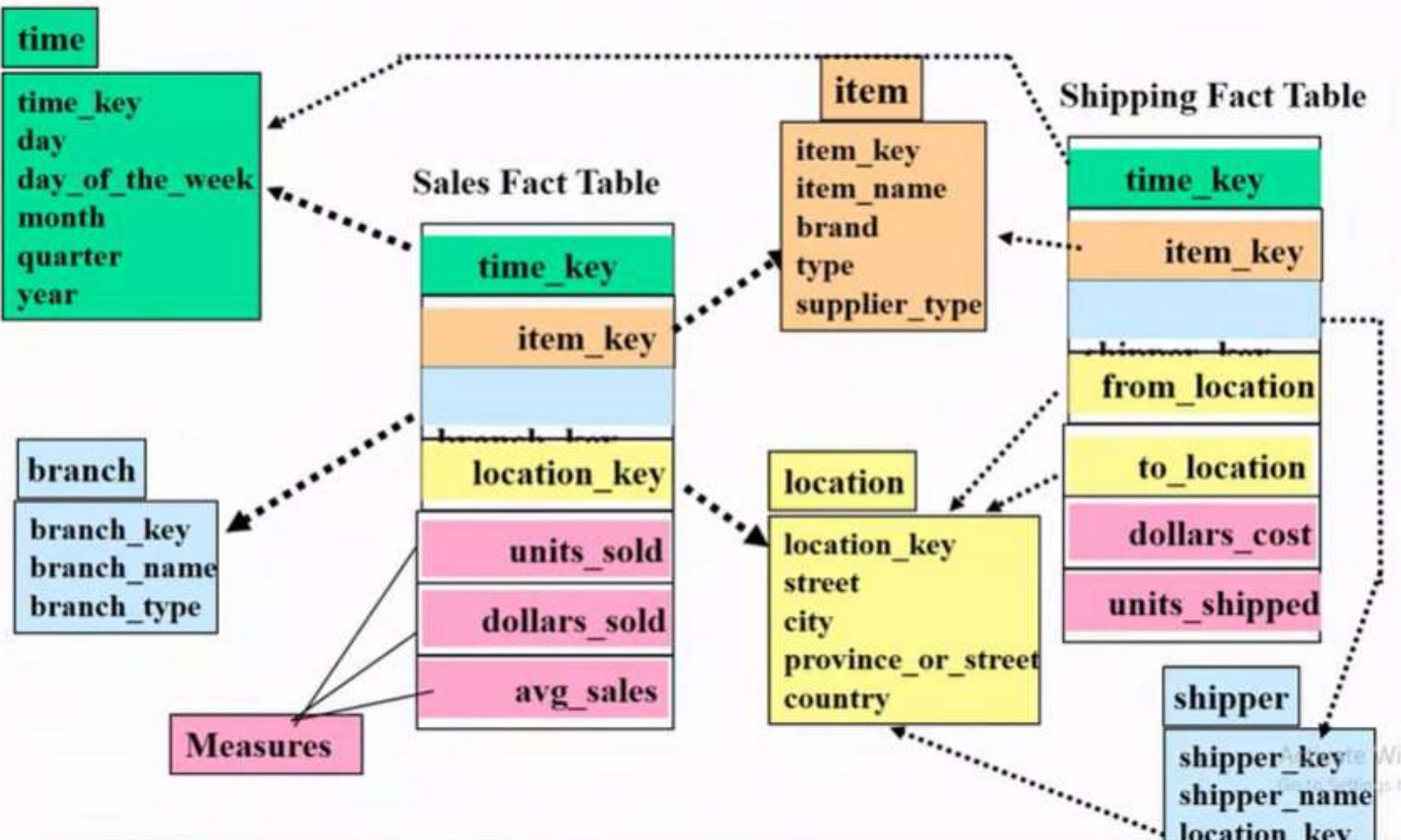




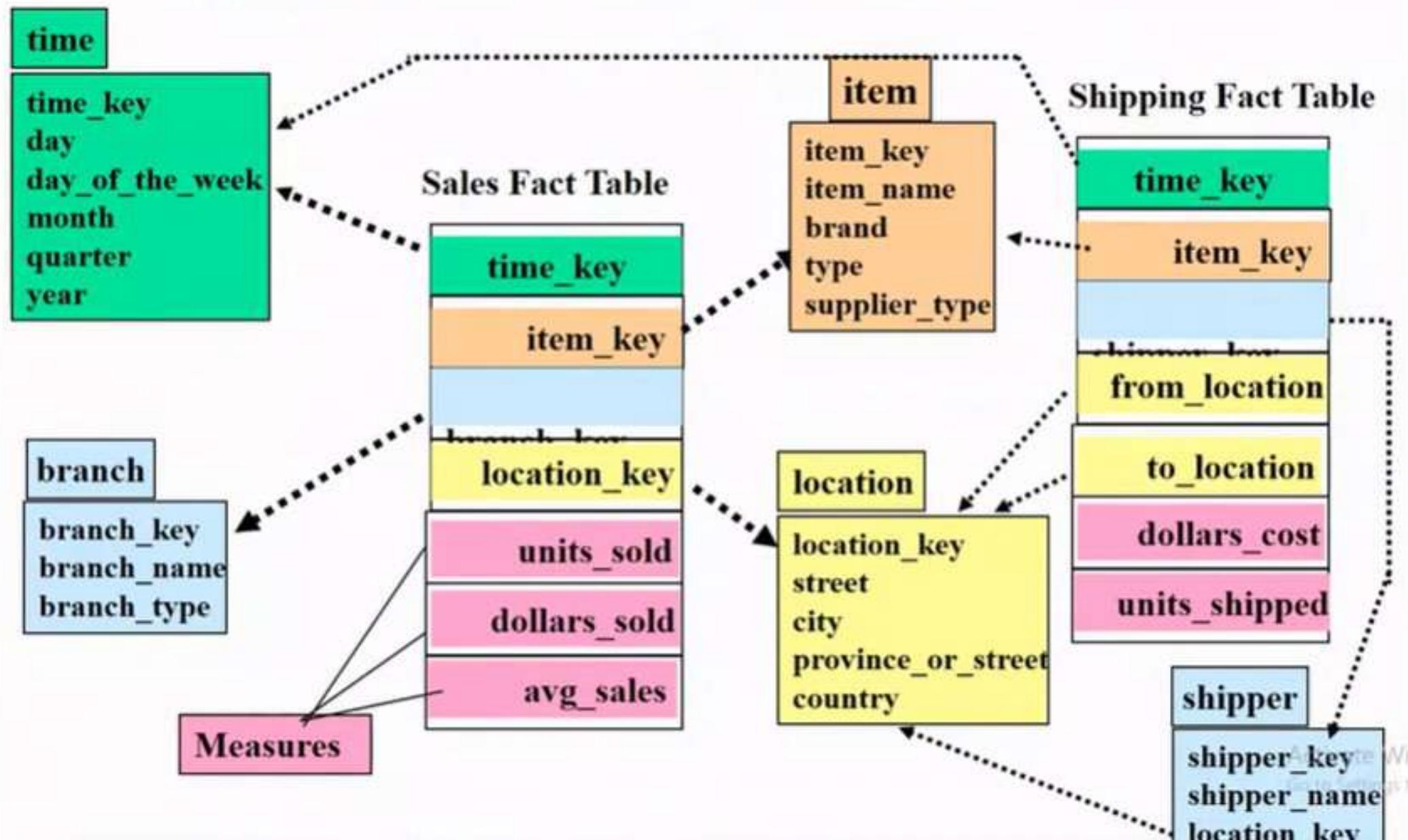
--- Example of Snowflake Schema



--- Example of Galaxy Schema



--- Example of Galaxy Schema



-- Data Cubes ...

Fact relation

sale	Product	Client	Amt
	p1	c1	12
	p2	c1	11
	p1	c3	50
	p2	c2	8

Two-dimensional cube

	c1	c2	c3
p1	12		50
p2	11	8	

-- Data Cubes ...

Fact relation

sale	Product	Client	Amt
	p1	c1	12
	p2	c1	11
	p1	c3	50
	p2	c2	8

Two-dimensional cube

	c1	c2	c3
p1	12		50
p2	11	8	

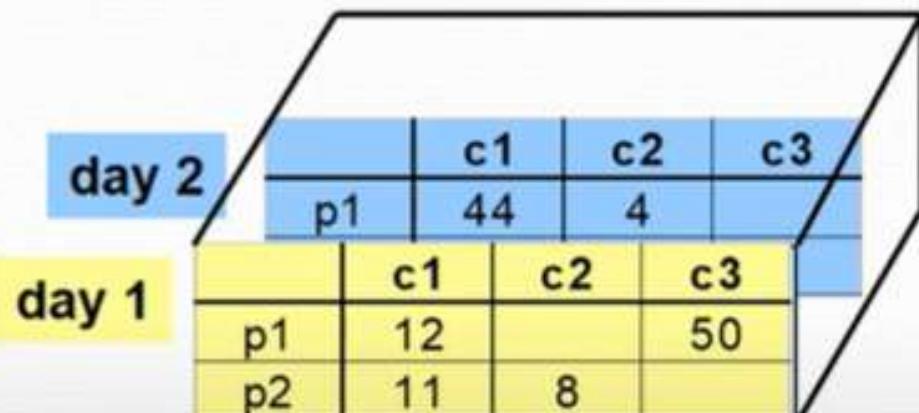


Data Cubes ...

Fact relation

sale	Product	Client	Date	Amt
	p1	c1	1	12
	p2	c1	1	11
	p1	c3	1	50
	p2	c2	1	8
	p1	c1	2	44
	p1	c2	2	4

3-dimensional cube

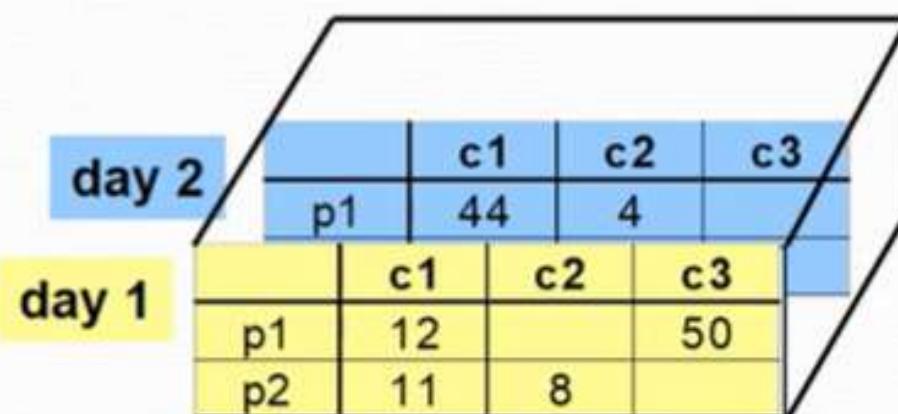


Data Cubes ...

Fact relation

sale	Product	Client	Date	Amt
	p1	c1	1	12
	p2	c1	1	11
	p1	c3	1	50
	p2	c2	1	8
	p1	c1	2	44
	p1	c2	2	4

3-dimensional cube



... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
		c1	c2	c3
day 1	p1	12		50
	p2	11	8	

	c1	c2	c3
p1	56	4	50
p2	11	8	

	c1	c2	c3
sum	67	12	50

129

	sum
p1	110
p2	19

... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
day 1	p1	12		50
	p2	11	8	

→ ...

	c1	c2	c3
p1	56	4	50
p2	11	8	

	c1	c2	c3
sum	67	12	50

129

	sum
p1	110
p2	19

... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
day 1	c1			
	p1	12		50
	p2	11	8	

	c1	c2	c3
p1	56	4	50
p2	11	8	

	c1	c2	c3
sum	67	12	50

129

	sum
p1	110
p2	19

... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
	c1	c2	c3	
day 1	p1	12		50
	p2	11	8	

	c1	c2	c3
p1	56	4	50
p2	11	8	

sum	c1	c2	c3
67	12	50	

129

	sum
p1	110
p2	19

... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
day 1	c1			
	p1	12		50
	p2	11	8	

	c1	c2	c3
p1	56	4	50
p2	11	8	

	c1	c2	c3
sum	67	12	50

129

	sum
p1	110
p2	19

... -- Data Cubes ...

Example: computing sums

		c1	c2	c3
day 2	p1	44	4	
	c1			c3
day 1	p1	12		50
	p2	11	8	

→ ...

	c1	c2	c3
p1	56	4	50
p2	11	8	

sum	c1	c2	c3
67	12	50	

129

	sum
p1	110
p2	19

Data Cubes ...

- In multidimensional data model together with measure values usually we store summarizing information (aggregates)

	c1	c2	c3	Sum
p1	56	4	50	110
p2	11	8		19
Sum	67	12	50	129



The Cube Operator ...

*	c1	c2	c3	*
p1	56	4	50	110
p2	11	8		19

day 2	c1	c2	c3	*	129
p1	44	4		48	
*					

day 1	c1	c2	c3	*	
p1	12		50	62	48
p2	11	8		19	
*	23	8	50	81	

sale(*,p2,*)



The Cube Operator ...

		*	c1	c2	c3	*
		p1	56	4	50	110
		p2	11	8		19
day 2	*		c1	c2	c3	*
		p1	44	4		48
day 1	*	c1	c2	c3	*	129
		p1	12		50	62
		p2	11	8		19
	*	*	23	8	50	81

sale(*,p2,*)

Data Cubes ...

- In multidimensional data model together with measure values usually we store summarizing information (aggregates)

	c1	c2	c3	Sum
p1	56	4	50	110
p2	11	8		19
Sum	67	12	50	129

The Cube Operator ...

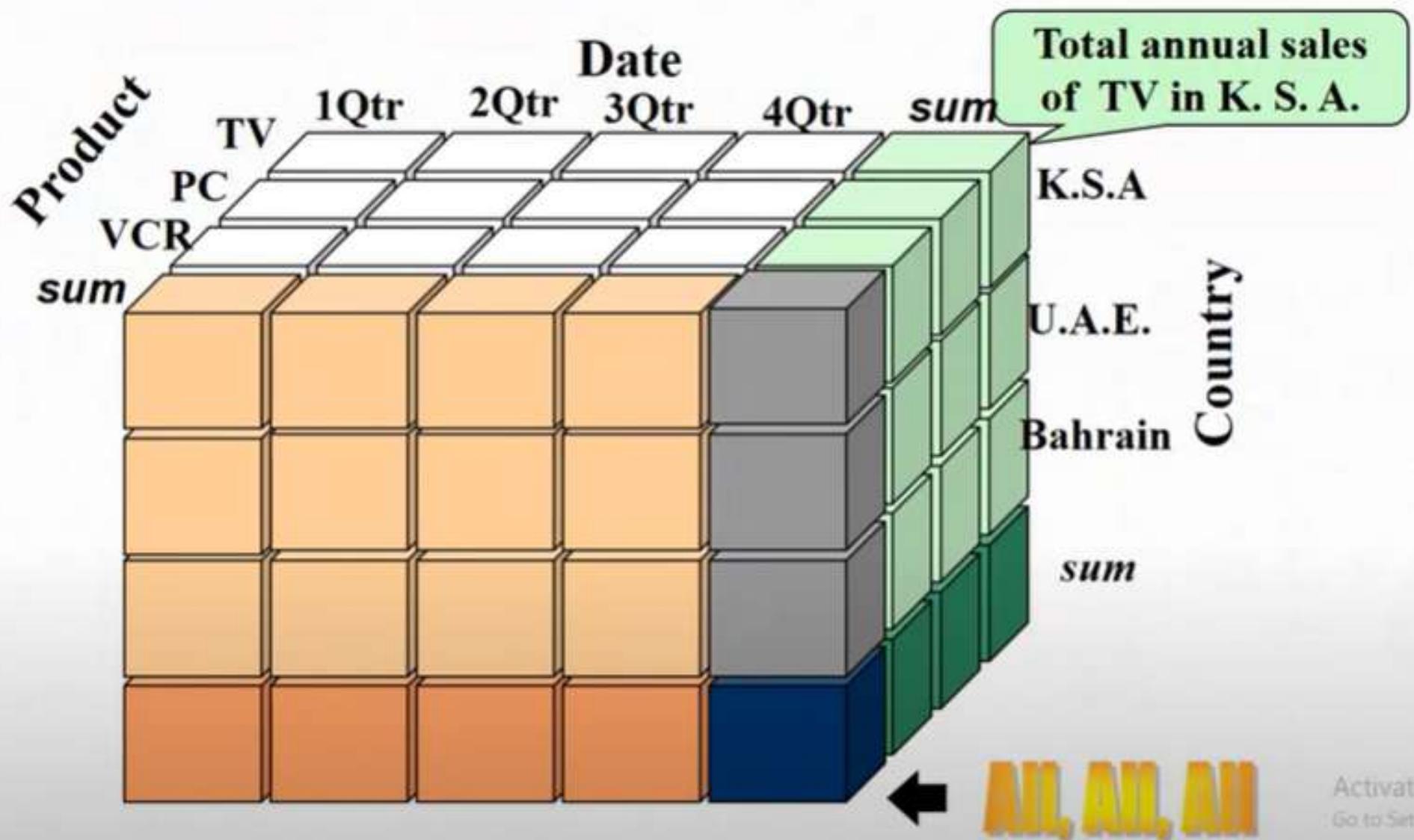
*	c1	c2	c3	*
p1	56	4	50	110
p2	11	8		19

day 2	c1	c2	c3	*	129
p1	44	4		48	
p2					129

day 1	c1	c2	c3	*	
p1	12		50	62	48
p2	11	8		19	

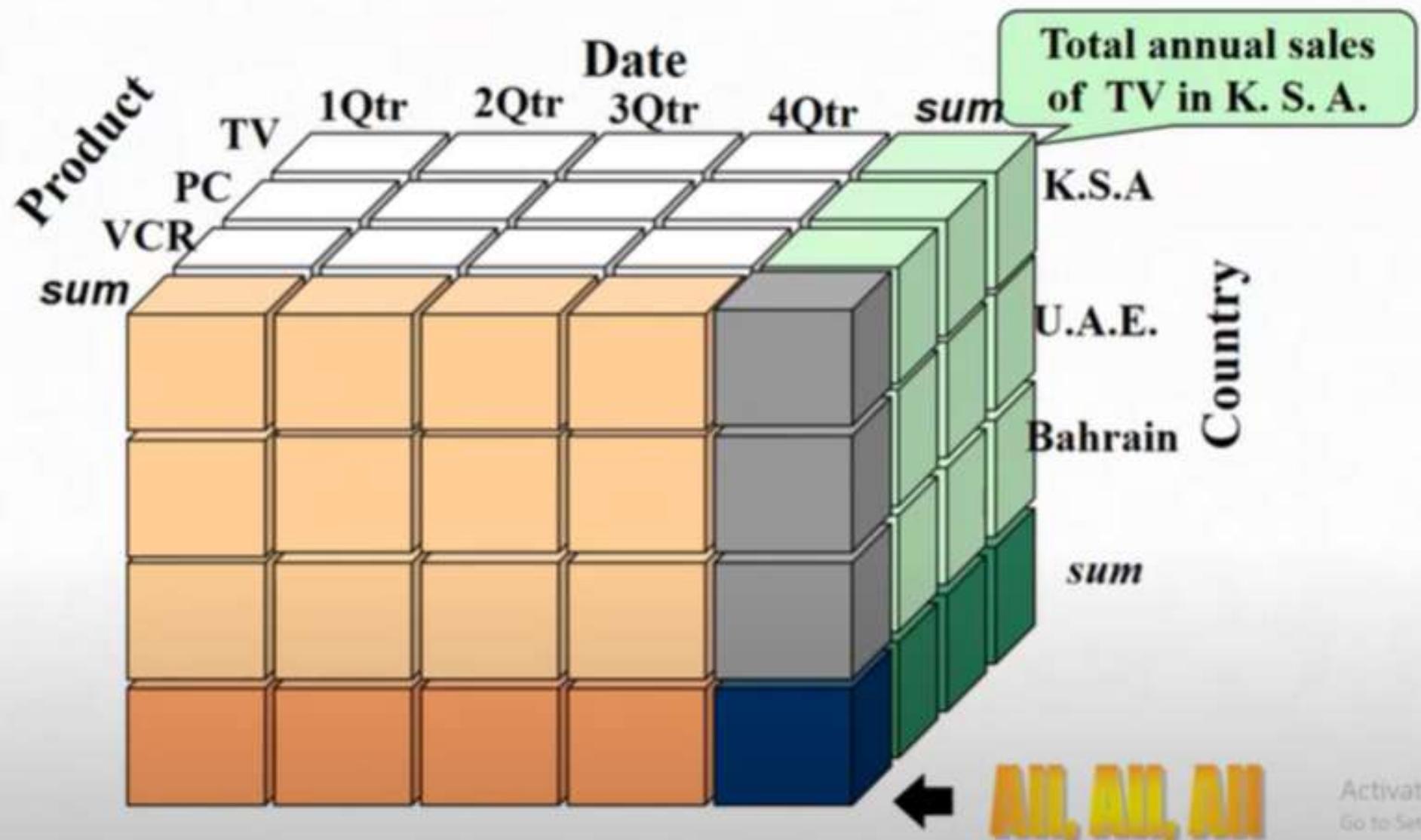
sale(*,p2,*)

Sample Data Cube

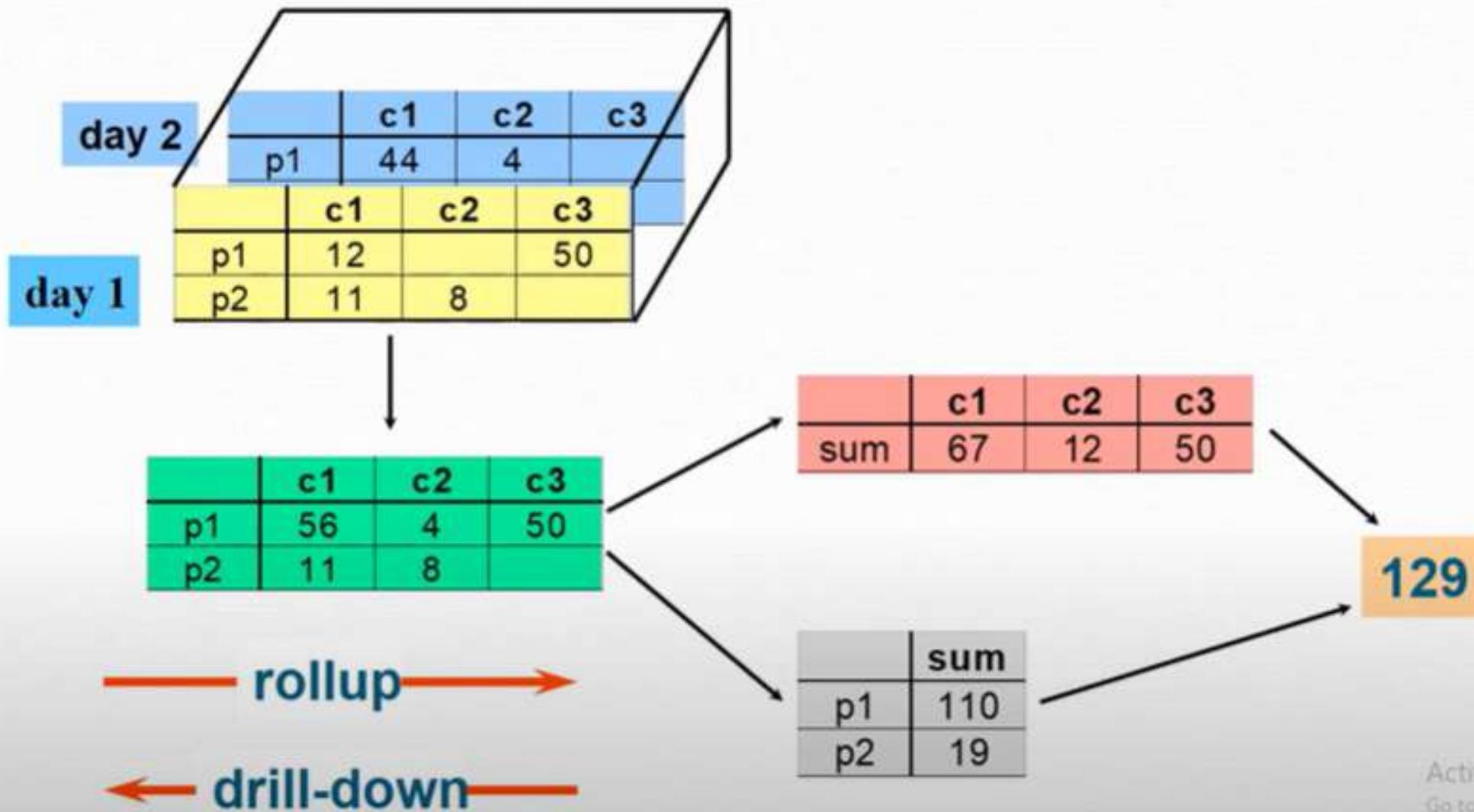




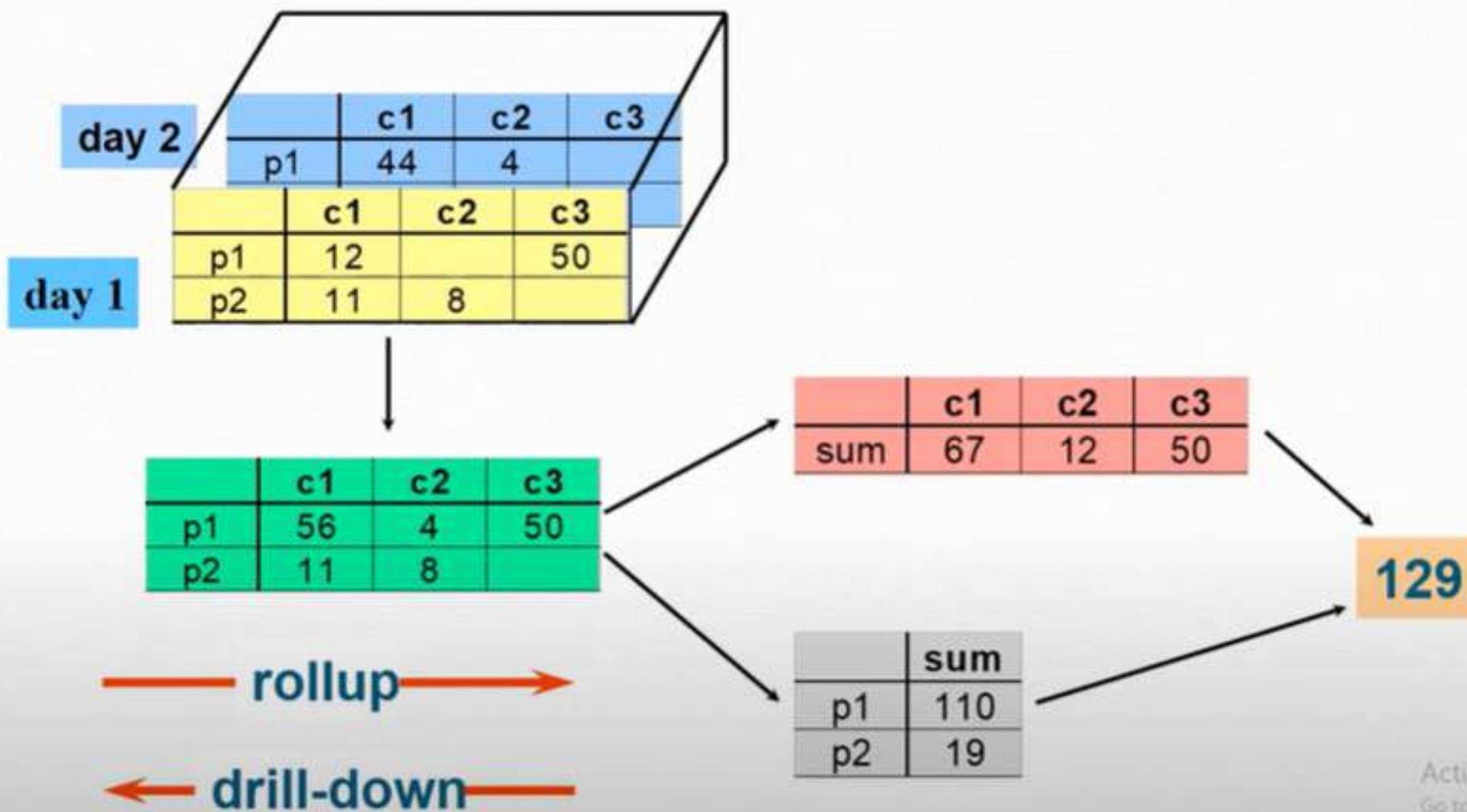
Sample Data Cube



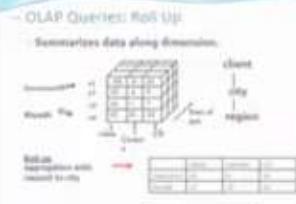
OLAP Queries: Drill down



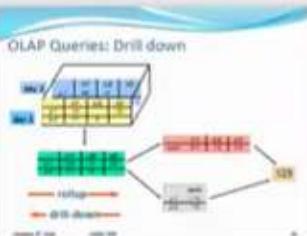
OLAP Queries: Drill down



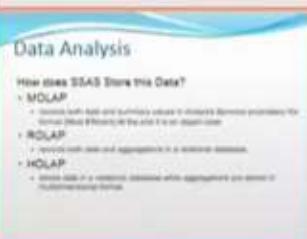
38



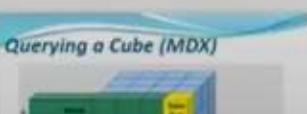
39



40



41



Data Analysis

How does SSAS Store this Data?

- MOLAP
 - records both fact and summary values in multidimensional providers like native binary or XMLA or the XMLA or relational layer
- ROLAP
 - records both fact and aggregations in a relational database.
- HOLAP
 - stores fact in a relational database while aggregations are stored in multidimensional format.

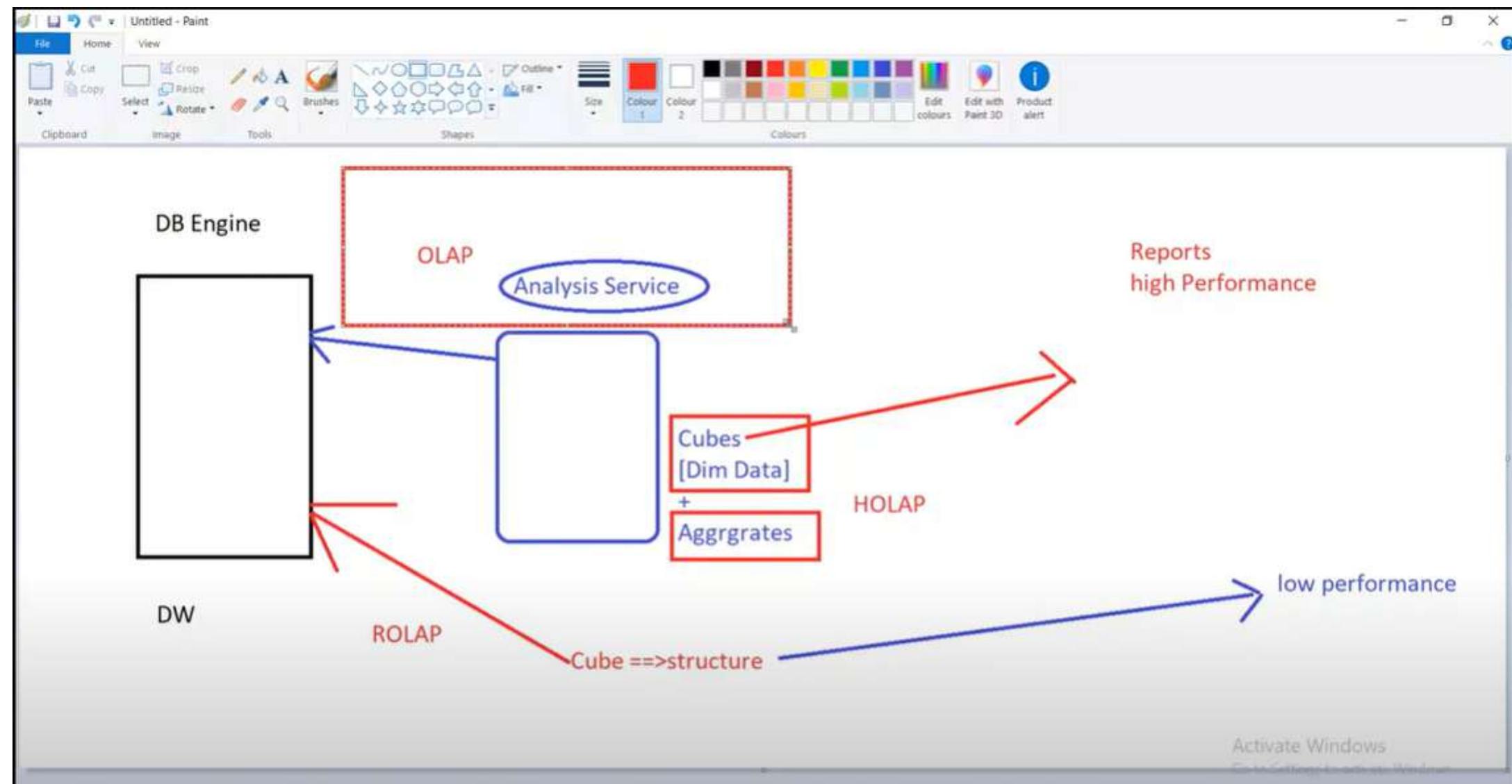
Activate Windows

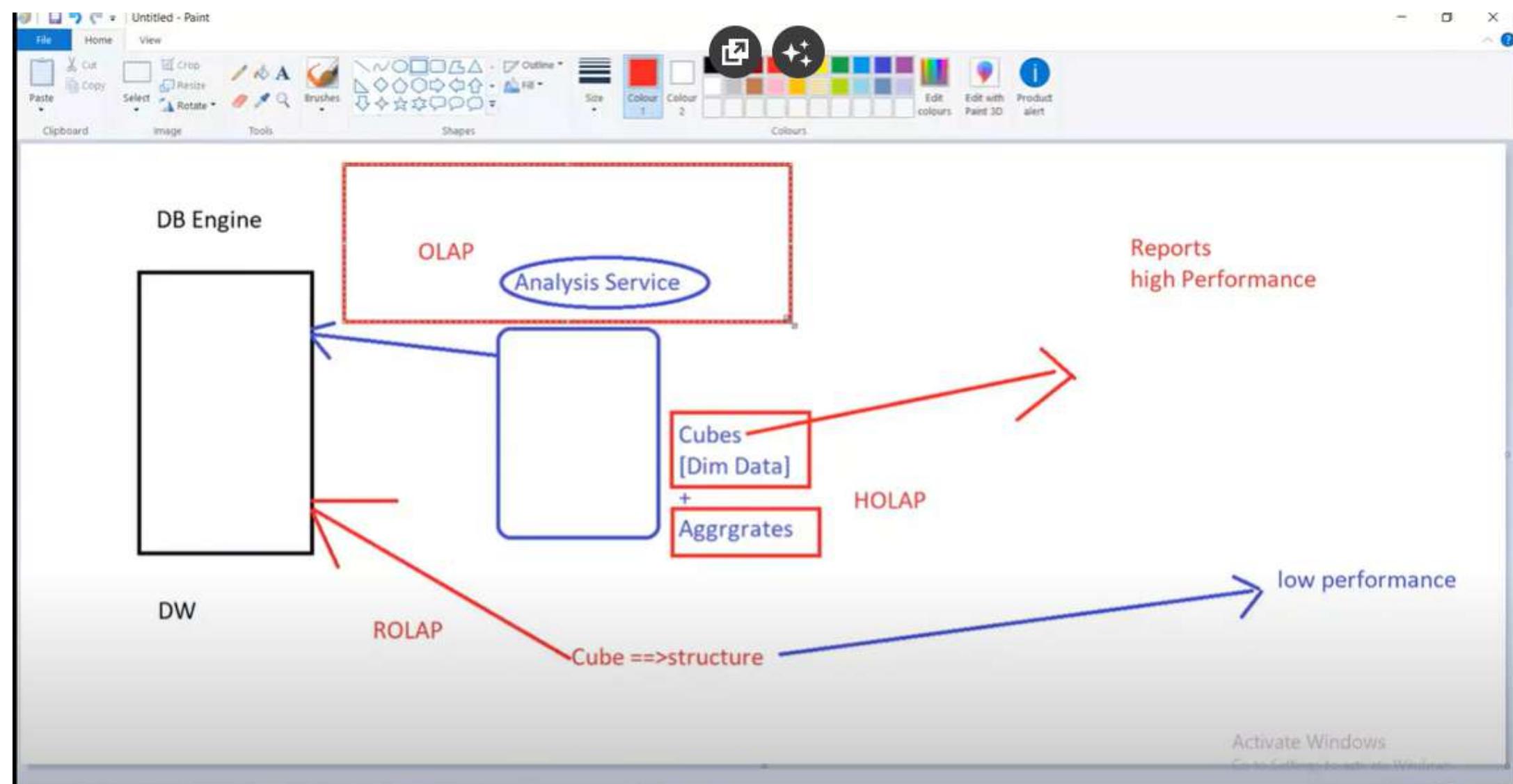
[Go to Settings to activate Windows](#)

Click to add notes

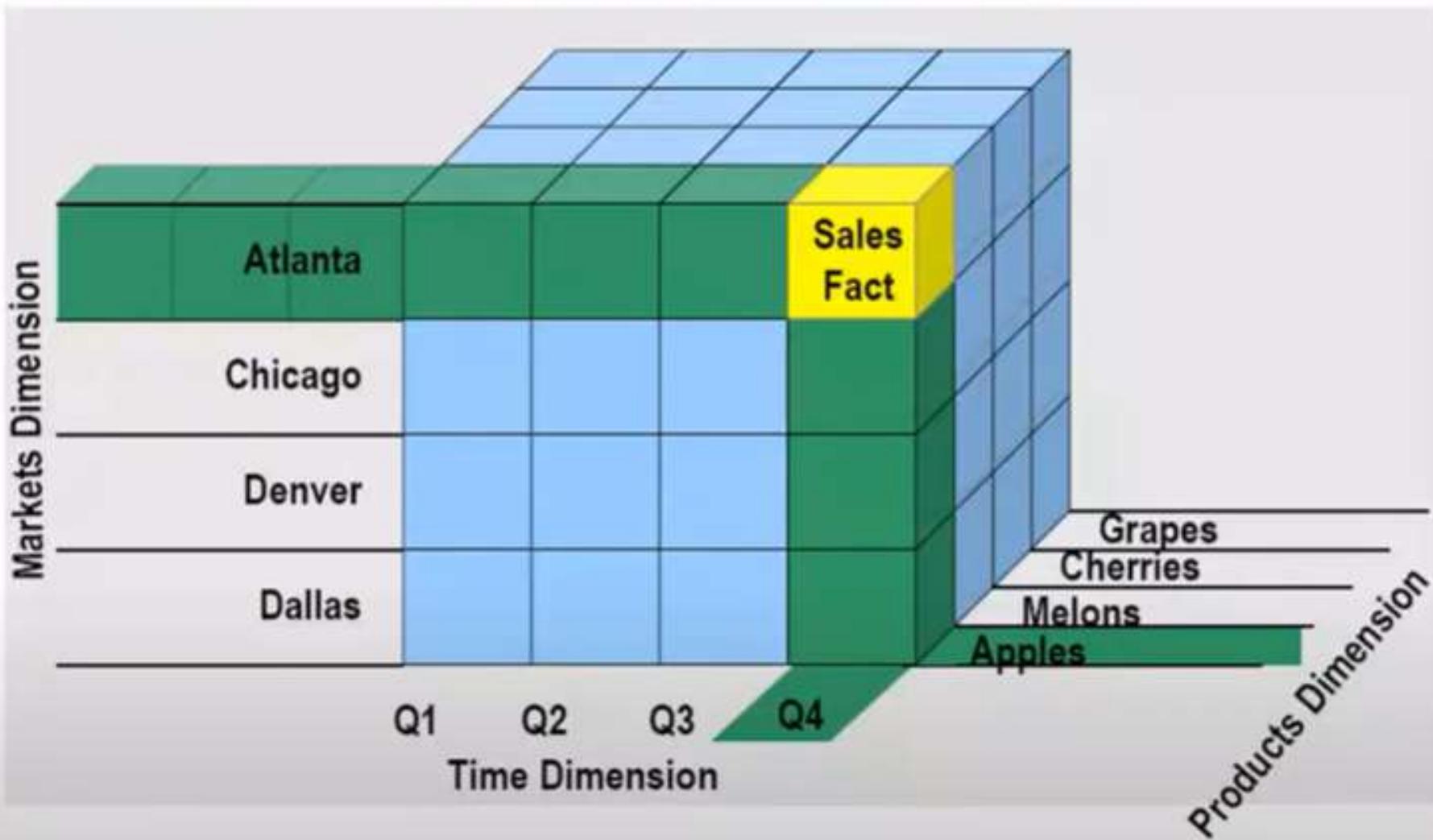
Notes Comments

83%

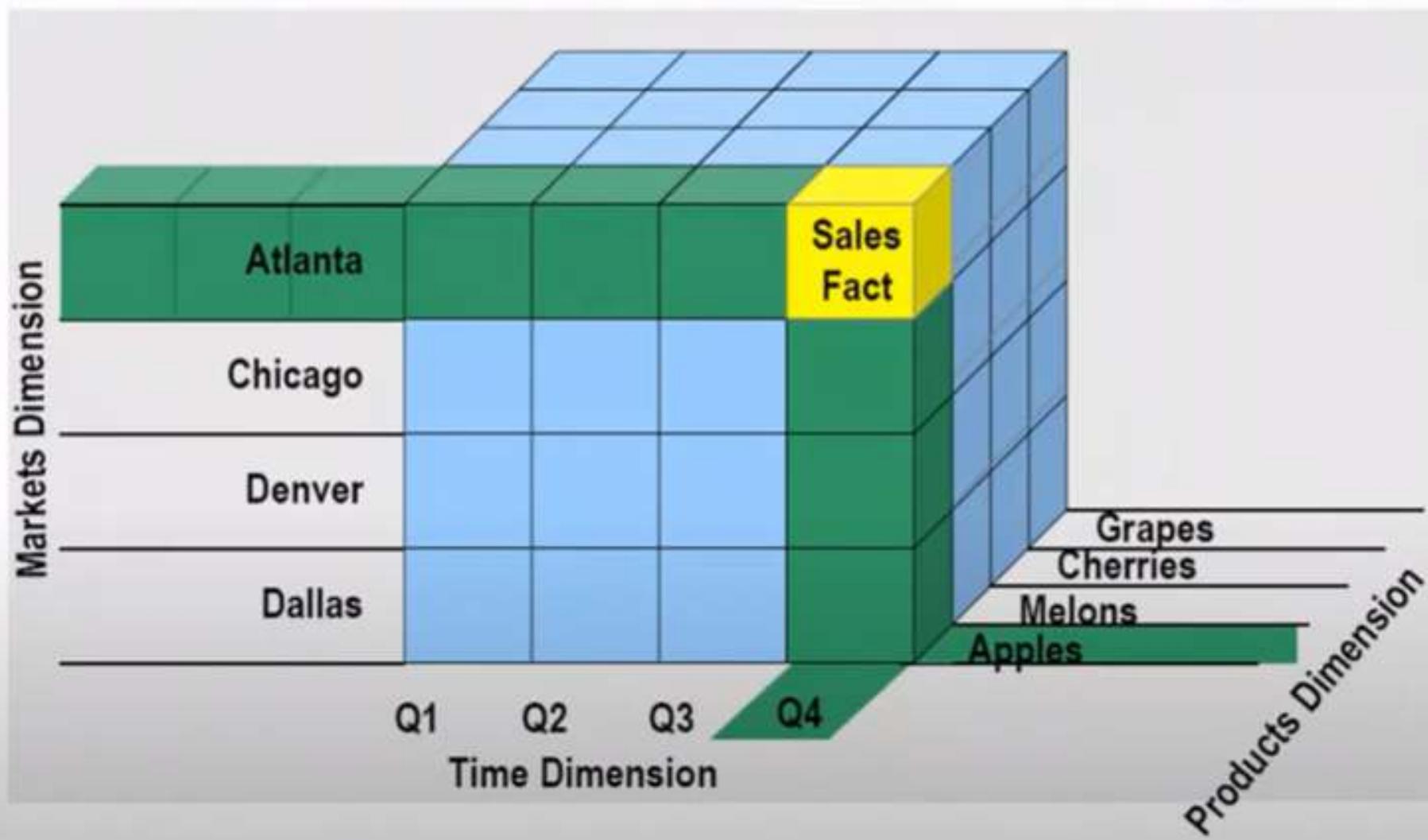




Querying a Cube (MDX)



Administration and DDL for cube (XMLA)



Power BI Projects | power bi & tableau | (35) falcom-co:AI | DeepLearning.AI | ملخص رامي الحرامي | 521546624_120456 | Screenshot(6206) | iti-I (4).pdf | (28) 2 SQL Server Analysis

www.youtube.com/watch

YouTube EG

Search

Administration and DDL for cube (XMLA)

Sales Fact

Markets Dimension

Atlanta

Chicago

Denver

Dallas

Time Dimension

Q1 Q2 Q3 Q4

Products Dimension

Grapes

Cherries

Melons

Apples

Activate Windows
Go to Settings to activate Windows.

1:23:22 / 2:57:03

A M S A A HM OB D G R

2 SQL Server Analysis Service-SSAS.

Abdallah Gamal

4.12K subscribers

Subscribed

17

Share

Download

ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C

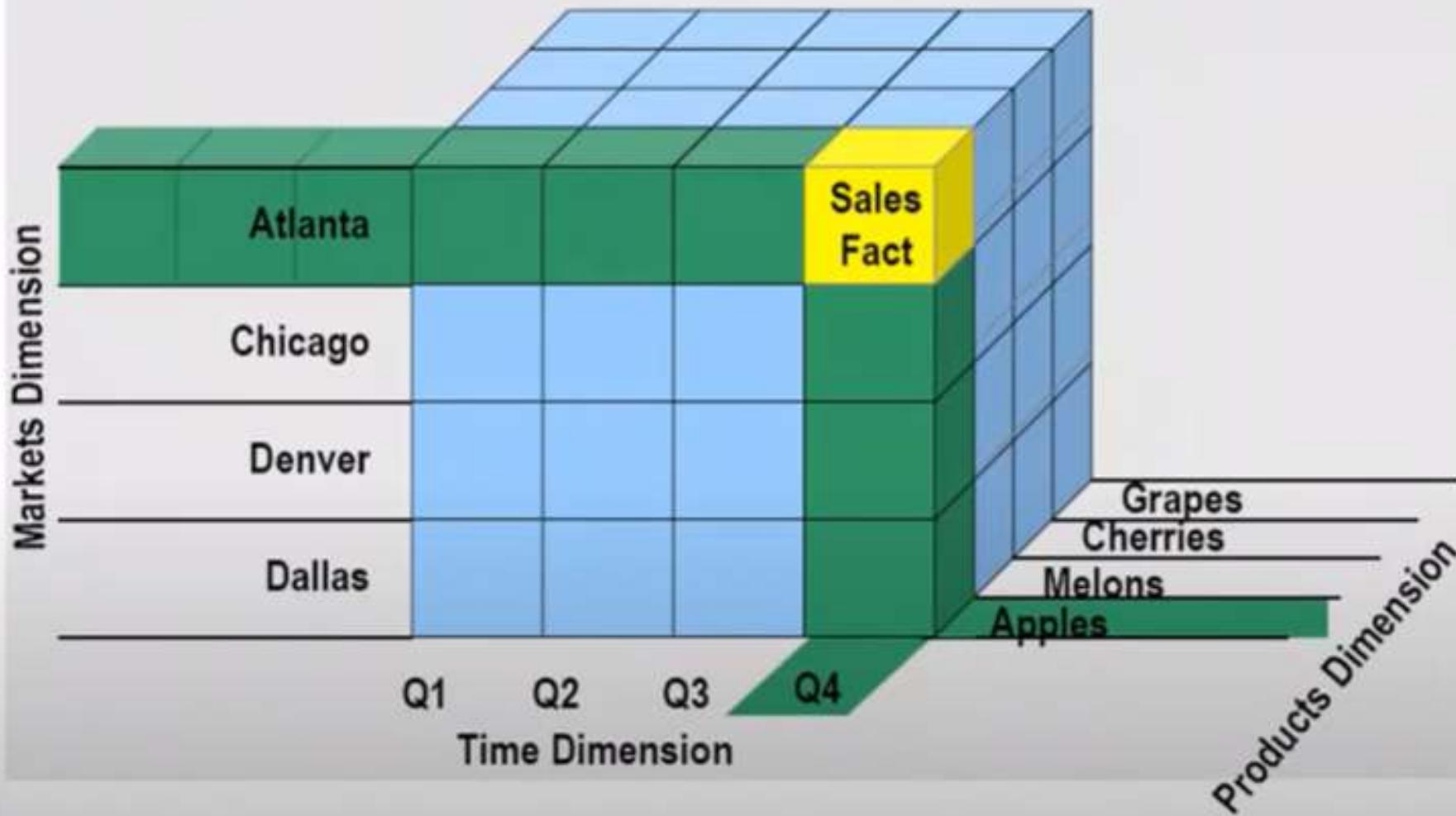
مشتمل

10:37 PM

ENG

7/24/2025

Administration and DDL for cube (XMLA)



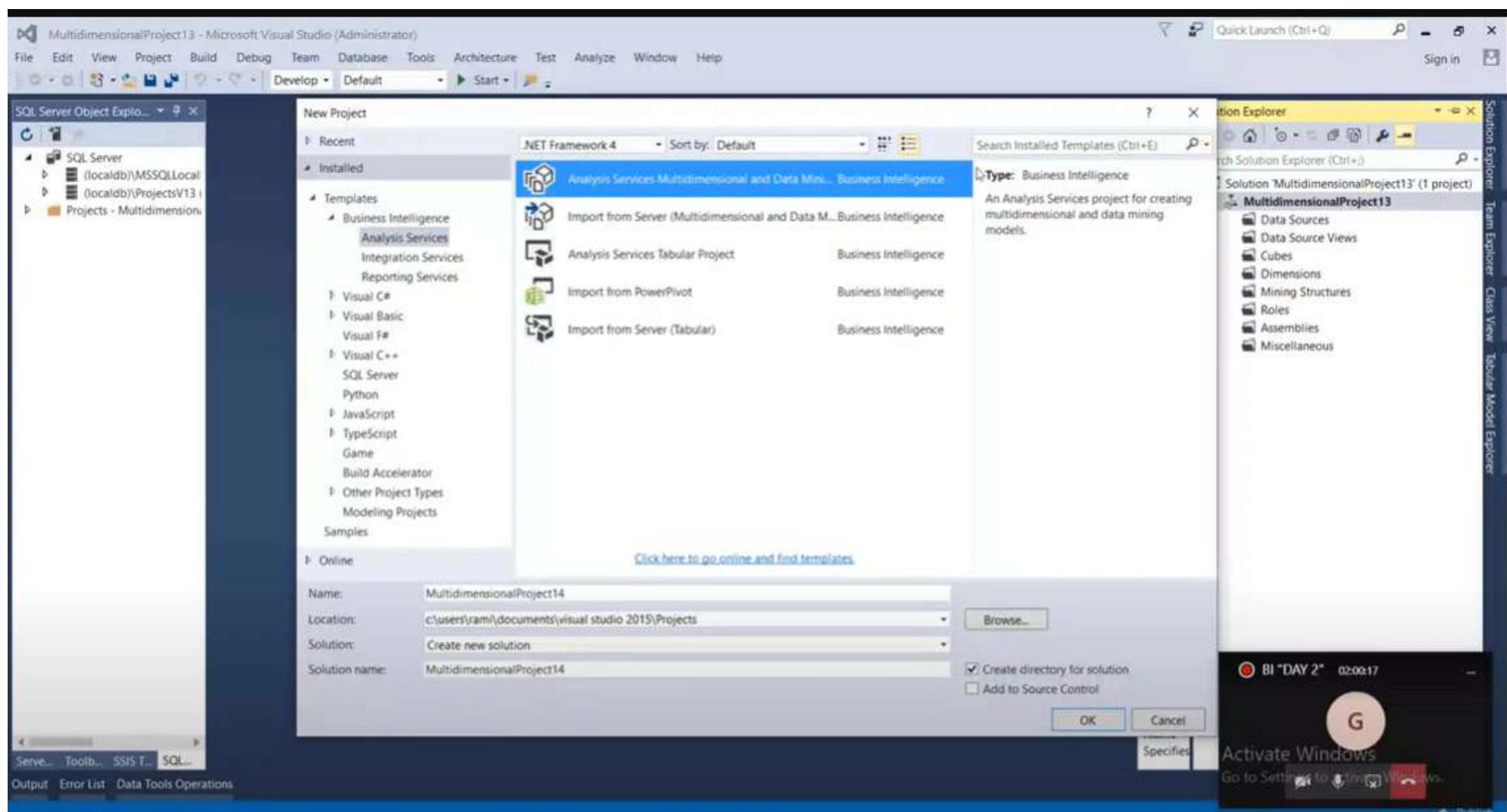
Data Presentation

- Using Excel pivot tables and more
- Using SQL Server Reporting Services (SSRS)
- Understanding SharePoint Web parts
- Reporting tools (Crystal Reports)
- 3rd Party tools (ProClarity)
- Performance Point Server
- C#, Asp.Net Report viewer



Data Presentation

- Using Excel pivot tables and more
- Using SQL Server Reporting Services (SSRS)
- Understanding SharePoint Web parts
- Reporting tools (Crystal Reports)
- 3rd Party tools (ProClarity)
- Performance Point Server
- C#, Asp.Net Report viewer



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

SQL Server Object Explorer Sales.dsv (Design) Diagram Designer

Diagram Designer

Select Measures

Select measures that you want to include in the cube.

Measure

FactSales

Qty

Qty Total Price

FactSales Count

< Back Next > Find & Replace Cancel

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

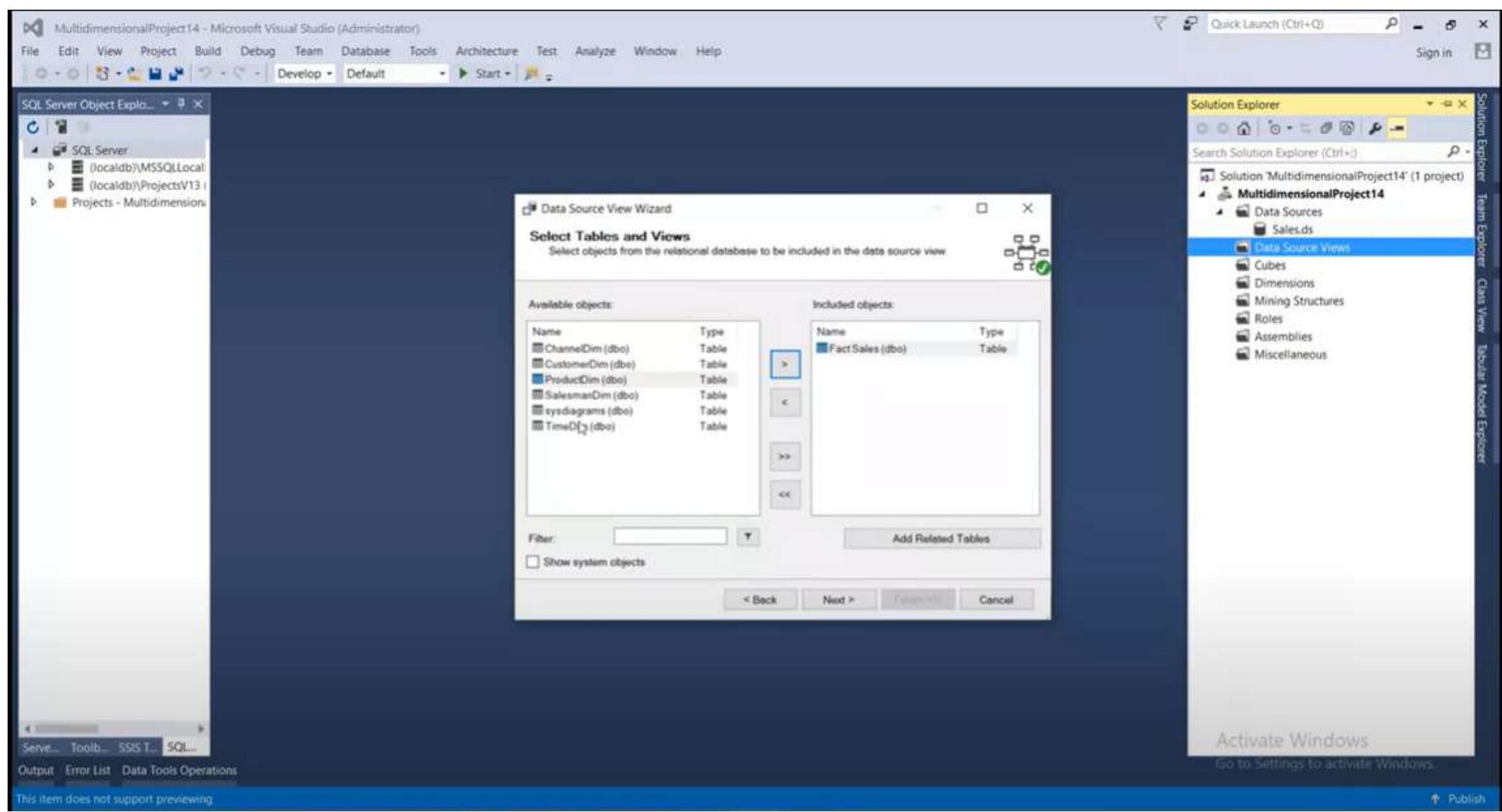
- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Cubes
 - Dimensions
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Team Explorer Class View Tabular Model Explorer

Activate Windows
Go to Settings to activate Windows.

Serve... Toolbar SSIS T... SQL... Output Error List Data Tools Operations

The screenshot shows the Microsoft Visual Studio interface for a Multidimensional Project. On the left, the 'Cube Wizard' is open, specifically the 'Select Measures' step. It lists several measures from the 'FactSales' fact table: ProductID, CustomerID, SalesmanID, ChannelID, TimeID, Qty, and Qty Total price. These measures are selected, indicated by a checked checkbox next to each entry. Below the list are buttons for '< Back', 'Next >', 'Find & Replace', and 'Cancel'. To the right of the wizard is a 'Diagram Designer' window showing a data model. It features three main components: a 'Fact Sales' box containing the fact table columns, a 'ProductDim' box containing product-related dimensions, and a 'TimeDim' box containing time-related dimensions. Arrows indicate relationships between the fact table and both dimension tables. The 'Solution Explorer' on the right shows the project structure under 'MultidimensionalProject14', including 'Data Sources', 'Data Source Views', 'Cubes', 'Dimensions', 'Mining Structures', 'Roles', 'Assemblies', and 'Miscellaneous'. The 'Cubes' node is currently selected. At the bottom of the screen, there is a watermark that says 'Activate Windows' and 'Go to Settings to activate Windows.'



SQL Server Object Explorer

Sales.dsv [Design] Diagram Organizer

Cube Wizard

Select Measure Group Tables

Select a data source view or diagram and then select the tables that will be used for measure groups.

Data source view: Sales

Tables:

- Fact Sales
- ProductDim
- TimeDim

Measure group tables:

- Fact Sales
- ProductDim
- TimeDim

Suggest

Fact Sales

ProductID
CustomerID
SalesmanID
ChannelID
ItemID
Qty
Total price

ProductDim

ProductID
ProductName
ProductPrice
ProductCategory

TimeDim

YearID
CalendarQuarter
CalendarYear

< Back Next > Finish > Cancel

Serve... Toolb... SSIS T... SQL...

Output Error List Data Tools Operations

Activate Windows
Go to Settings to activate Windows.

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Cubes
 - Fact Sales
 - Dimensions
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Team Explorer Class View Tabular Model Explorer

```
graph LR; FactSales[Fact Sales] --> ProductDim[ProductDim]; FactSales --> TimeDim[TimeDim];
```

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

SQL Server Object Explorer Sales.dsv [Design] Diagram Designer

Solution Explorer Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources Sales.ds
 - Data Source Views Sales.dsv
 - Cubes
 - Dimensions
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Activate Windows Go to Settings to activate Windows.

This item does not support previewing

Diagram Designer (Sales.dsv [Design])

Select Measures

Select measures that you want to include in the cube.

Measure

Fact Sales

- Qty
- Qty Total Price
- Fact Sales Count

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

ProductDm

- ProductID
- ProductName
- ProductPrice
- ProductCategory

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

Next > Cancel

Sales.dsv [Design] > X

Diamond.Dimensions

Cube Wizard

Select New Dimensions

Select new dimensions to be created, based on available tables.

Dimension

Product Dim

ProductDim

Time Dim

TimeDim

< Back Next > Finish Cancel

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

Serve... Toolb... SSIS T... SQL...

Output Error List Data Tools Operations

This item does not support previewing

Activate Windows
Go to Settings to activate Windows.

Publish

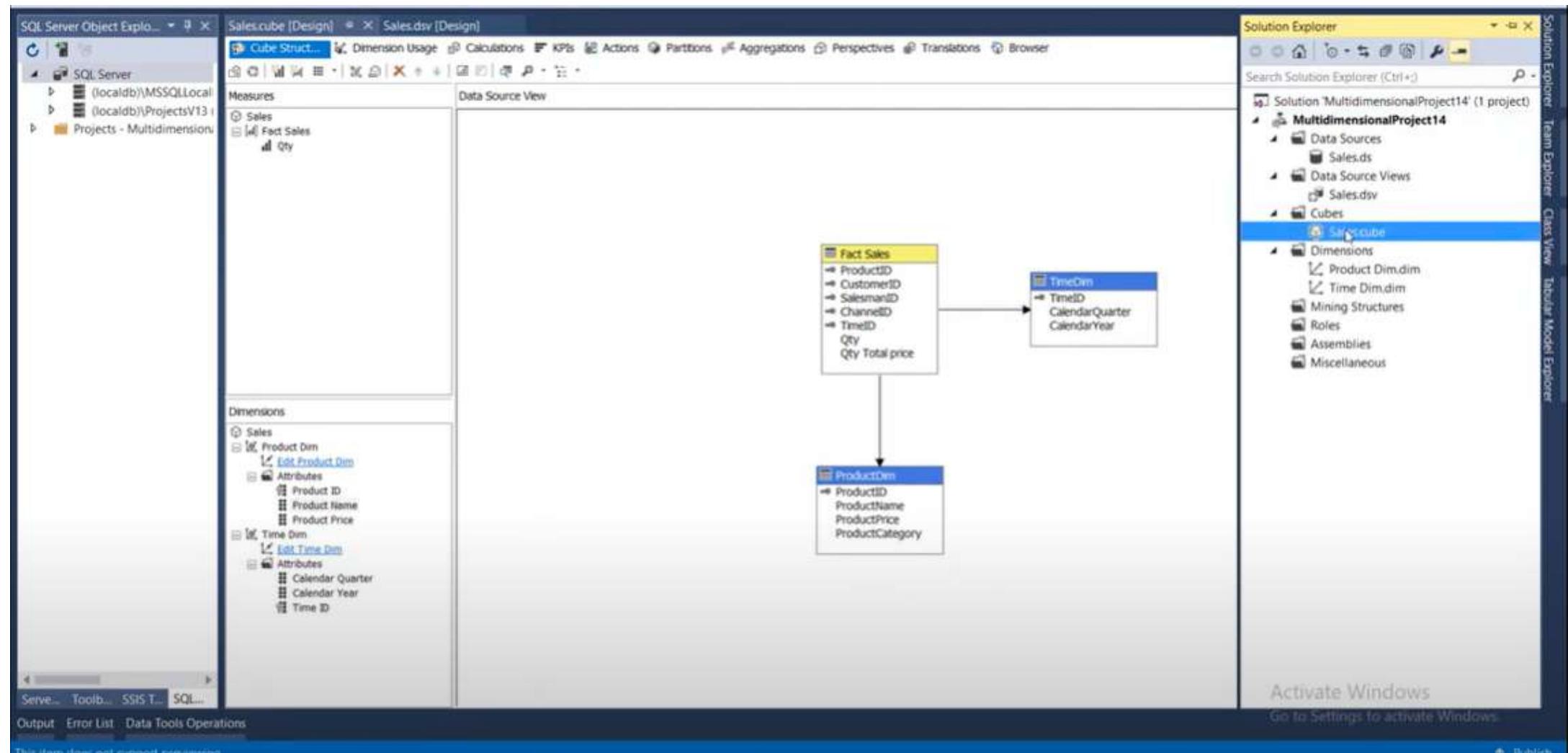
Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Cubes
 - Dimensions
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Team Explorer Class View Tabular Model Explorer

The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. On the left, the 'Cube Wizard' window is open, titled 'Select New Dimensions'. It lists available dimensions: Product Dim (selected), ProductDim, Time Dim, and TimeDim. Below the list are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. In the center, a data flow diagram is displayed. A 'Fact Sales' source table is connected to a 'ProductDim' destination table via a primary key relationship. Another connection goes from 'Fact Sales' to a 'TimeDim' destination table. The 'ProductDim' table contains columns for ProductID, ProductName, ProductPrice, and ProductCategory. The 'TimeDim' table contains columns for TimeID, CalendarQuarter, and CalendarYear. On the right, the 'Solution Explorer' pane shows a project named 'MultidimensionalProject14' containing a single cube named 'Cubes'. The 'Cubes' node is selected. Other items in the solution include 'Data Sources' (Sales.ds), 'Data Source Views' (Sales.dsv), and various dimensions, mining structures, roles, assemblies, and miscellaneous items. At the bottom, there are tabs for 'Server', 'Toolbars', 'SSIS Tools', and 'SQL...'. The status bar at the bottom indicates 'This item does not support previewing' and provides activation information for Windows.



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measures Data Source View

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimension

Fact Sales

Qty

Dimensions

Sales

Product Dim

Attributes

Product ID

Product Name

Product Price

Time Dim

Attributes

Calendar Quarter

Calendar Year

Time ID

Fact Sales

ProductID CustomerID SalesmanID ChannelID TimeID Qty Qty Total price

ProductDim

ProductID ProductName ProductPrice ProductCategory

Open Process... Browse View Code F7 View Designer Shift+F7 Add Business Intelligence... Scope to This New Solution Explorer View Exclude From Project Cut Ctrl+X Copy Ctrl+C Delete Del Rename Properties Alt+Enter

Activate Windows Go to Settings to activate Windows.

Output Error List Data Tools Operations

This item does not support previewing Publish

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources Sales.ds

Data Source Views Sales.dsv

Cubes Sales.cube

Product Dim.dim Time Dim.dim

ProductCategory

Deployment Progress - MultidimensionalProject14

Server : localhost
Database : MultidimensionalProject14

Command

Object list:

Object Name	Type	Process Options	Settings
Process Cube - Sales			

Process Progress

Command

- Processing Dimension 'Product Dim' completed.
Start time: 27/10/2020 13:03:33; End time: 27/10/2020 13:03:34; Duration: 0:00:01
- Processing Dimension Attribute '(All)' completed.
- Processing Dimension Attribute 'Product ID' completed. 6 rows have been read.
Start time: 27/10/2020 13:03:34; End time: 27/10/2020 13:03:34; Duration: 0:00:00
- SQL queries
 - SELECT DISTINCT [dbo].[ProductDim].[ProductID] AS [dbo].[ProductDimProductD0_0].[dbo].[ProductDim].[ProductN
- Processing Dimension Attribute 'Product Name' completed. 6 rows have been read.
Start time: 27/10/2020 13:03:33; End time: 27/10/2020 13:03:34; Duration: 0:00:00
- SQL queries
 - Processing Dimension Attribute 'Product Price' completed. 6 rows have been read.
- Processing Cube 'Sales' completed.
Start time: 27/10/2020 13:03:34; End time: 27/10/2020 13:03:36; Duration: 0:00:02
- Processing Measure Group 'Fact Sales' completed.
- Processing Dimension 'Time Dim' completed.
Start time: 27/10/2020 13:03:33; End time: 27/10/2020 13:03:34; Duration: 0:00:01
- Processing Dimension Attribute '(All)' completed.

Status:

Process succeeded.

Buttons: Step, Reprocess, View Details..., Copy, Close, Help

Buttons: Run, Close

Deployment Completed Successfully

Activate Windows
Go to Settings to activate Windows.

Sales.cube [Design] Sales.csv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer

Measures

- Sales
- [x] Fact Sales
 - All Qty

Dimensions

- Sales
- [x] Product Dim
 - [Edit Product Dim](#)
 - Attributes
 - Product ID
 - Product Name
 - Product Price
- [x] Time Dim
 - [Edit Time Dim](#)
 - Attributes
 - Calendar Quarter
 - Calendar Year
 - Time ID

Edit Measure

Usage: Sum

Source table: Fact Sales

Source column:

- CustomerID
- SalesmanID
- ChannelID
- Qty
- Qty Total price

TimeDim

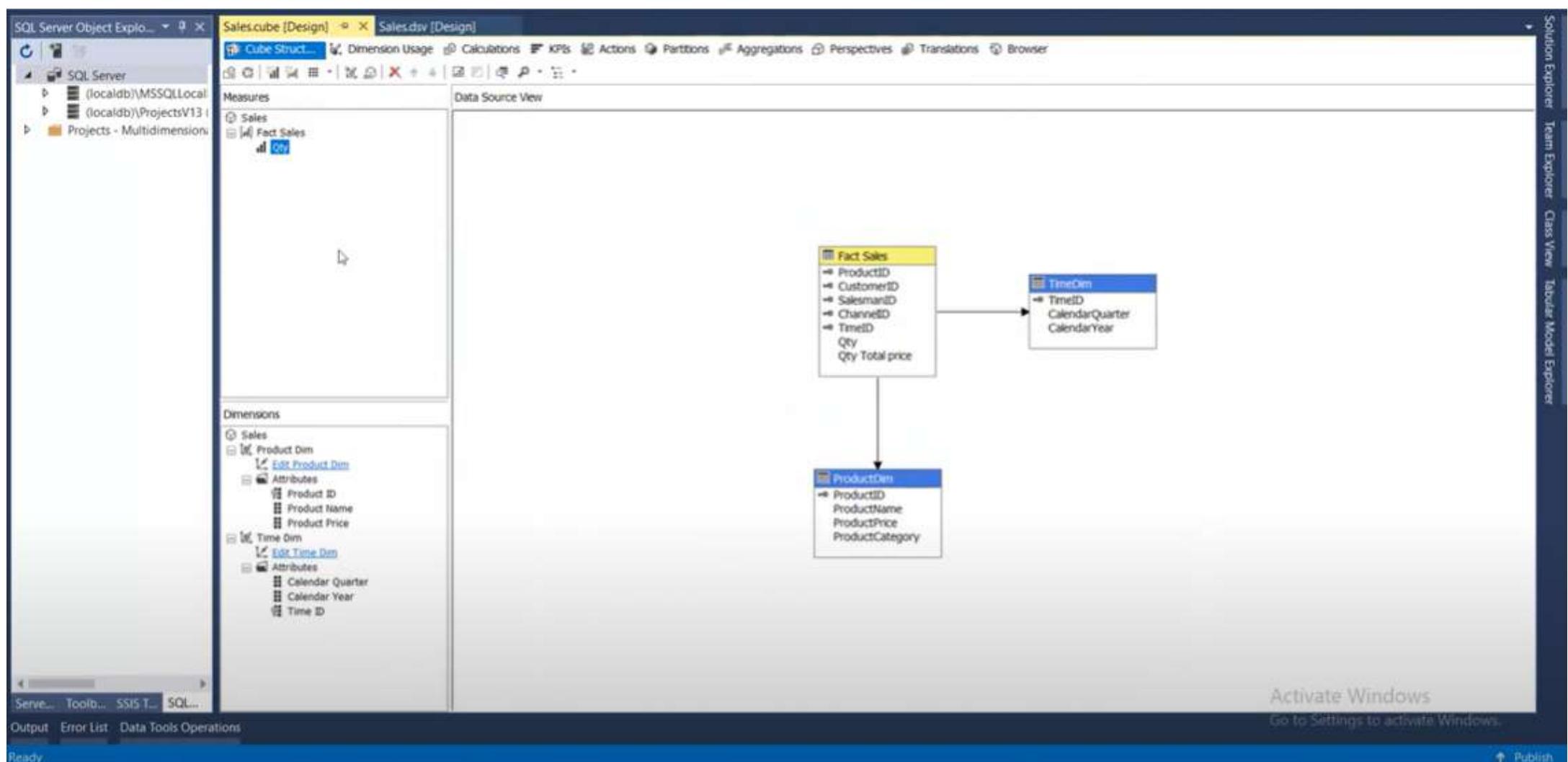
- TimeID
- CalendarQuarter
- CalendarYear

Show all columns

OK Cancel Help

Activate Windows
Go to Settings to activate Windows.

Serve... Toolbar SSIS T... SQL...
Output Error List Data Tools Operations



Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

SQL Server Object Explorer

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Edit as Text Import...

Sales

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Measure Group: <All>

Sales

Measures

KPIs

Product Dim

Time Dim

Calculated Members

Drag levels or measures here to add to the query.

Activate Windows
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Error List Data Tools Operations Ready Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Win Help

Quick Launch (Ctrl + Q) Sign in

Develop Default Start

SQL Server Object Explorer

Salescube [Design] Sales.dim [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Measure Group: <All>

Sales

Measures

KPIs

Product Dim

Time Dim

Calculated Members

Drag levels or measures here to add to the query.

Activate Windows
Go to Settings to activate Windows

Server Tools SSIS T SQL

Output Error List Data Tools Operations

SQL Server Object Explorer Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... Analyze in Excel

Dimension Hierarchy Operator Filter Expression Parameters

Sales

Metadata

Measure Group: <All>

Sales

- Measures
 - Fact Sales
 - Qty
- KPIs
- Product Dim
 - Product ID
 - Product Name
 - Product Price
- Time Dim
 - Calendar Quarter
 - Calendar Year
 - Time ID

Calculated Members

Calendar Year	Product Name	Qty
2007	Accessories	110
2007	Books	80
2007	Clothing	110
2007	Components	30
2007	Sportswear	50
2008	Accessories	195
2008	Books	75
2008	Clothing	75
2008	Components	85
2008	Sportswear	80

Activate Windows
Go to Settings to activate Windows.

Serve... Toolb... SSIS L... SQL... Output Error List Data Tools Operations Ready Publish

Solution Explorer Team Explorer Class View Tabular Model Explorer

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: PivotTable1 Options + Field Settings Drill Down Drill Up Expand Field Group Selection Group Field Ungroup Insert Slicer Insert Timeline Connections Filter Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships Tools PivotChart Recommended PivotTables Tools Calculations Tools Field List Buttons Headers Show

B4 A B C D E F G H I J K L M N O P Q R S T

PivotTable1 To build a report, choose fields from the PivotTable Field List

PivotTable Fields Choose fields to add to report: Search

- Σ Fact Sales
- Product Dim
 - Product ID
 - Product Name
 - Product Price
- Time Dim
 - Calendar Quarter

Drag fields between areas below:

FILTERS COLUMNS

ROWS VALUES

Activate Windows Go to Subtotal Defer Layout Upd... UPDATE

tmp2834

Ready

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: PivotTable1 Calendar Year Expand Field
Options Field Settings Drill Down Drill Up Collapse Field

Group Selection Group Ungroup Group Field Insert Slicer Insert Timeline Connections Refresh Change Data Source Clear Select Move PivotTable Fields, Items & Sets OLAP Relationships Tools Calculations Tools PivotChart Recommended PivotTables Field List +/- Buttons Headers Show

A1 Row Labels

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	2007	380																		
3	2008	510																		
4	Grand Total	890																		
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

PivotTable Fields

Choose fields to add to report:

Search

Product Dim Product ID Product Name Product Price

Time Dim Calendar Quarter Calendar Year Time ID

Drag fields between areas below:

FILTERS

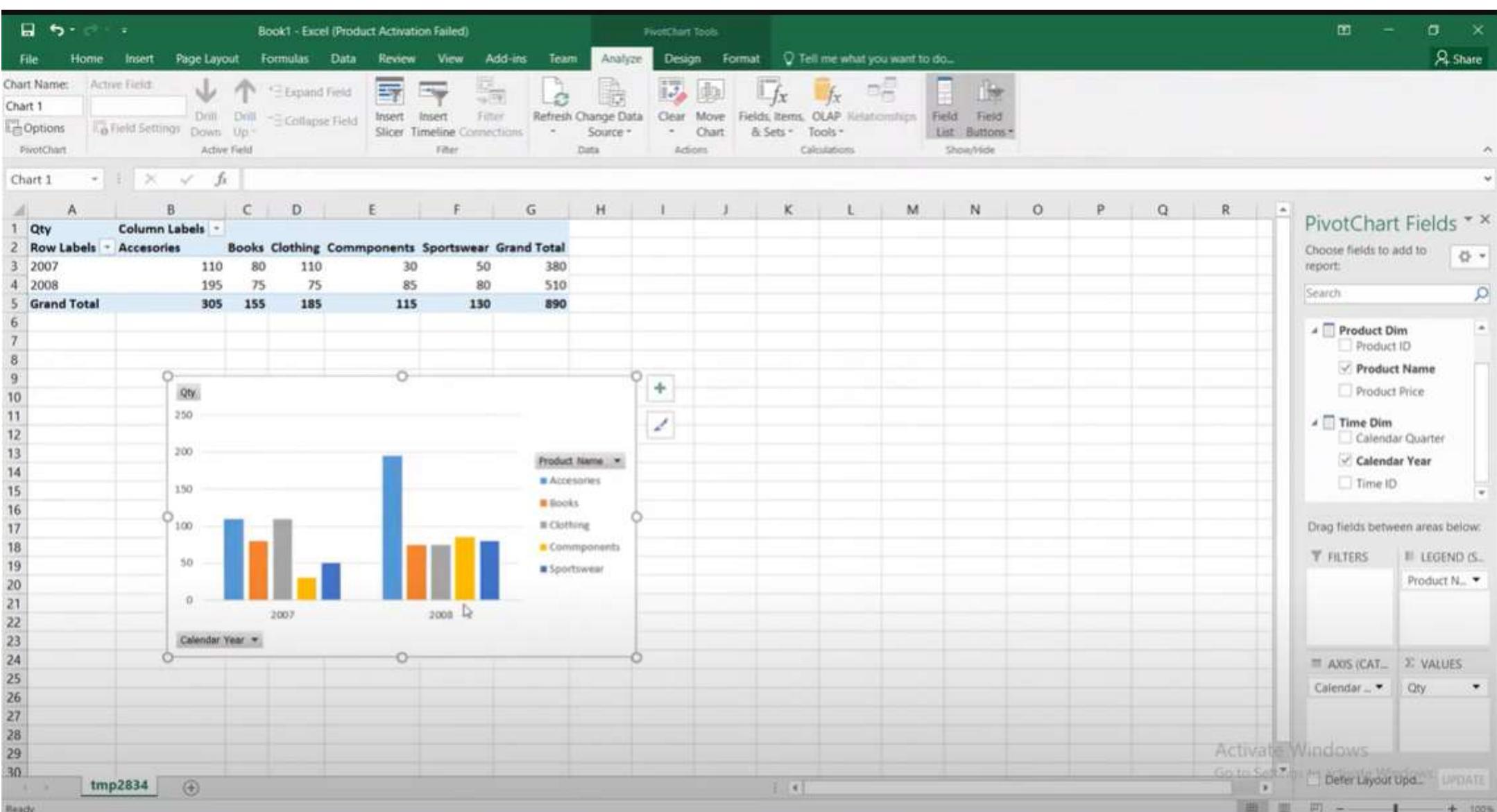
ROWS Calendar ... VALUES Qty

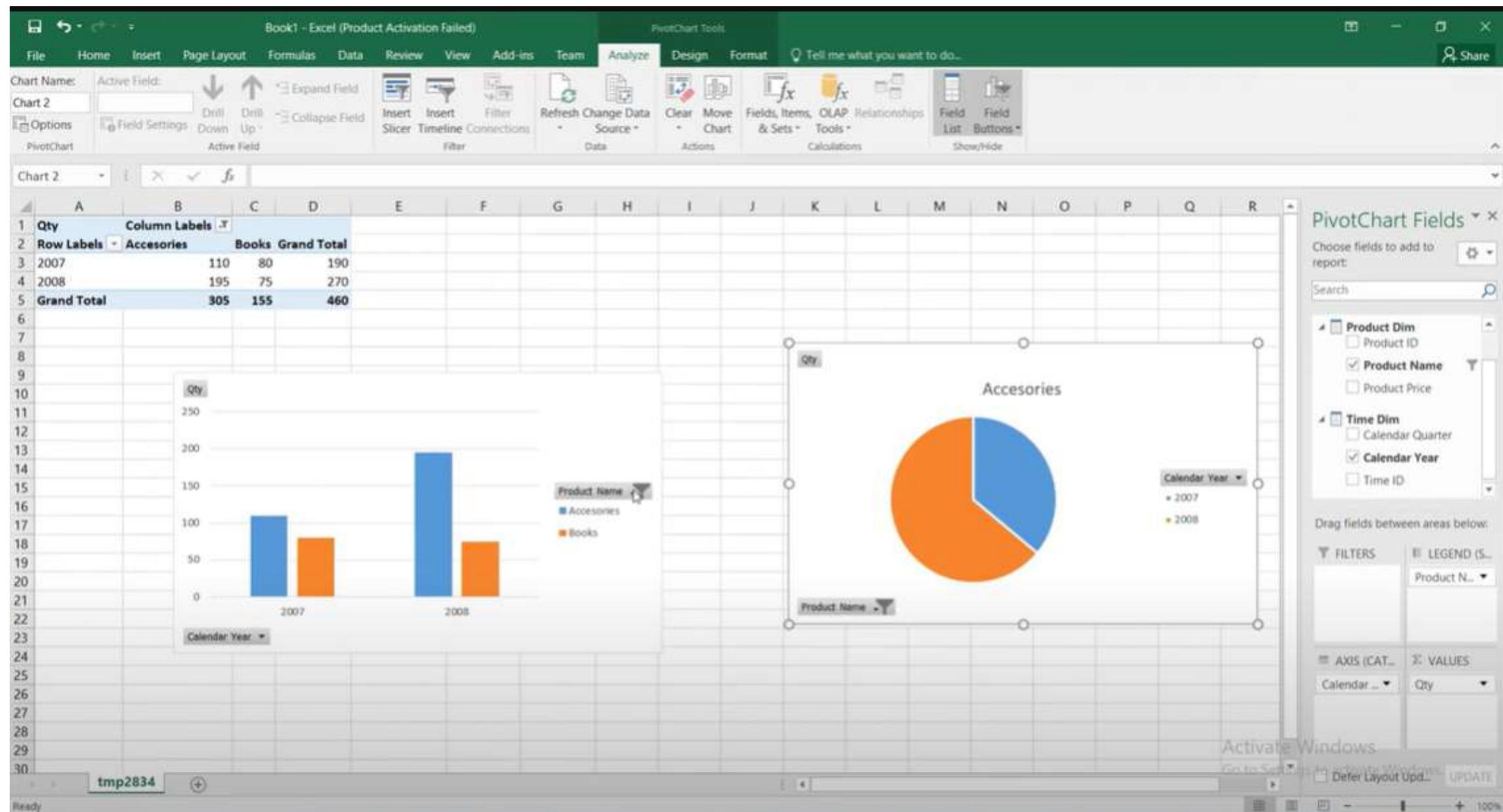
Activate Windows

Defer Layout Upd... UPDATE

tmp2834

Ready





MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browse

Language: Default

Edit as Text Import...

Sales

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Measure Group: <All>

Sales

Measures

Fact Sales

Qty

KPIs

Product Dim

Product ID

Product Name

Product Price

Time Dim

Calendar Quarter

Calendar Year

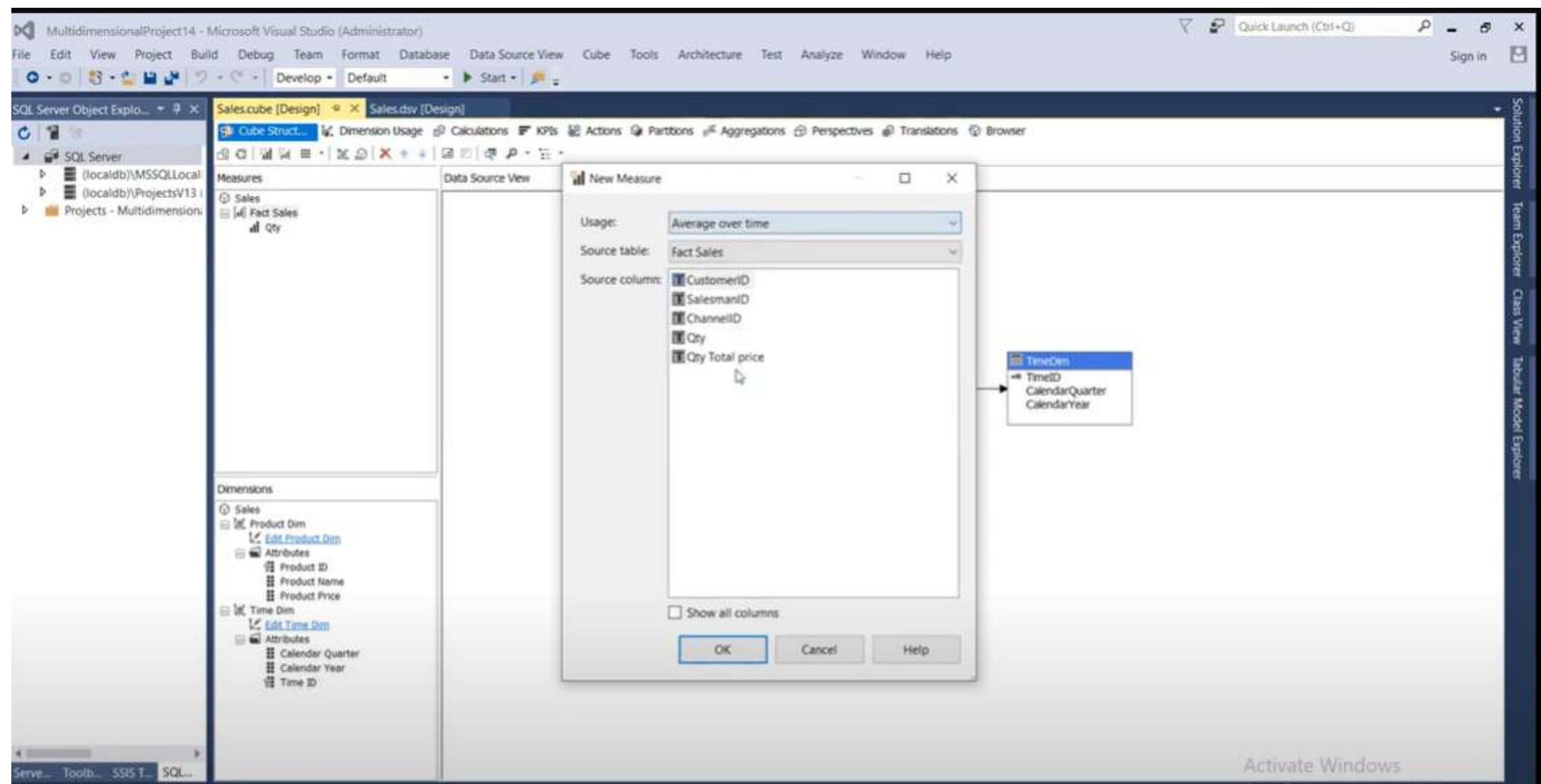
Time ID

Calculated Members

Calendar Year	Product Name	Qty
2007	Accessories	110
2007	Books	80
2007	Clothing	110
2007	Components	30
2007	Sportswear	50
2008	Accessories	195
2008	Books	75
2008	Clothing	75
2008	Components	85
2008	Sportswear	80

Activate Windows
Go to Settings to activate Windows

Serve... Tools... SSIS T... SQL... Output Error List Data Tools Operations



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Sales.cube [Design] Sales.dim [Design]

Cube Struct... Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

Team Explorer Class View Tabular Model Explorer

Measures

- Sales
 - [! Fact Sales
 - All Qty
 - All Qty - Fact Sales

Dimensions

- Sales
- [! Product Dim
 - Edit Product Dim
 - Attributes
 - Product ID
 - Product Name
 - Product Price
- [! Time Dim
 - Edit Time Dim
 - Attributes
 - Calendar Quarter
 - Calendar Year
 - Time ID

Data Source View

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Activate Windows
Go to Settings to activate Windows.

Server... Toolbars SSIS T... SQL...
Output Error List Data Tools Operations
This item does not support previewing Publish

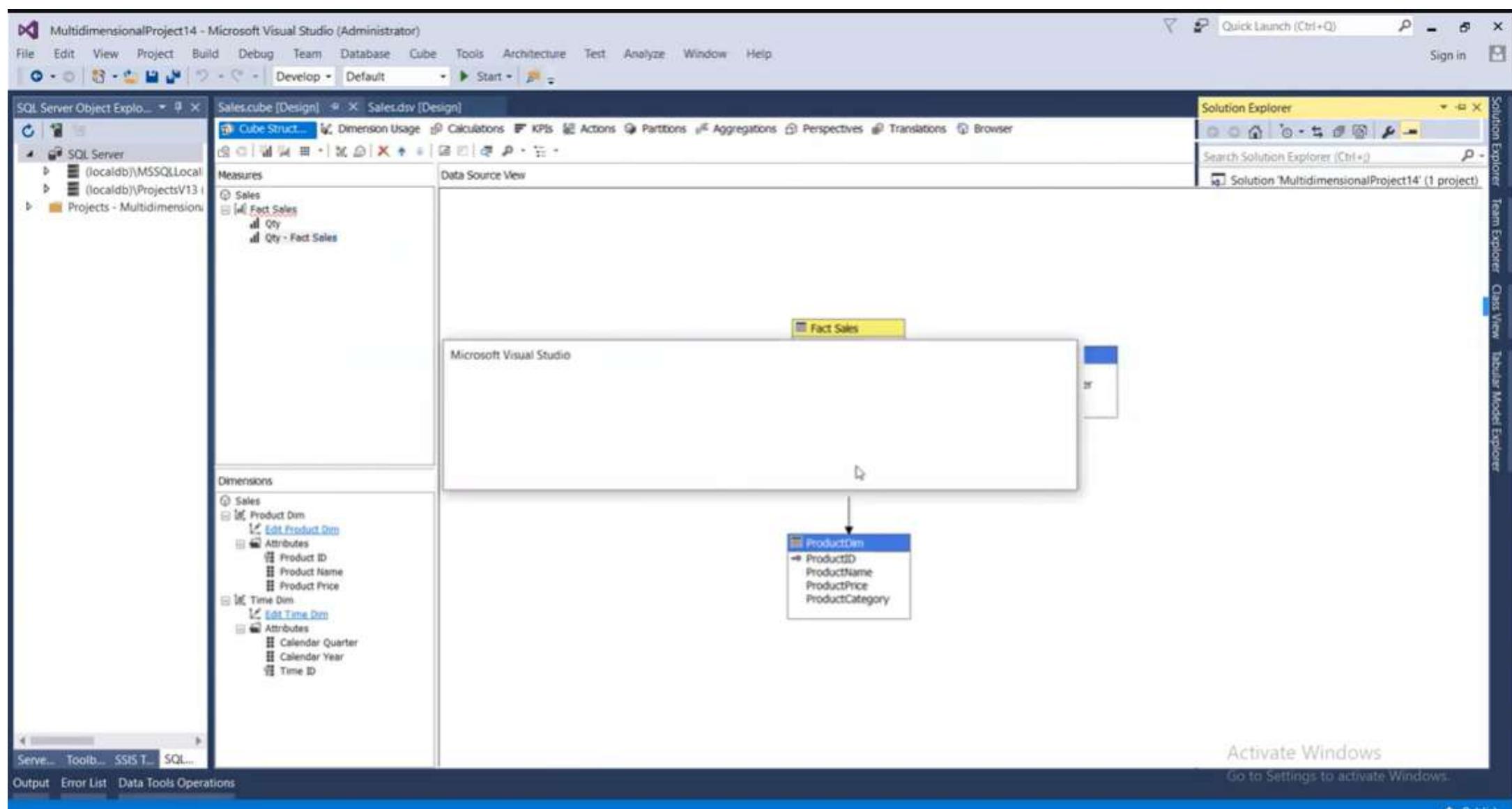
```
graph TD; FactSales[Fact Sales] --> TimeDim[TimeDim]; FactSales --> ProductDim[ProductDim];
```

The diagram illustrates the relationships between three dimensions in a cube structure:

- Fact Sales**: Contains attributes: ProductID, CustomerID, SalesmanID, ChannelID, TimeID, Qty, and Qty Total price.
- TimeDim**: Contains attributes: TimeID, CalendarQuarter, and CalendarYear.
- ProductDim**: Contains attributes: ProductID, ProductName, ProductPrice, and ProductCategory.

Relationships are indicated by arrows:

- A relationship exists between Fact Sales and TimeDim.
- A relationship exists between Fact Sales and ProductDim.



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer

Salescube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measures

- Sales
 - Fact Sales
 - Qty
 - Qty - Fact Sales

Dimensions

- Sales
 - Product Dim
 - Edit Product Dim
 - Attributes
 - Product ID
 - Product Name
 - Product Price
 - Time Dim
 - Edit Time Dim
 - Attributes
 - Calendar Quarter
 - Calendar Year
 - Time ID

Data Source View

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

ProductionDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Context menu for Fact Sales:

- Open
- Process... **Selected**
- Browse
- View Code F7
- View Designer Shift+F7
- Add Business Intelligence...
- Scope to This
- New Solution Explorer View
- Exclude From Project
- Cut Ctrl+X
- Copy Ctrl+C
- Delete Del
- Rename
- Properties Alt+Enter

Solution Explorer

Search Solution Explorer (Ctrl+F) P

Solution MultidimensionalProject14 (1 project)

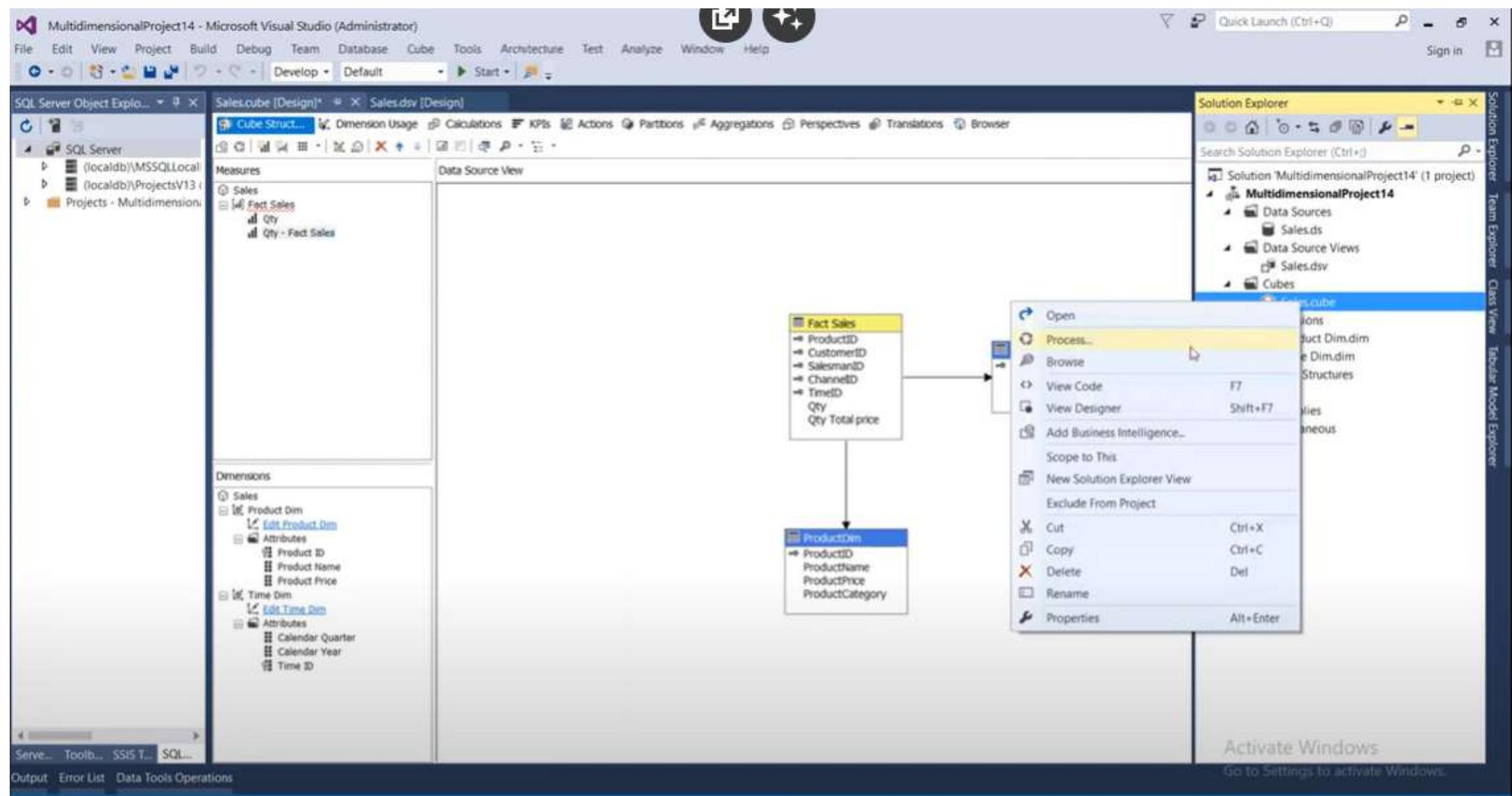
- MultidimensionalProject14
 - Data Sources
 - Sales.dsv
 - Data Source Views
 - Sales.dsv
 - Cubes
 - Salescube

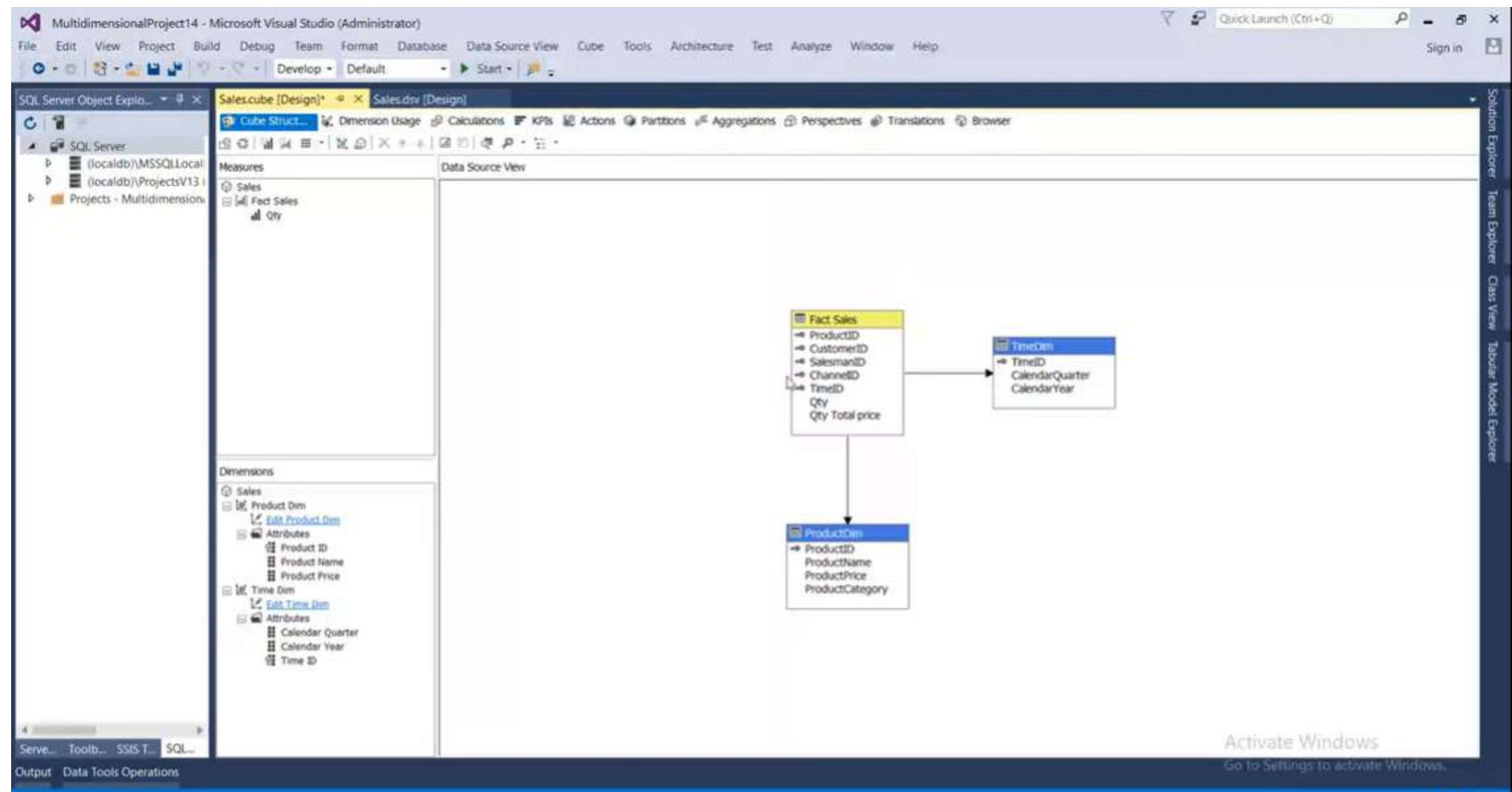
Team Explorer Class View Tabular Model Explorer

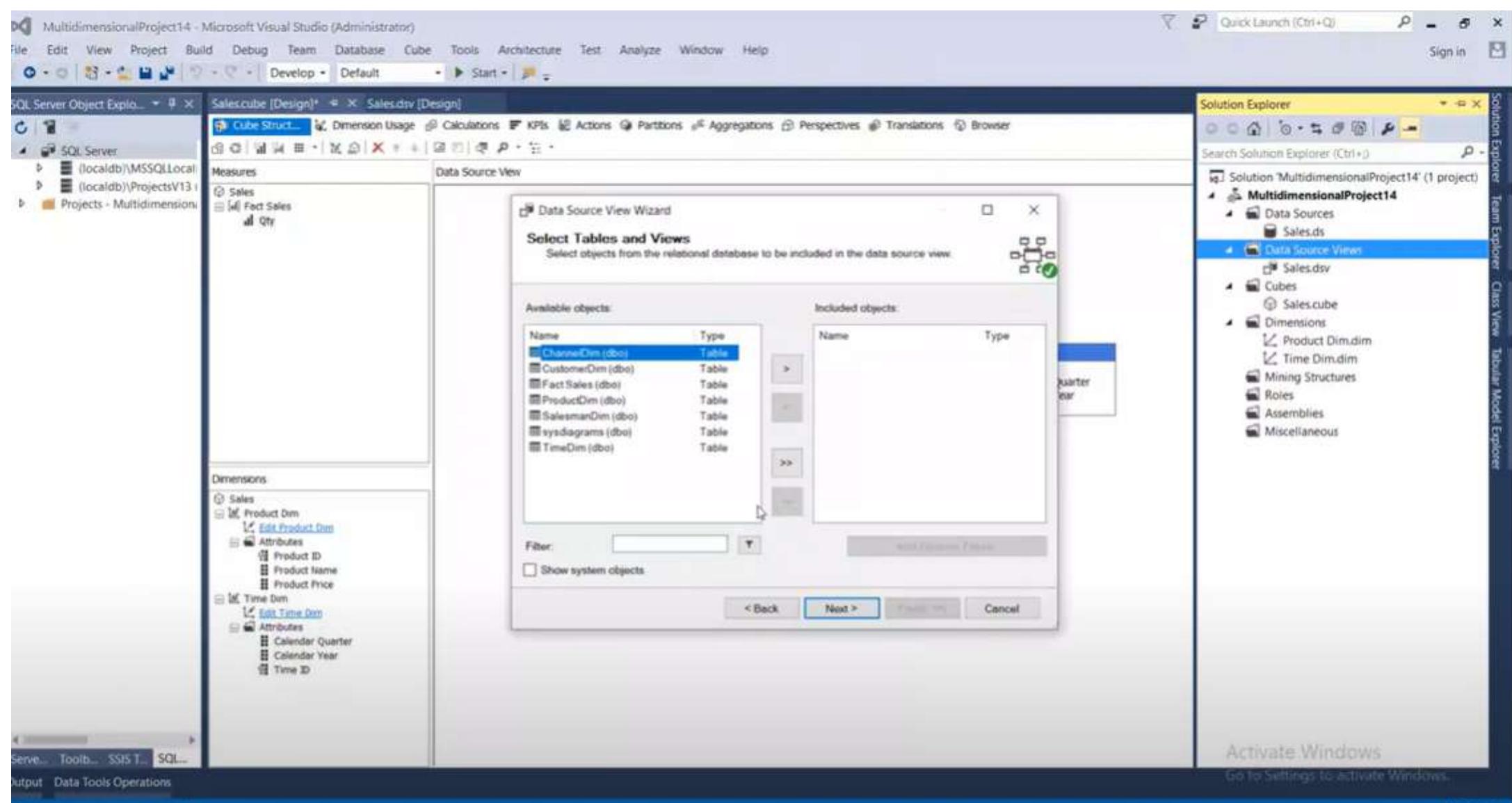
Activate Windows Go to Settings to activate Windows.

Serve... Tools... SSMS 1... SQL...

Output Error List Data Tools Operations







MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Salescube [Design] * Sales.ds [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Develop Default Start

Measures

Sales Fact Sales Qty

Dimensions

Sales Product Dim Product ID Product Name Product Price

Time Dim Time Dim Calendar Quarter Calendar Year Time ID

Data Source View

Data Source View Wizard

Select Tables and Views

Select objects from the relational database to be included in the data source view.

Available objects:

Name	Type
ChannelDim (dbo)	Table
CustomerDim (dbo)	Table
Fact.Sales (dbo)	Table
ProductDim (dbo)	Table
SalesmanDim (dbo)	Table
sysdiagrams (dbo)	Table
TimeDim (dbo)	Table

Included objects:

Name	Type
Kuarter	Table

> <> <>>

Filter: Next > Cancel

Output Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

Data Source Views

- Sales.ds

Cubes

- Sales(cube)

Dimensions

- Product Dim.dim
- Time Dim.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Team Explorer Class View Tabular Model Explorer

Activate Windows
Go to Settings to activate Windows

The screenshot shows the 'Data Source View Wizard' dialog box in the center of the Visual Studio interface. The 'Available objects' section lists several tables from the 'dbo' schema: ChannelDim, CustomerDim, Fact.Sales, ProductDim, SalesmanDim, sysdiagrams, and TimeDim. The 'Included objects' section shows a single table named 'Kuarter'. Below the tables is a 'Filter' input field and a 'Show system objects' checkbox. At the bottom of the dialog are 'Back', 'Next >', 'Finish', and 'Cancel' buttons. The 'Next >' button is currently selected. The Visual Studio ribbon at the top has tabs for File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Window, and Help. The 'Develop' tab is selected. The 'Solution Explorer' on the right shows the project structure with 'MultidimensionalProject14' containing 'Sales.ds' and 'Salescube'. The 'Cube Structure' tab is active in the main workspace. The status bar at the bottom indicates 'Activate Windows' and 'Go to Settings to activate Windows'.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Diagram Organizer

Cube Wizard

Select Measure Group Tables

Select a data source view or diagram and then select the tables that will be used for measure groups.

Data source view:

- Sales
- Sales
- Sales 1

Tables

- ChannelDim
- CustomerDim
- Fact Sales
- ProductDim
- SalesmanDim
- TimeDim

CustomerDim

- CustomerID
- CustomerName
- CustomerPhone
- CustomerAddress

At least one measure group table must be selected.

< Back Next > Finish (F1) Cancel

SalesmanID
SalesmanPhone
SalesmanAddress

ProductID
ProductPrice
ProductCategory

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

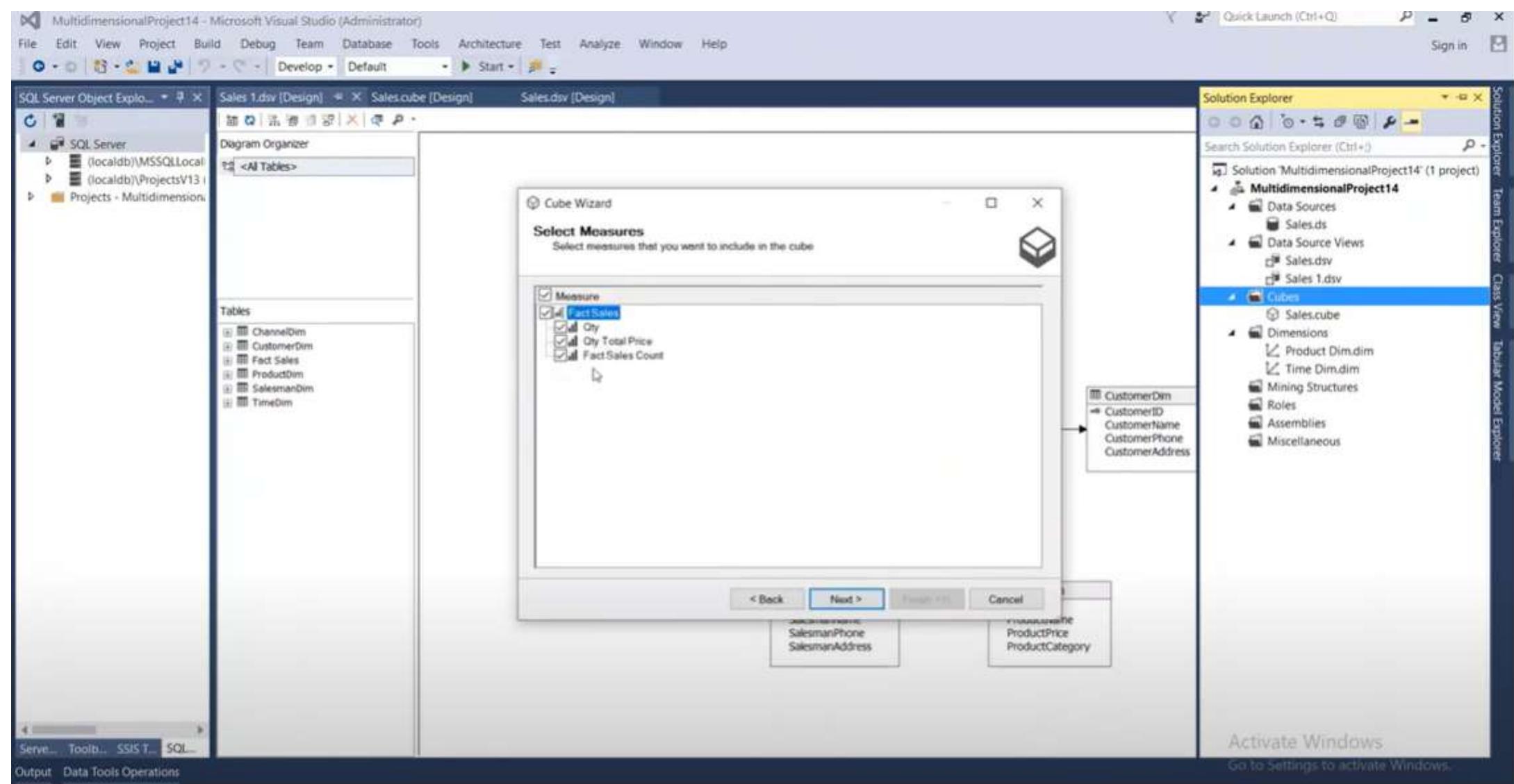
- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Salescube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Team Explorer Class View Table Model Explorer

Activate Windows

Go to Settings to activate Windows.

Serve... Toolbar SSIS T... SQL...
Output Data Tools Operations



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer Sales 1.dsv (Design) Sales(cube) [Design] Sales.dsv [Design]

Diagram Organizer <All Tables>

Cube Wizard

Select New Dimensions
Select new dimensions to be created, based on available tables.

Dimension

Product Dim

ProductDim

Channel Dim

ChannelDim

Salesman Dim

SalesmanDim

Customer Dim

CustomerDim

Time Dim

TimeDim

CustomerDim

CustomerID
CustomerName
CustomerPhone
CustomerAddress

< Back Next > Finish Cancel

SalesmanPhone
SalesmanAddress

ProductPrice
ProductCategory

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Mining Structures

Roles

Assemblies

Miscellaneous

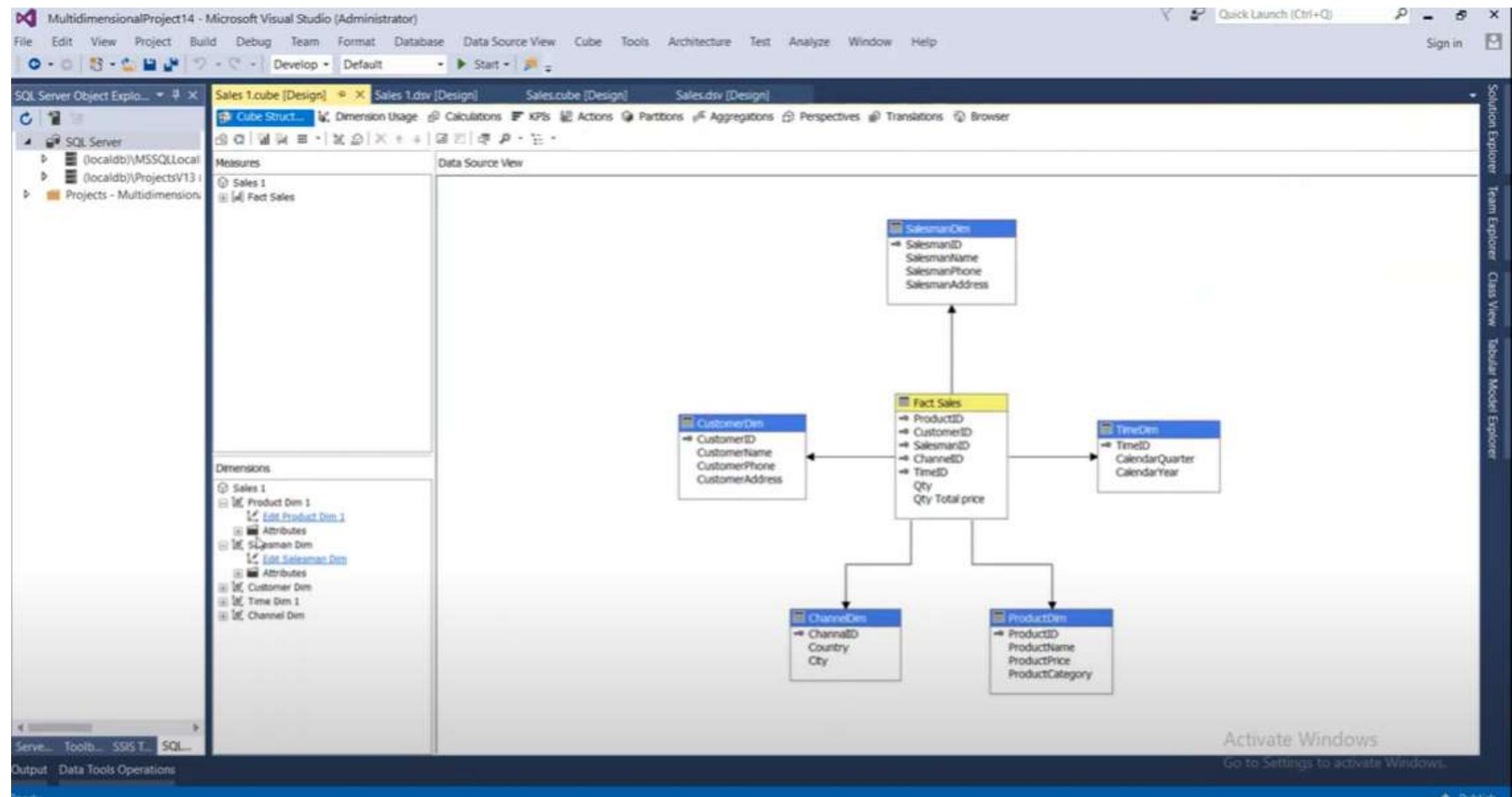
Activate Windows
Go to Settings to activate Windows.

Output Data Tools Operations

This item does not support previewing

Publish

The screenshot displays the Microsoft Visual Studio interface for developing a multidimensional cube. The main window shows the 'Cube Wizard' dialog titled 'Select New Dimensions'. It lists several dimensions with checkboxes: Product Dim, ProductDim, Channel Dim, ChannelDim, Salesman Dim, SalesmanDim, Customer Dim, CustomerDim, and Time Dim, TimeDim. A preview pane on the right shows columns from the SalesmanDim and CustomerDim tables. The Solution Explorer on the right shows the project structure, including the MultidimensionalProject14 solution, Sales(cube) cube, and various dimensions and mining structures. The status bar at the bottom indicates that the item does not support previewing.



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl + Q) Sign in

Develop Default Start

SQL Server Object Explorer

Product Dim 1.dim [Design] Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes

Product Dim 1 Product ID

Hierarchies

To create a new hierarchy, drag an attribute here.

Data Source View

ProductDM

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Activate Windows
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Data Source View Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Develop Default Start

Salesman Dim.dim [Design] Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Salesdsv [Design]

Dimension Structure Attribute Relationships Translations Browser

SQL Server Object Explorer

Attributes

Salesman Dim
Salesman ID

Herarchies

To create a new hierarchy, drag an attribute here.

Data Source View

SalesmanDim
↳ SalesmanID
↳ SalesmanName
↳ SalesmanPhone
↳ SalesmanAddress

Activate Windows
Go to Settings to activate Windows

Serve... Tools... SSIS T... SQL...
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Data Source View Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Develop Default Start

SQL Server Object Explorer

Time Dim 1.dim [Design] Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes Hierarchy

Time Dim 1
Calendar Quarter
Calendar Year
Time ID

To create a new hierarchy, drag an attribute here.

Data Source View

TimeDim
TimeID
CalendarQuarter
CalendarYear

Activate Windows
Go to Settings to activate Windows.

Serve... Tools... SSIS T... SQL...
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Start

Sales 1.cube [Design] Sales 1.ds [Design] Sales.cube [Design] Sales.ds [Design]

Cube Structure Dimension Usage Calculations KPis Actions Partitions Aggregations Perspectives Translations Browser

Measures Data Source View

SQL Server {localdb}\MSSQLLocalDB {localdb}\ProjectsV13 Projects - Multidimensional

Sales 1 Fact Sales Qty Qty Total Price

Dimensions

Sales 1 Product Dim 1 Edit Product Dim 1 Attributes Salesman Dim Edit Salesman Dim Attributes Customer Dim Edit Customer Dim Attributes Time Dim 1 Edit Time Dim 1 Attributes Channel Dim Edit Channel Dim Attributes

CustomerDim CustomerID CustomerName CustomerPhone CustomerAddress

Fact Sales ProductID CustomerID SalesmanID ChannelID TimeID Qty Qty Total price

SalesmanDim SalesmanID SalesmanName SalesmanPhone SalesmanAddress

ChannelDim ChannelID Country City

ProductCategory

Solution Explorer

Search Solution Explorer (Ctrl+F) Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources Sales.ds
- Data Source Views Sales.ds Sales 1.ds
- Cubes Sales.cube

Sales 1.cube

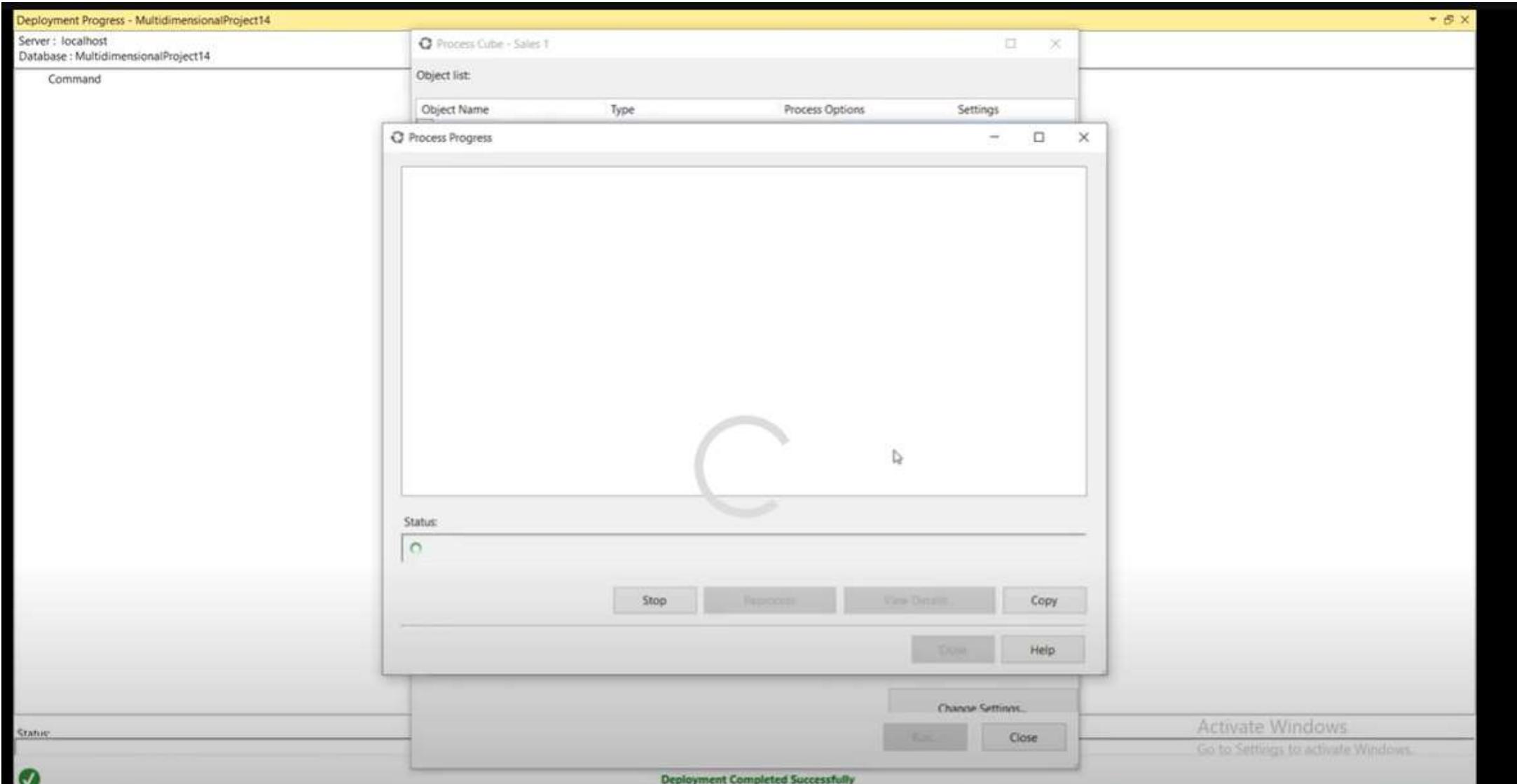
Open Process... Browse View Code F7 View Designer Shift+F7 Add Business Intelligence... Scope to This New Solution Explorer View Exclude From Project Cut Ctrl+X Copy Ctrl+C Delete Del Rename Properties Alt+Enter

Activate Windows Go to Settings to activate Windows.

Server Tools SSIS T... SQL... Output Data Tools Operations

This item does not support previewing Publish

```
graph TD; FactSales[Fact Sales] --> CustomerDim[CustomerDim]; FactSales --> SalesmanDim[SalesmanDim]; FactSales --> ChannelDim[ChannelDim]; FactSales --> ProductCategory[ProductCategory];
```



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales 1.cube [Design] Sales 1.dsv [Design] Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Sales 1

Measure Group: <All>

Metadata

Measures

Fact Sales

Qty Total Price

KPIs

Channel Dim

Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Drag levels or measures here to add to the query.

Calculated Members

Activate Windows
Go to Settings to activate Windows.

Serve... Tools... SSIS T... SQL... Ready Output Data Tools Operations Publish

Book1 - Excel (Product Activation Failed)

File Home Insert Page Layout Formulas Data Review View Add-ins Team Tell me what you want to do...

Cut Copy Format Painter

Font Alignment Number Styles

Conditional Format as Table

AutoSum Fill Sort & Filter Clear

K18

Column Labels

	Algeria			Egypt			France			Moraco			Total Qty	Total Qty	Total Price
	Qty	Qty	Total Price	Qty	Qty	Total Price	Qty	Qty	Total Price	Qty	Qty	Total Price			
Accessories	5	50	225	2480	5	55	70	800	305	35	1600	155	3385	6400	
Books	60	3000	60	1800						35	1600	185		3900	
Clothing	65	1400	120	2500								115	4800		
Components	70	3000	20	800	25	1000						130	6750		
Sportswear	10	550	90	4600	30	1600									
Grand Total	210	8000	515	12180	60	2655	105	2400	890	25235					

Activate Windows
Go to Settings to activate Windows

tmpDD6E

Ready

Sales 1.cube [Design] Sales 1.dsv [Design] Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Language: Default Edit as Text Import...

Sales 1

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Measure Group: <All>

Measures Fact Sales Qty Qty Total Price

KPIs

Channel Dim

Customer Dim

Product Dim 1 Product ID Product Name Product Price

Salesman Dim Salesman ID Salesman Name Salesman Phone

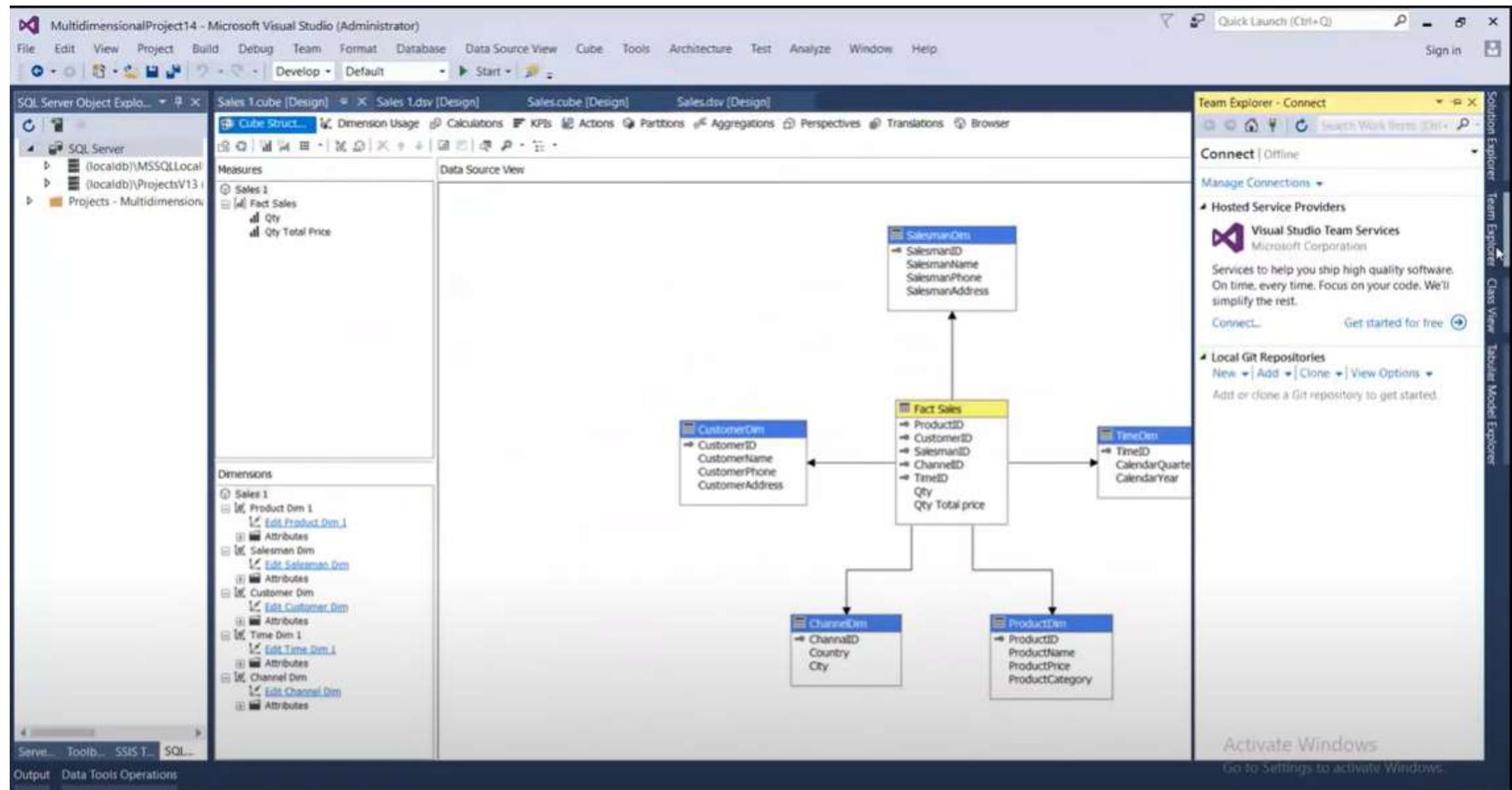
Time Dim 1 Calendar Quarter Calendar Year Time ID

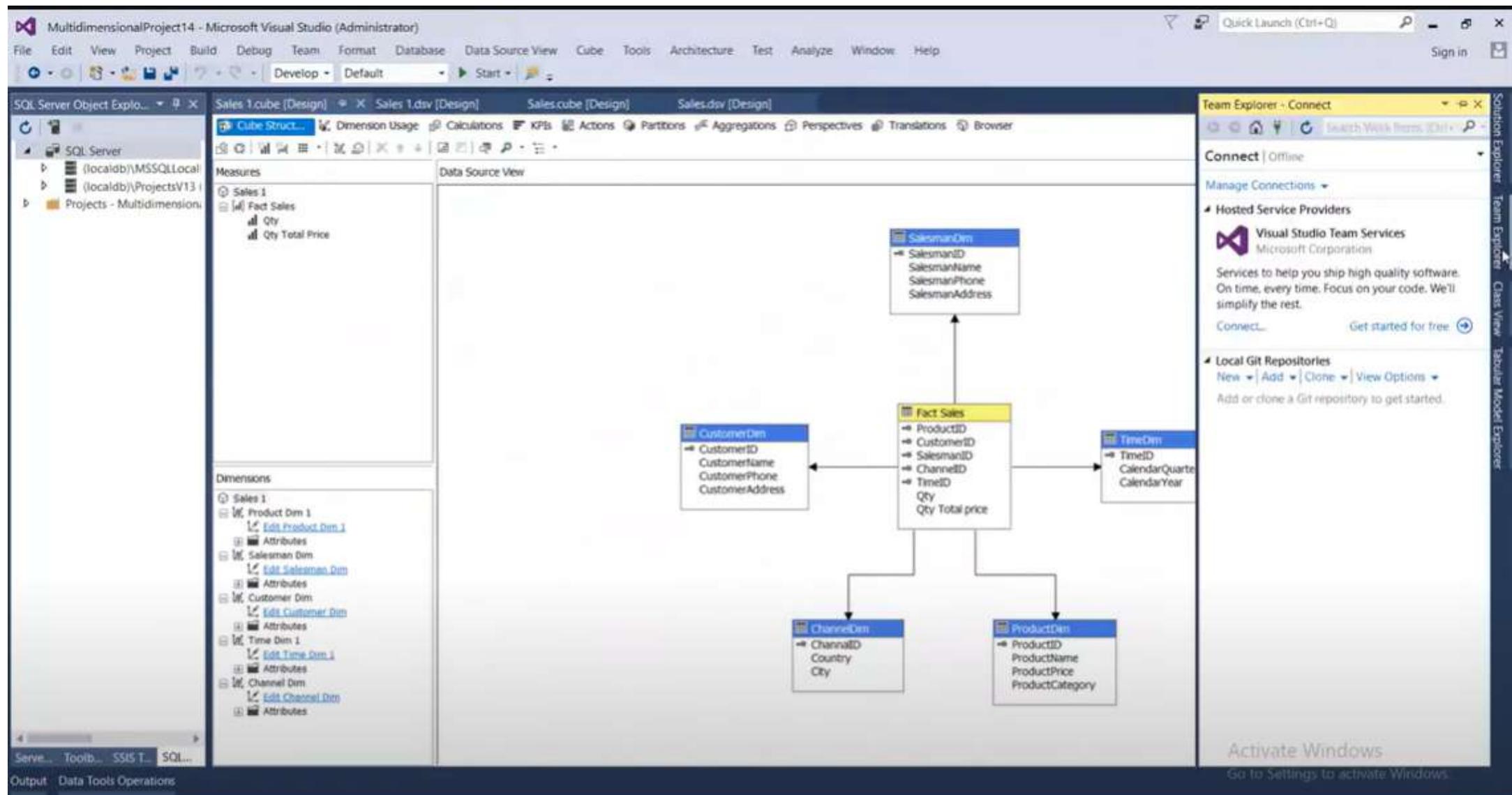
Calculated Members

Product Name	Salesman Name	Calendar Year	Qty	Qty Total Price
Accessories	Ahmed	2007	30	320
Accessories	Ahmed	2008	30	310
Accessories	khald	2007	20	300
Accessories	khald	2008	10	105
Accessories	Omar	2007	60	610
Accessories	Omar	2008	155	1740
Books	Ahmed	2007	70	3300
Books	Ahmed	2008	15	1000
Books	khald	2007	10	300
Books	khald	2008	10	300
Books	Omar	2008	50	1500
Clothing	khald	2007	80	1700
Clothing	khald	2008	55	1100
Clothing	Omar	2007	30	500
Clothing	Omar	2008	20	600
Components	khald	2008	60	2600
Components	Omar	2007	30	1200
Components	Omar	2008	25	1000
Sportswear	Ahmed	2007	40	2000
Sportswear	khald	2007	10	550
Sportswear	khald	2008	30	1600
Sportswear	Omar	2008	50	2600

Activate Windows
Go to Settings to activate Windows.

Server Tools SSIS T-SQL Output Data Tools Operations Ready Publish





Sales 1.cube [Design] X Sales 1.dsv [Design] Sales(cube) Sales.dsv [Design]

SQL Server Object Explorer

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measures

- Sales 1
 - Fact Sales
 - Qty
 - Qty Total Price

Dimensions

- Sales 1
 - Product Dim 1
 - Edit Product Dim 1
 - Attributes
 - Salesman Dim
 - Edit Salesman Dim
 - Attributes
 - Customer Dim
 - Edit Customer Dim
 - Attributes
 - Time Dim 1
 - Edit Time Dim 1
 - Attributes
 - Channel Dim
 - Edit Channel Dim
 - Attributes

Data Source View

Cube Wizard

Welcome to the Cube Wizard

Use this wizard to create a new cube. First, you select the data source view and tables for the cube, and then you set its properties. You can also opt to create a cube without using a data source.

Don't show this page again

Next > Finish < Back Cancel

Selected Tables

- ChannelID
- Country
- City

Available Tables

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales(cube)
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Team Explorer Class View Table Model Explorer

Activate Windows
Go to Settings to activate Windows.

Sales 1(cube) [Design] X Sales 1.dsv [Design] Sales(cube) [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer

Measures

- Sales 1
 - Fact Sales
 - Qty
 - Qty Total Price

Dimensions

- Sales 1
 - Product Dim 1
 - Edit Product Dim 1
 - Attributes
 - Salesman Dim
 - Edit Salesman Dim
 - Attributes
 - Customer Dim
 - Edit Customer Dim
 - Attributes
 - Time Dim 1
 - Edit Time Dim 1
 - Attributes
 - Channel Dim
 - Edit Channel Dim
 - Attributes

Data Source View

Cube Wizard

Select Measure Group Tables

Select a data source view or diagram and then select the tables that will be used for measure groups.

Data source view:

- Sales
- Sales
- Sales 1

Measure group source:

- Fact Sales
- ProductDim
- TimeDim

At least one measure group table must be selected.

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

ProductDim

- ChannelID
- Country
- City

Cancel

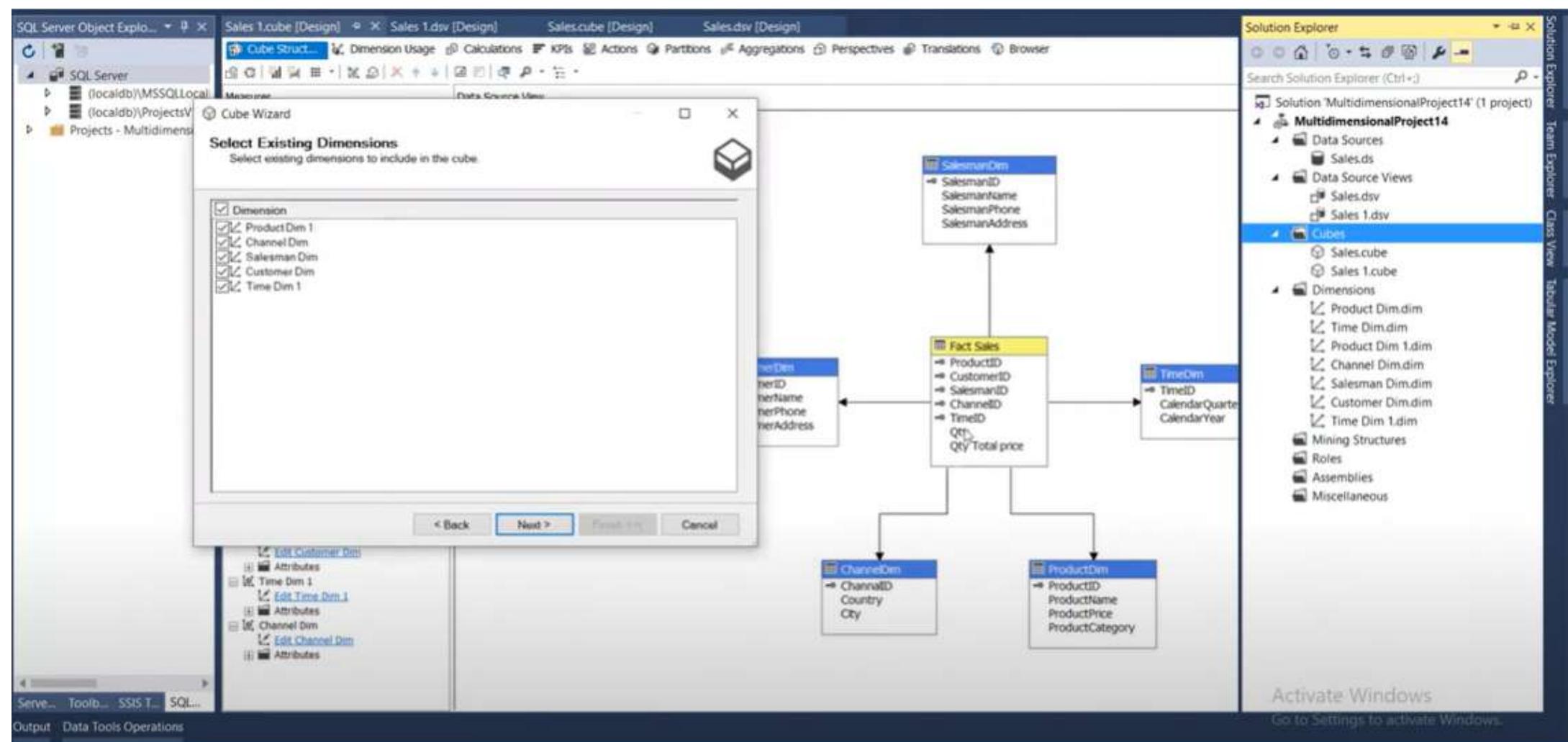
Solution Explorer

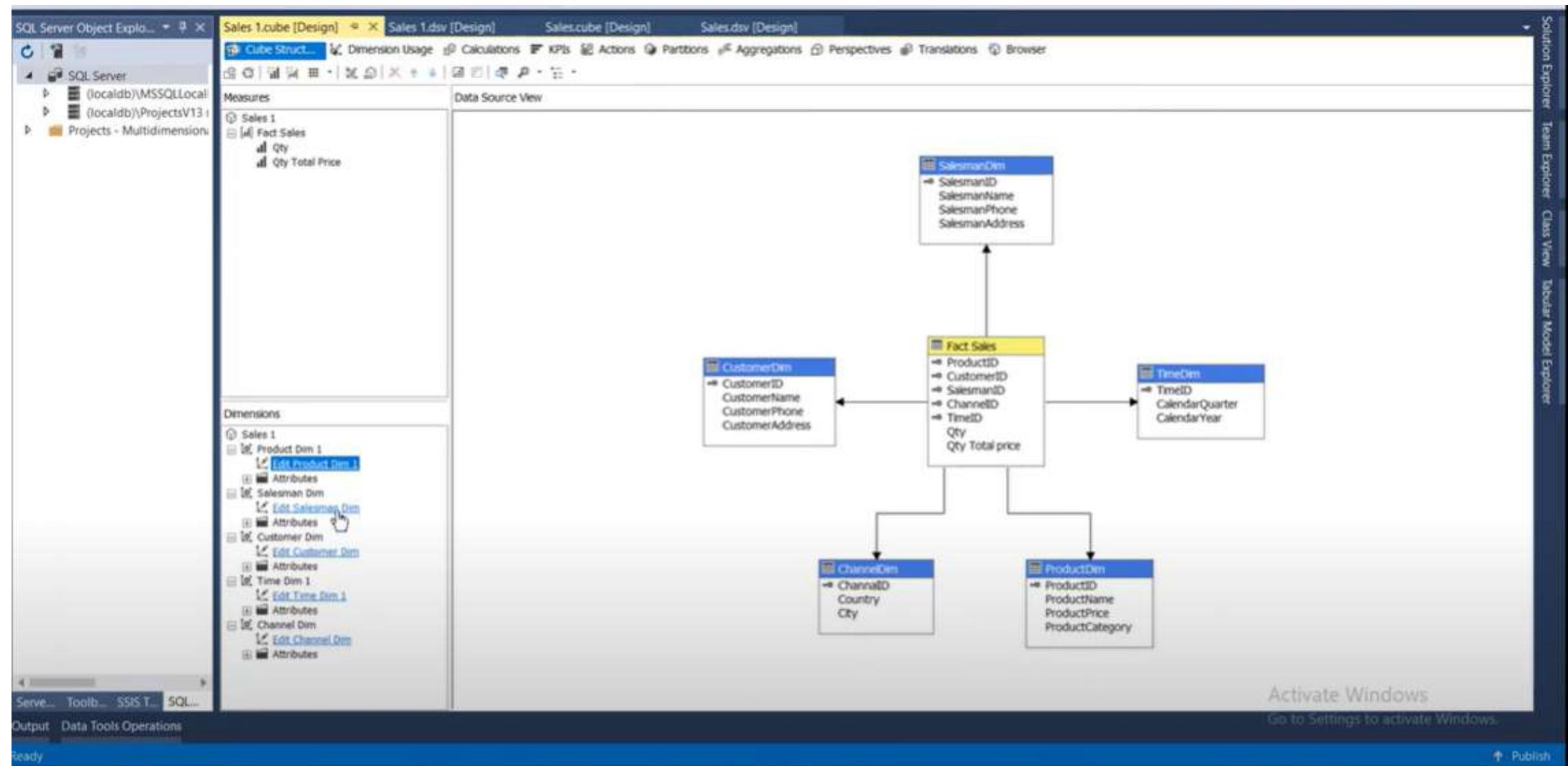
Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales(cube)
 - Sales 1(cube)
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Output Data Tools Operations

Activate Windows
Go to Settings to activate Windows.





MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales 1

Metadata Functions

Measure Group: <All>

Sales 1

Measures

Fact Sales

Qty

Qty Total Price

KPIs

Channel Dim

Customer Dim

Product Dim 1

Product ID

Product Name

Product Price

Salesman Dim

Salesman ID

Salesman Name

Salesman Phone

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

SELECT NON EMPTY { [Measures].[Qty], [Measures].[Qty Total Price] } ON COLUMNS, NON EMPTY { {[Product Dim 1].[Product Name].[Product Name].ALLMEMBERS * [Salesman Dim].[Salesman Name].[Salesman Name].ALLMEMBERS * [Time Dim 1].[Calendar Year].[Calendar Year].ALLMEMBERS } } DIMENSION PROPERTIES MEMBER_CAPTION, MEMBER_UNIQUE_NAME ON ROWS FROM { SELECT { {[Time Dim 1].[Calendar Year].A[2007]} } ON COLUMNS FROM [Sales 1] } CELL PROPERTIES VALUE, BACK_COLOR, FORE_COLOR, FORMATTED_VALUE, FORMAT_STRING, FONT_NAME, FONT_SIZE, FONT_FLAGS

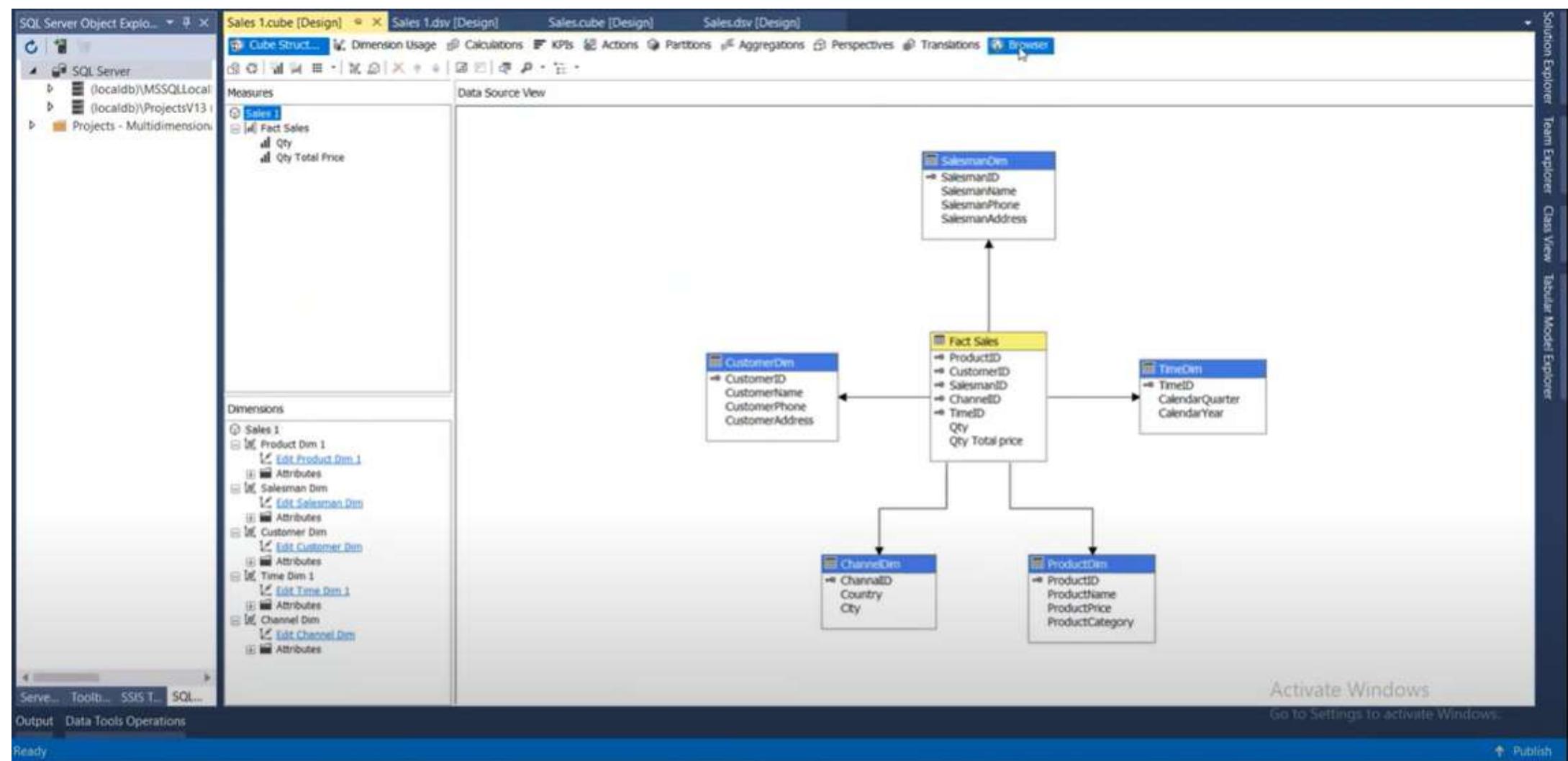
Product Name	Salesman Name	Calendar Year	Qty	Qty Total Price
Accesories	Ahmed	2007	30	320
Accesories	khald	2007	20	300
Accesories	Omar	2007	60	610
Books	Ahmed	2007	70	3300
Books	khald	2007	10	300
Clothing	khald	2007	80	1700
Clothing	Omar	2007	30	500
Components	Omar	2007	30	1200
Sportswear	Ahmed	2007	40	2000
Sportswear	khald	2007	10	550

Activate Windows
Go to Settings to activate Windows.

Server Tools SSIS T SQL

Output Data Tools Operations

Ready Publish



Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... New... Open... Save... Delete... Refresh... Filter... Help...

Language: Default

Sales 1

Metadata

Measure Group:

<All>

Sales 1

- Measures
 - Fact Sales
 - Qty
 - Qty Total Price
- KPIs
- Channel Dim
- Customer Dim
- Product Dim 1
 - Product ID
 - Product Name
 - Product Price
- Salesman Dim
 - Salesman ID
 - Salesman Name
 - Salesman Phone
- Time Dim 1
 - Calendar Quarter
 - Calendar Year

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Product Name	Calendar Year	Qty	Qty Total Price
Accessories	2007	110	1230
Accessories	2008	195	2155
Books	2007	80	3600
Books	2008	75	2800
Clothing	2007	110	2200
Clothing	2008	75	1700
Components	2007	30	1200
Components	2008	85	3600
Sportswear	2007	50	2550
Sportswear	2008	80	4200

Activate Windows
Go to Settings to activate Windows.

Server... Tools... SSIS T... SQL... Output Data Tools Operations ready Publish

Sales 1.cube [Design] * Sales 1.dsv [Design] Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Script Organizer

Name: UnitPrice

Parent Properties

Parent hierarchy: Measures

Parent member: Change

Expression

Additional Properties

Format string:

Visible: True

Non-empty behavior:

Associated measure group: (Undefined)

Display folder:

Color Expressions

Font Expressions

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales 1

Measures

Fact Sales

Qty

Qty Total Price

Channel Dim

Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Activate Windows
Go to Settings to activate Windows.

Serve... Toolbars SSIS T... SQL...
Output: Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales 1.cube [Design] Sales 1.dsv [Design] Salescube [Design] Sales.dsv [Design]

Develop Default Start

SQL Server Object Explorer

Script Organizer

Name: UnitPrice

Parent Properties

Parent hierarchy: Measures

Parent member: Change

Expression: [Measures].[Qty Total Price]/[Measures].[Qty]

Additional Properties

Format string:

Visible: True

Non-empty behavior:

Associated measure group: (Undefined)

Display folder:

Color Expressions

Font Expressions

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales 1

 all Measures

 Fact Sales

 all Qty

 all Qty Total Price

 Channel Dim

 Customer Dim

 Product Dim 1

 Salesman Dim

 Time Dim 1

Activate Windows
Go to Settings to activate Windows.

Serve... Toolbars SSIS T... SQL...
Output Data Tools Operations

Solution Explorer Team Explorer Class View Tabular Model Explorer

SQL Server

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Script Organizer

Name: UnitPrice

1. Parent Properties

Parent hierarchy: Measures

Parent member: Change

2. Expression

[Measures].[Qty Total Price]/[Measures].[Qty]

3. Additional Properties

Format string:

Visible: True

Non-empty behavior:

Associated measure group: (Undefined)

Display folder:

Color Expressions

Font Expressions

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales 1

Measures

Fact Sales

Qty

Qty Total Price

Channel Dim

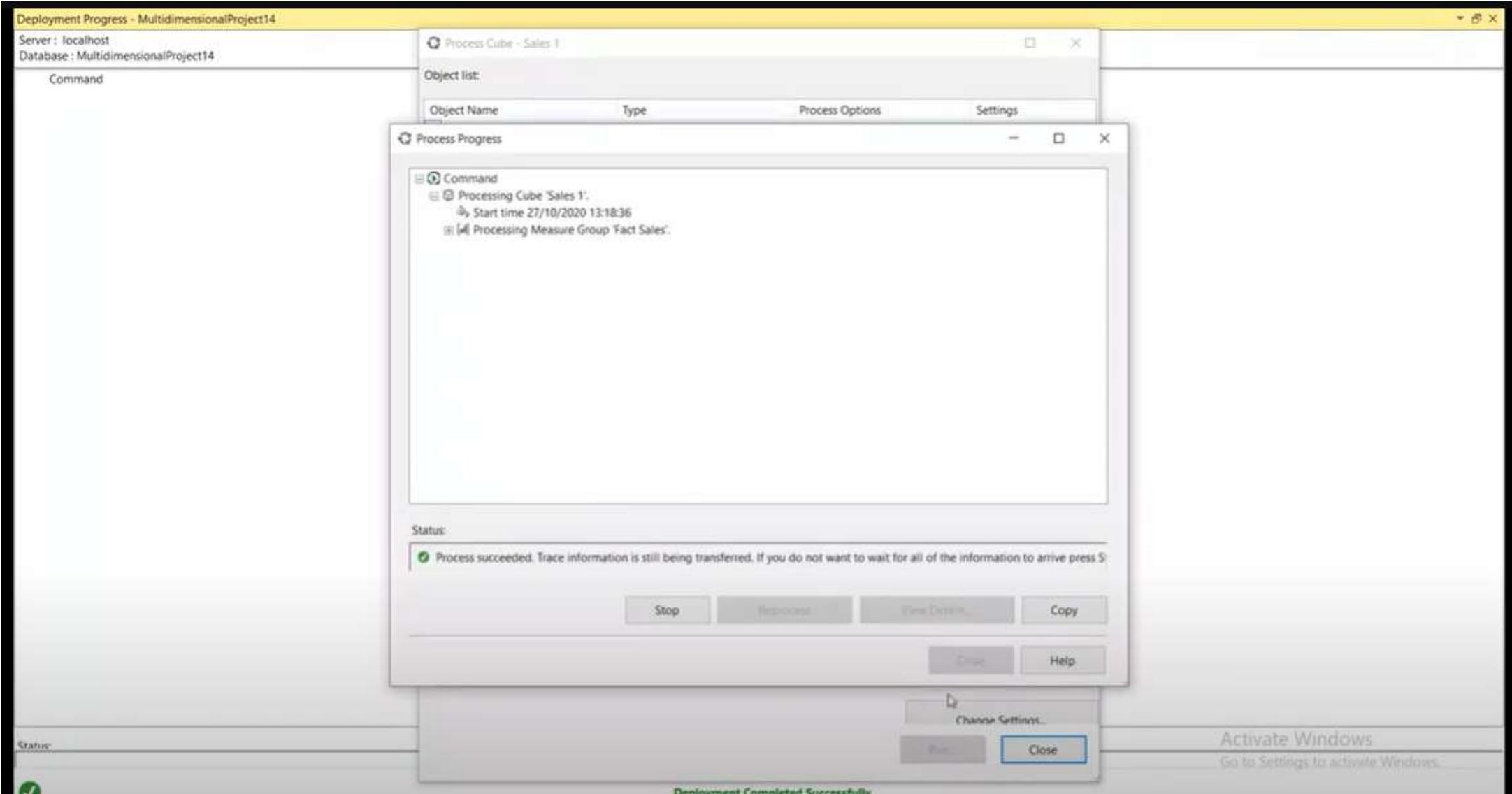
Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Activate Windows
Go to Settings to activate Windows.



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browse

Language: Default

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression

<Select dimensions>

Sales

Measure Group: <All>

Metadata

Sales

Measures

Fact Sales

Qty

KPIs

Product Dim

Product ID

Product Name

Product Price

Time Dim

Calendar Quarter

Calendar Year

Time ID

Calculated Members

Dimension Hierarchy Operator Filter Expression

Calendar Year Product Name Qty

Calendar Year	Product Name	Qty
2007	Accessories	110
2007	Books	80
2007	Clothing	110
2007	Components	30
2007	Sportswear	50
2008	Accessories	135
2008	Books	75
2008	Clothing	75
2008	Components	85
2008	Sportswear	80

The cube has been reprocessed on the server. To prevent possible browsing errors, click [Reconnect](#). To hide this message, [Click here](#).

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

 - Sales.dsv
 - Sales 1.dsv

- Cubes

 - Sales.cube
 - Sales 1.cube**

- Dimensions

 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Team Explorer Class View

Activate Windows
Go to Settings to activate Windows.

Book2 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review Add-ins Team Analyze Design Tell me what you want to do..

PivotTable Name: Active Field: PivotTable2 PivotTable2 Country Options: + Expand Field Drill Down Drill Up Collapse Field Group Selection Ungroup Group Field Insert Slicer Timeline Connections Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships & Sets Tools Calculations PivotChart Recommended PivotTables Tools Field List +/- Buttons Headers Show

A1 Row Labels Row Labels

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	Algeria	210																		
3	2007	120																		
4	2008	90																		
5	Egypt	515																		
6	2007	210																		
7	2008	305																		
8	France	60																		
9	2008	60																		
10	Moroco	105																		
11	2007	50																		
12	2008	55																		
13	Grand Total	890																		
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

PivotTable Fields

Choose fields to add to report:

Search

Salesman Dim

Salesman ID

Salesman Name

Salesman Phone

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

Drag fields between areas below:

FILTERS

COLUMNS

ROWS

VALUES

Country Qty

Calendar

Activate Windows

Go to Section Defer Layout Upd... UPDATE

tmpB5D2

Ready

100%

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Dimension Hierarchy Operator Filter Expression Para...

<Select dimension>

Calendar Year	Product Name	Qty	Qty Total Price	UnitPrice
2007	Accesories	110	1230	11.1818181818182
2007	Books	80	3600	45
2007	Clothing	110	2200	20
2007	Components	30	1200	40
2007	Sportswear	50	2550	51
2008	Accesories	195	2155	11.0512820512821
2008	Books	75	2800	37.3333333333333
2008	Clothing	75	1700	22.66666666666667
2008	Components	85	3600	42.3529411764706
2008	Sportswear	80	4200	52.5

SQL Server Object Explor... Default Start

Projects - Multidimension

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales(cube)
 - Sales 1(cube)
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Sales 1.cube [Design] Sales(cube) [Design] Sales.dim [Design]

Cube Struct... Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression Para...

<Select dimension>

Calendar Year	Product Name	Qty	Qty Total Price	UnitPrice
2007	Accesories	110	1230	11.1818181818182
2007	Books	80	3600	45
2007	Clothing	110	2200	20
2007	Components	30	1200	40
2007	Sportswear	50	2550	51
2008	Accesories	195	2155	11.0512820512821
2008	Books	75	2800	37.3333333333333
2008	Clothing	75	1700	22.6666666666667
2008	Components	85	3600	42.3529411764706
2008	Sportswear	80	4200	52.5

Solution Explorer

Solution MultidimensionalProject14 (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dim
 - Sales 1.dim
 - Cubes
 - Sales.cube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Serve... Tools... SSIS T... SQL... Output Data Tools Operations Solution Explorer Team Explorer Class View Tabular Model Go to Settings to activate Windows

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Sales cube [Design] Sales.cube [Design] Sales.dsv [Design]

Quick Launch (Ctrl+Q) Sign in

Develop Default Start

SQL Server

Sales 1

Cube Objects Object Type Perspective Name

Name: Perspective:

DefaultMeas...

- Measure Groups

- Fact Sales

Qty

Qty Total Price

- Dimensions

+ Product Dim 1

CubeDimen...

+ Salesman Dim

CubeDimen...

+ Customer Dim

CubeDimen...

+ Time Dim 1

CubeDimen...

+ Channel Dim

CubeDimen...

- Calculations

UnitPrice

Perspectives Translations Browser

Solution Explorer

Search Solution Explorer (Ctrl+F)

1. Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales.cube

Sales 1.cube

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolb... SSIS T... SQL...

Solution Explor... Team Explorer... Class View Tabular Model... Go to Settings to activate Windows

Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer Default Start

Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales 1

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Measure Group:

<All>

Sales 1

Measures

KPIs

Channel Dim

Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Calculated Members

Cube Selection

Select a cube from the following list. Changing the cube from the current selection can change the query.

EmpPerformance

CityPerProduct

Sales

Sales 1

OK Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:25:16

A

Activate Windows

Go to Settings to activate Windows

Solution Explorer

Output Data Tools Operations

Ready

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales 1.cube [Design] Sales(cube) [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Analyze in Excel

Choose the perspective you want to view when browsing the model in Excel.

Sales 1
EmpPerformance
CityPerProduct

QtyPerProduct

Metadata

Measure Group:
<All>

- QtyPerProduct
 - Measures
 - Fact Sales
 - UnitPrice
 - KPIs
 - Product Dim 1
 - Product ID
 - Product Name

Calculated Members

Serve... Toolb... SSIST... SQL...

Output Data Tools Operations

Ready

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Sources

- sales.ds
- Source Views
- sales.dsv
- sales 1.dsv
- sales.cube
- sales 1.cube
- dimensions
- product Dim.dim
- time Dim.dim
- product Dim 1.dim
- Channel Dim.dim
- salesman Dim.dim
- Customer Dim.dim
- time Dim 1.dim
- ng Structures
- g
- mblies
- ellaneous

BI "DAY 2" 02:25:36

A

Activate Windows
Go to Settings to activate Windows.

Published

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main workspace is divided into several tabs: 'Sales 1.cube [Design]', 'Sales(cube) [Design]', and 'Sales.dsv [Design]'. The 'Sales 1.cube [Design]' tab is active, displaying the cube's structure with dimensions like 'QtyPerProduct' and measures like 'Fact Sales'. A context menu is open over the 'Sales 1' dimension, specifically the 'Analyze in Excel' option, which lists perspectives: 'Sales 1', 'EmpPerformance', and 'CityPerProduct'. The 'Solution Explorer' pane on the right shows the project structure, including files like 'sales.ds', 'sales.dsv', 'sales.cube', and various dimension and fact files. A watermark for 'BI "DAY 2" 02:25:36' is visible at the bottom right.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer Sales.1.cube [Design] Sales.cube [Design] Sales.csv [Design]

Cube Struct... Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Develop Default Start

Script Organizer

Name: UnitPrice

1. CALCULATE

2. UnitPrice

Parent Properties

Parent hierarchy: Measures

Parent member: Change

Expression

[Measures].[Qty Total Price]/[Measures].[Qty]

Additional Properties

Format string:

Visible: True

Non-empty behavior:

Associated measure group: (Undefined)

Display folder:

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales 1

- Measures
- Channel Dim
- Customer Dim
- Product Dim 1
- Salesman Dim
- Time Dim 1

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.csv
 - Sales 1.csv
 - Cubes
 - Sales cube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

BI "DAY 2" 02/27/06

A

Activate Windows Go to Settings > Activation

Serve... Toolbars SSIS T... SQL...

Output Data Tools Operations

Ready

Ln 1 Col 1 Ch 1 INS

Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales 1.cube [Design] Sales(cube) [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

Sales 1

Metadata

Measure Group:

<All>

Sales 1

Measures

Fact Sales

Qty

Qty Total Price

UnitPrice

KPIs

Channel Dim

Channel ID

City

Country

Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameters

Country City Qty

Algeria		210
Egypt	Caro	515
France	Lyon	60
Moraco		105

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

 - Sales.dsv
 - Sales 1.dsv

- Cubes

 - Sales cube
 - Sales 1.cube

- Dimensions

 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

BI "DAY 2" 02:28:24

A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolbars SSIS T... SQL...

Output Data Tools Operations

Ready

ln 1 Col 1 Dl 1 INS

Publish

Deployment Progress - MultidimensionalProject14

Server : localhost
Database : MultidimensionalProject14

Command

- Processing Dimension 'Channel Dim' completed.
- Processing Cube 'Sales 1' completed.
Start time: 27/10/2020 13:28:32; End time: 27/10/2020 13:28:35; Duration: 00:00:03
- Processing Measure Group 'Fact Sales' completed.
- Processing Dimension 'Time Dim 1' completed.

Process Cube - Sales 1

Object list:

Object Name	Type	Process Options	Settings
Sales 1	Cube	Process Full	

Remove Impact Analysis..

Batch Settings Summary

Processing order:
Parallel

Transaction mode:
(Default)

Dimension errors:
(Default)

Dimension key error log path:
(Default)

Process affected objects:
Do not process

Channel Settings... Run... Close

Deployment Completed Successfully



A

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Sales.cube (Design) Sales.dsv (Design)

Dimension Struct... Attribute Relationships Translations Browser

Default Language Object... Arabic (Egypt)
Product Dim Capti... المنتج
Attributes
Product ID Capti... رقم المنتج
Product Name Capti... اسم المنتج
Product Price Capti... السعر

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales.cube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Server Tools SSIS T... SQL... Output Data Tools Operations Ready Publish

SQL server tracks.docx - Word

Muhammadi Badr Share

File Home Insert Design References Mailings Review View Dynamics AX Tell me what you want to do... Muhammadi Badr Share

Cut Copy Format Painter Paste Clipboard Font Paragraph Styles Editing

SQL server tracks

Administration (Database administrator [DBA])

- Manage SQL Server databases
- Configure and maintain database servers and processes
- Monitor system's health and performance
- Ensure high levels of performance, availability, sustainability and security
- Analyze, solve, and correct issues in real time
- Provide suggestions for solutions
- Refine and automate regular processes, track issues, and document changes
- Assist developers with query tuning and schema refinement
- Provide 24x7 support for critical production systems
- Perform scheduled maintenance and support release deployment activities after hours

Developing (Database developer)

- Development of high quality database solutions

Page 1 of 8 2 of 574 words English (United States) 100% 02:06 PM 2022/09/09

Type here to search

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations Actions Partitions Aggregations Perspectives Translations Browser

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimension

KPI Organizer

Key Performance Indicators (KPIs) are not defined for this cube.

Calculation Tools

Metadata Functions Templates

Measure Group:

<All>

Sales

- Measures
- Product Dim
- Time Dim

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Salescube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows

Server Tools SQL... Output Data Tools Operations

Activity Monitor

Sales cube [Design] × Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Sales Metadata Measure Group: <All>

Sales Measures KPIs Product Dim Time Dim

السنة	الربع	قيمة
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Calculated Members

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Subcube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

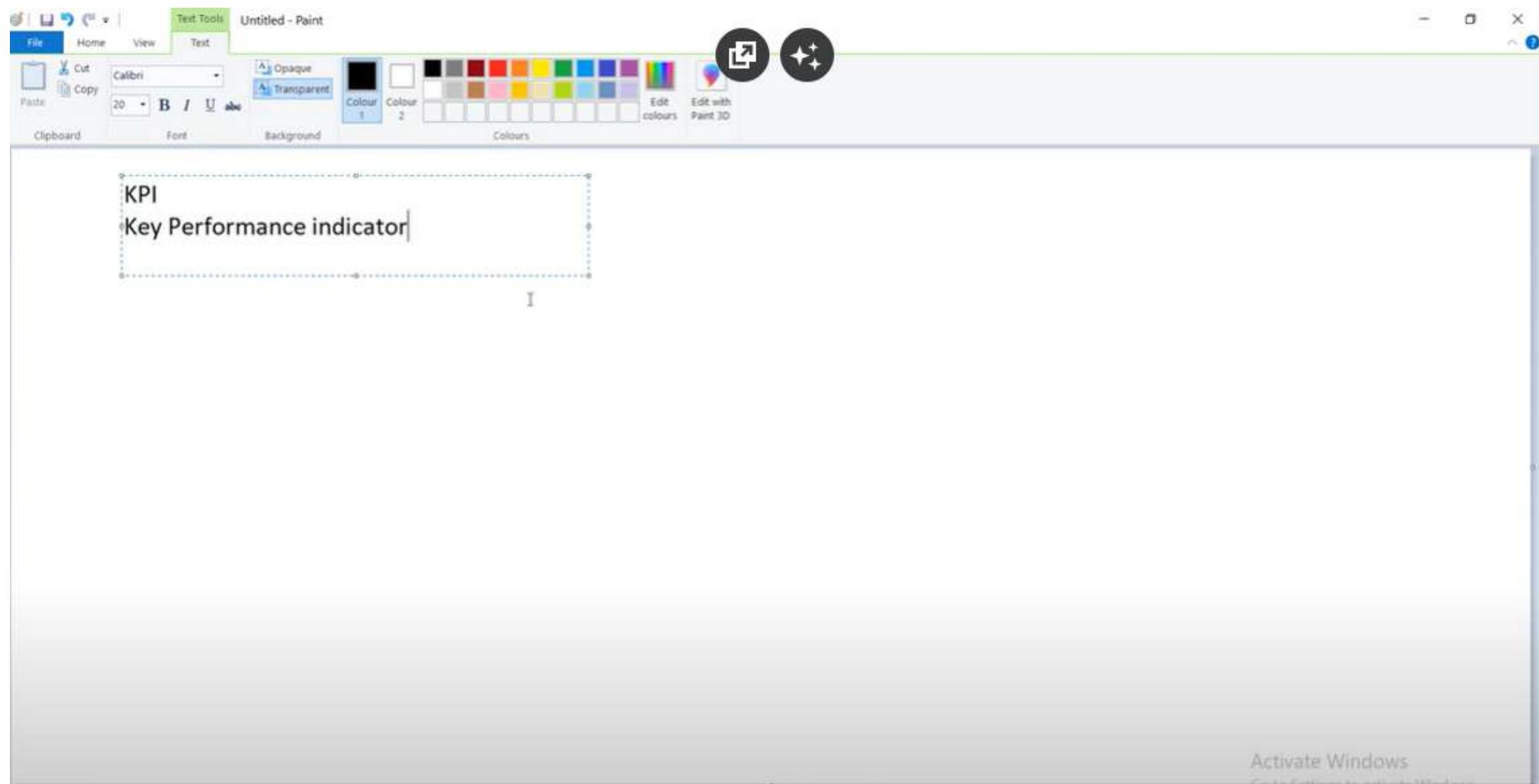
Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

This item does not support previewing

Action

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Publish

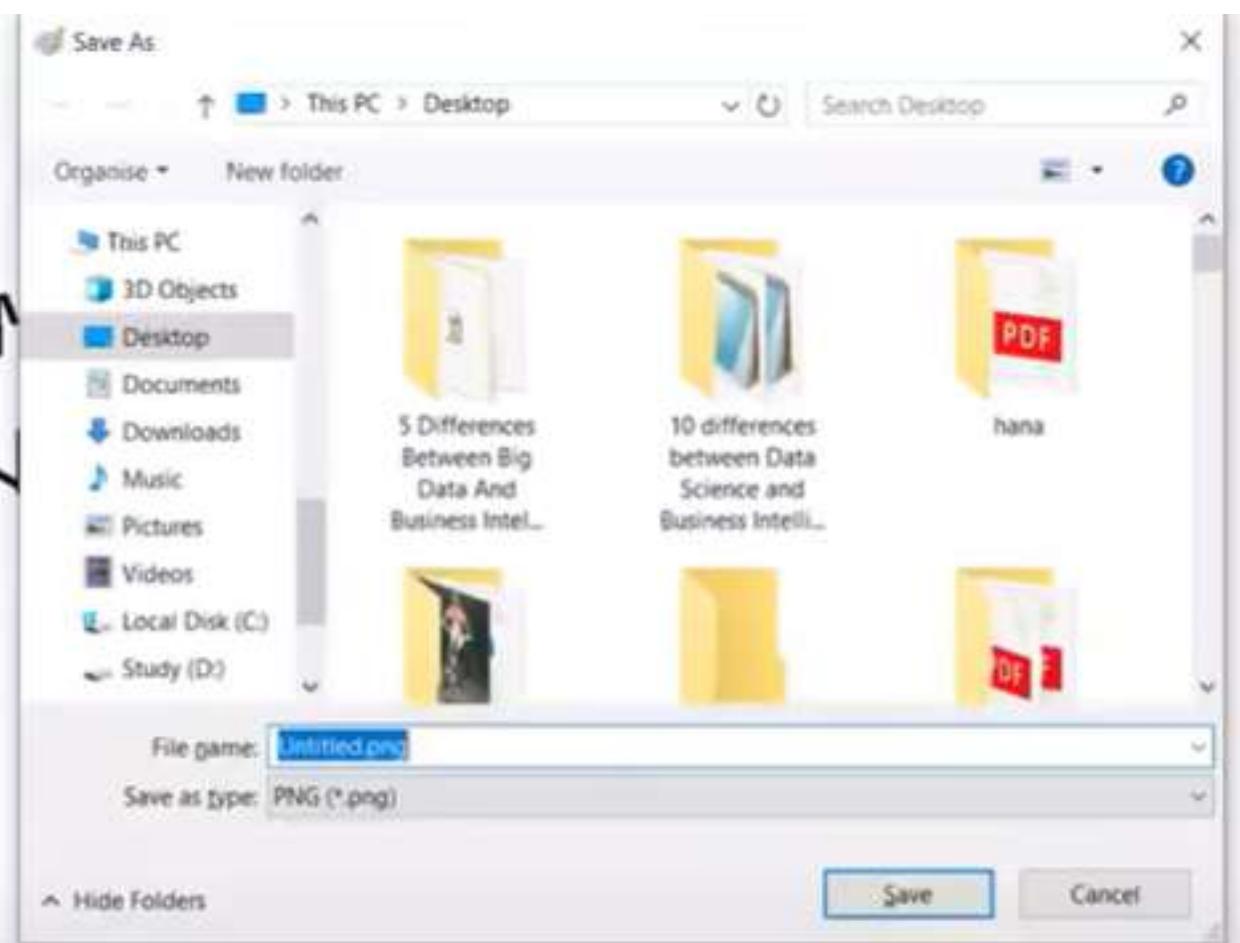


KPI

Ename	Qty	
ahmed	3000	
ali	2000	
omar	400	
.....	↑
.....	
.....	↓

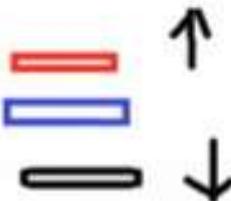
KPI

Ename	Qty
ahmed	3000
ali	2000
omar	400
.....
.....
.....



KPI

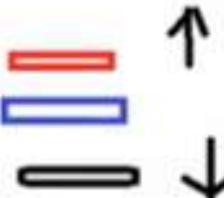
Ename	Qty
ahmed	3000
ali	2000
omar	400
.....	
.....	
.....	



KPI	
KPI Name	"totalsal"
KPI Value	Qty
KPI Goal	1000
KPI Symbol	Traffic sign
KIP status	1 green -1 red 0 yellow

KPI

Ename	Qty
ahmed	3000
ali	2000
omar	400
.....	
.....	
.....	



KPI
KPI Name "totalsal"
KPI Value Qty
KPI Goal 1000
KPI Symbol Traffic sign
KIP status 1 green
-1 red
0 yellow

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl + Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

a Value Expression

a Goal Expression

a Status

Status indicator: Gauge

Status expression:

a Trend

Trend indicator: Standard arrow

Trend expression:

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales

- Measures
- Product Dim
- Time Dim

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

- MySales
- Data Sources
- Sales.ds
- Data Source Views

 - Sales.dsv
 - Sales 1.dsv

- Cubes

 - Sales.cube
 - Sales 1.cube

- Dimensions

 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPI Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer MySales

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status: Status indicator: Traffic light.

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then 1
end
```

Calculation Tools

Measure Group: <All>

Sales

- Measures
 - Fact Sales
 - Qty
- Product Dim
- Time Dim

Solution Explorer

Search Solution Explorer (Ctrl+F)

- Solution 'MultidimensionalProject14' (1 project)
 - MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales.cube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Ready Line 1 Col 30 Ch 30 INS Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <Add>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status Indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Salescube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim.1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model Go to Settings to activate Windows.

Ready

Line 1 Column 1 Cell 1 INS Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Develop Default Start

SQL Server Object Explorer Sales.cube [Design] Sales.dsv [Design]

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Salescube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

MySales Value MySales Goal MySales Status

MySales Value	MySales Goal	MySales Status
890	1000	-1

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution MultidimensionalProject14 (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

 - Sales.dsv
 - Sales 1.dsv

- Cubes

 - Salescube
 - Sales 1.cube

- Dimensions

 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model Go to Settings to activate Windows

Server... Toolbox... SSIS T... SQL...

Output Data Tools Operations

Ready Un 1 Col 1 Ch 1 INS Publish

The screenshot displays the Microsoft Visual Studio interface for a multidimensional project named "MultidimensionalProject14". The main window shows the "Sales.cube [Design]" tab, which contains a table with three columns: "MySales Value", "MySales Goal", and "MySales Status". The table has one row with values 890, 1000, and -1. On the left, there is a tree view of the cube's structure under the "Sales" measure group, including "Measures" (MySales), "KPIs" (Value, Goal, Status), and dimensions (Product Dim, Time Dim). The "Solution Explorer" on the right lists the project's components, including "MultidimensionalProject14" (solution), "Sales.ds" (data source), "Sales.dsv" (data source view), "Sales 1.dsv" (data source view), "Cubes" (Salescube, Sales 1.cube), "Dimensions" (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), "Mining Structures", "Roles", "Assemblies", and "Miscellaneous". The bottom status bar indicates the project is "Ready".

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations Actions Partitions Aggregations Perspectives Translations Browser

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Display Structure

	Value	Goal	Status	Trend	Weight
MySales	890	1000			

Solution Explorer

Search Solution Explorer (Ctrl+F)

MultidimensionalProject14

- Projects - Multidimensional
- Sales.ds
- Sales.dsv
- Sales 1.ds
- Sales.cube
- Sales 1.cube
- Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIS Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales

Measure Group: <All>

Sales

Metadata Functions

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

SELECT NON EMPTY { KPISValue("MySales"), KPISGoal("MySales"), KPISStatus("MySales") } ON COLUMNS FROM [Sales] CELL PROPERTIES VALUE, BACK_COLOR, FORE_COLOR, FORMATTED_VALUE, FORMAT_STRING, FONT_NAME, FONT_SIZE, FONT_FLAGS

MySales Value MySales Goal MySales Status

Click to execute the query.

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

 - Sales.dsv
 - Sales 1.dsv

- Cubes

 - Sales.cube
 - Sales 1.cube

- Dimensions

 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measures

- Sales
- [i] Fact Sales

Dimensions

- Sales
- Product Dim
- Time Dim
- Edit Time Dim**
- Attributes

Data Source View

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.dsv
 - Sales 1.dsv
 - Cubes
 - Sales.cube**
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Serve... Tools... SSIS T... SQL...

Output Data Tools Operations

Quick Launch (Ctrl+Q) Sign in

Solution Explorer Team Explorer Class View Tabular Model Go to Settings to activate Windows

```
graph TD; FactSales[Fact Sales] --> TimeDim[TimeDim]; FactSales --> ProductDim[ProductDim];
```

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Windows Help

Sales.cube [Design] Sales.ds [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

Language: Default

Dimension <Select dimension>

Measure Group: <All>

Sales

Metadata

Product Name Qty

Accessories	305
Books	155
Clothing	185
Components	115
Sportswear	130

Calculated Members

Solution Explorer

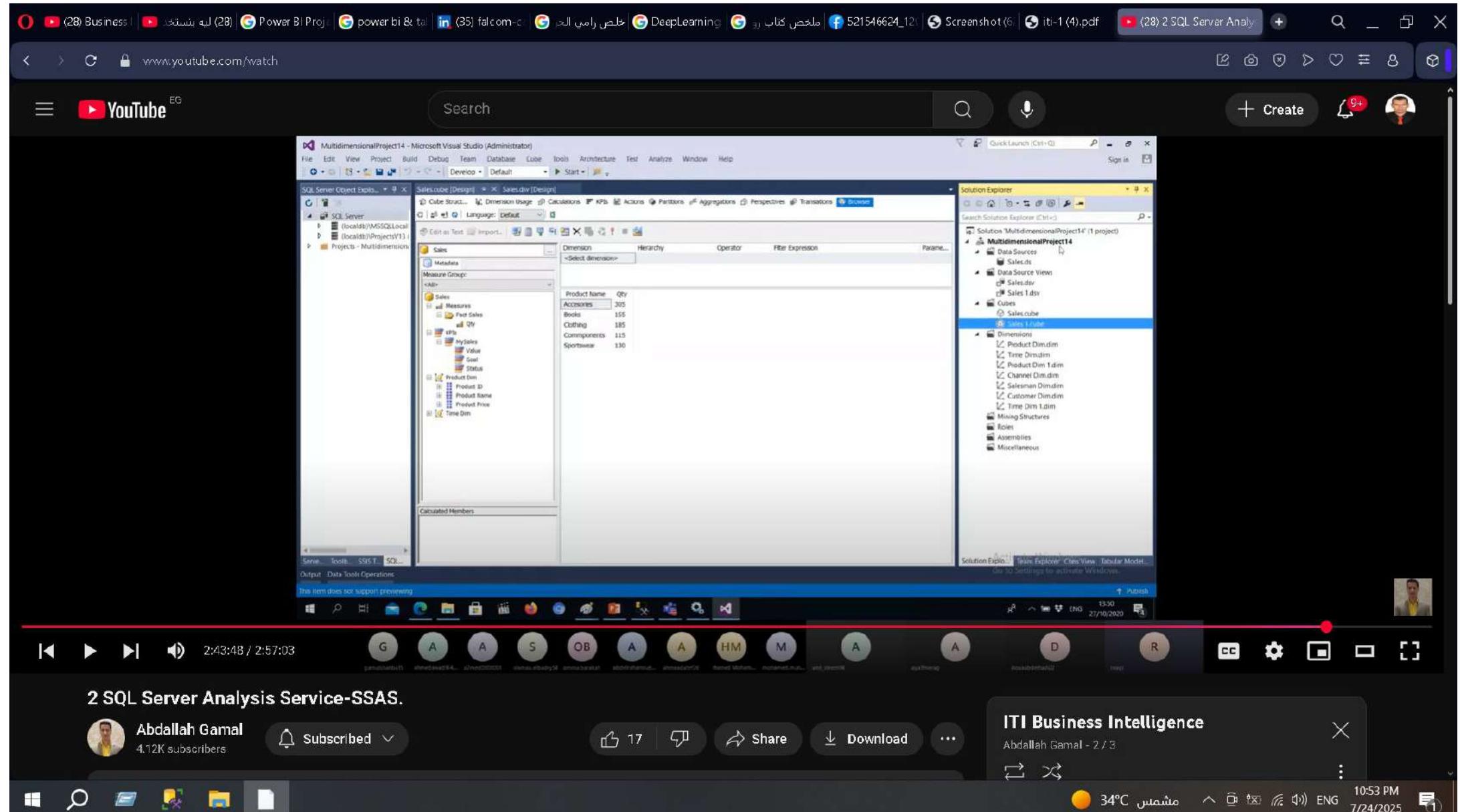
Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
 - Data Sources
 - Sales.ds
 - Data Source Views
 - Sales.ds
 - Sales 1.ds
 - Cubes
 - Sales.cube
 - Sales 1.cube
 - Dimensions
 - Product Dim.dim
 - Time Dim.dim
 - Product Dim 1.dim
 - Channel Dim.dim
 - Salesman Dim.dim
 - Customer Dim.dim
 - Time Dim 1.dim
 - Mining Structures
 - Roles
 - Assemblies
 - Miscellaneous

Solution Explorer Team Explorer Class View Tabular Model

Detailed description: This screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The top menu bar includes File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Windows, Help, and a Quick Launch search bar. The left sidebar contains the 'SQL Server Object Explorer' and 'Solution Explorer'. The main workspace has tabs for 'Sales.cube [Design]' and 'Sales.ds [Design]'. The 'Sales.cube [Design]' tab is active, showing a grid with columns 'Product Name' and 'Qty'. The data grid contains five rows: Accessories (305), Books (155), Clothing (185), Components (115), and Sportswear (130). On the left, there's a tree view of the cube's metadata, including Measure Groups (Fact Sales, MySales), Dimensions (Product Dim, Time Dim), and calculated members. The 'Solution Explorer' on the right lists the project's components: Data Sources (Sales.ds), Data Source Views (Sales.ds, Sales 1.ds), Cubes (Sales.cube, Sales 1.cube), Dimensions (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), Mining Structures, Roles, Assemblies, and Miscellaneous.



www.youtube.com/watch

YouTube EG

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Ram) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Object Explorer

(Microsoft Analysis Server 13.0.1742.0 -)

- Databases
 - MultidimensionalProject1
 - MultidimensionalProject10
 - MultidimensionalProject11
 - MultidimensionalProject14
 - Data Sources
 - Data Source Views
 - Cubes
 - Sales
 - Sales 1
 - Dimensions
 - Mining Structures
 - Roles
 - Assemblies
 - MultidimensionalProject4
 - MultidimensionalProject5
 - MultidimensionalProject6
 - MultidimensionalProject7
 - MultidimensionalProject8
 - Assemblies
 - Management

MDXQuery6.mdx - TOP - VF50P25\Ram - Generic Debugger

Cube: Sales

select [Measures].[Qty]
from Sales

Messages

Executing the query ...
Error (Data mining): Either the user, 'DESKTOP-VF50P25\Ram'
Error (Data mining): Either the user, 'DESKTOP-VF50P25\Ram'
Run complete

Output

Ready

2:45:58 / 2:57:03

G A A S OB A A HM M A D R

ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشتمل ENG 10:53 PM 7/24/2025

www.youtube.com/watch

YouTube EG

MDXQuery6.mdr - (local).MultidimensionalProject14 [DESKTOP-VF50P25\Ram] - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Search

select [Measures].[Qty] on columns
from Sales

Object Explorer

(Microsoft Analysis Server 13.0.1742.0 -)

Databases

Sales

Measure Group

Measures

Fact Sales

Qty

KPIs

Product Dim

Time Dim

Cubes

Sales

Sales 1

Dimensions

Mining Structures

Roles

Assemblies

MultidimensionalProject4

MultidimensionalProject5

MultidimensionalProject6

MultidimensionalProject7

Assemblies

Management

Output

Ready

Query executed successfully.

Local0 DESKTOP-VF50P25\Ram : MultidimensionalProject14 : 0:00:01

0:00:01 13:33 27/10/2020

2:46:28 / 2:57:03

G A S OB A A HM M A D R

ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشتمل ENG 10:53 PM 7/24/2025

www.youtube.com/watch

YouTube EG

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VI50P2S\Ram) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query

MDXQuery6.mdx ~\TOP-VI50P2S\Ram\

Object Explorer

(Microsoft Analysis Server 13.0.1742.0 -)

Databases

Metadata Functions

Measure Group

Cubes

Sales

Product Dim

Product ID

Product Name

Members

All

Accessories

Books

Clothing

Components

Sportswear

Product Name

Product Price

Time Dim

select [Measures].[Qty] on columns
from Sales

select [Measures].[Qty] on columns,
[Product Dim].[Product Name].allmembers on rows
from Sales

Messages Results

All 390

Accessories 305

Books 155

Clothing 185

Components 115

Sportswear 130

Query executed successfully.

Output Ready

Ready

2:47:08 / 2:57:03

A G A S OB A A HM M A D R

ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشتمل ENG 1053 PM 7/24/2025

www.youtube.com/watch

YouTube EG

MDXQuery6.mdx - (local).MultidimensionalProject14 [DESKTOP-VF50P25\Ram] - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

MDXQuery6.mdx -TOP- VF50P25\Ram - Generic Debugger

select [Measures].[Qty] on columns
from Sales

select [Measures].[Qty] on columns,
[Product Dim].[Product Name].allmembers on rows
from Sales

Messages Results

	Qty
All	890
Accessories	365
Books	155
Clothing	185
Components	115
Spotwear	130

Query executed successfully.

Output

Ready

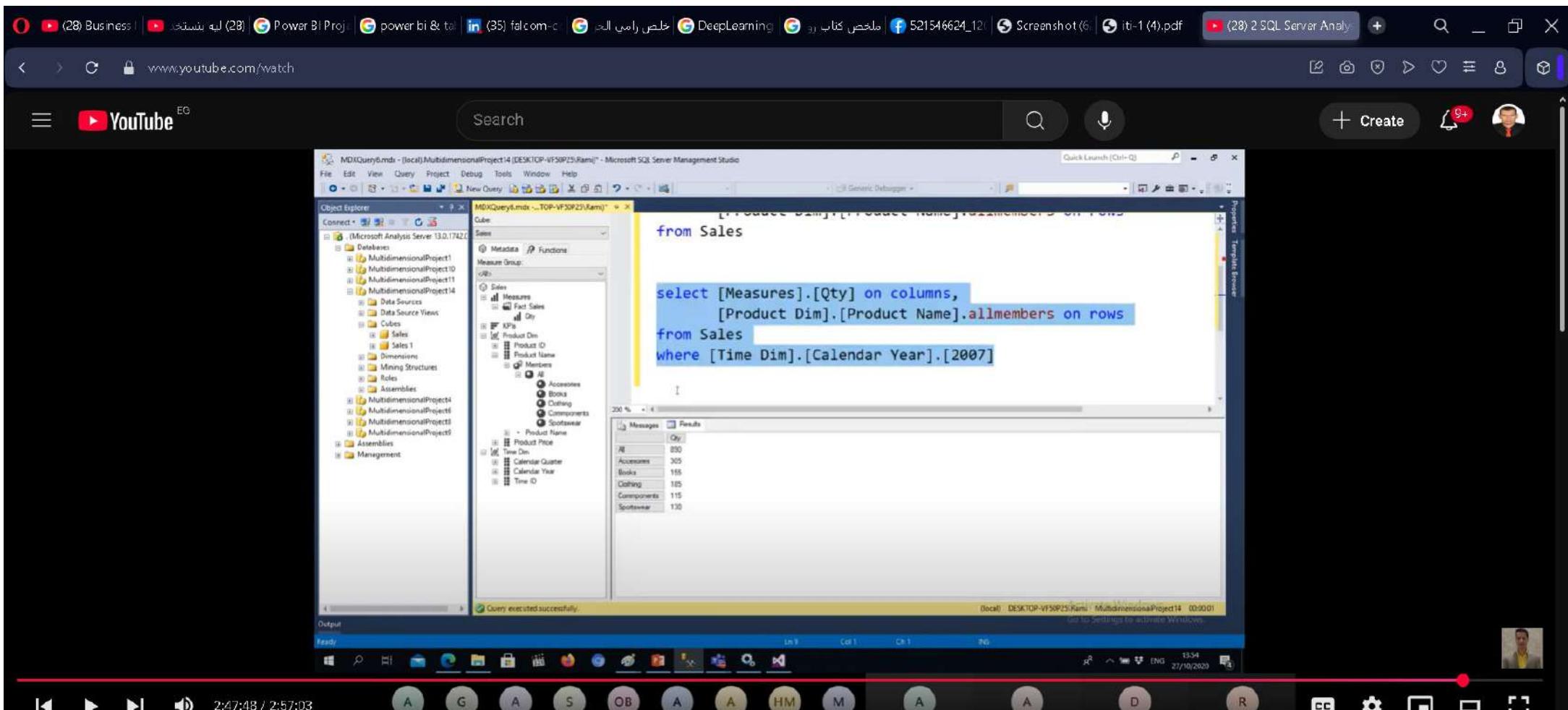
2:47:18 / 2:57:03

A G A S OB A A HM M A D R

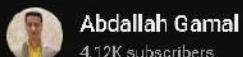
ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشتمل ENG 10:53 PM 7/24/2025



2 SQL Server Analysis Service-SSAS.



Subscribed

17 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 2 / 3



34°C مشتمل ENG 10:53 PM 7/24/2025

www.youtube.com/watch

YouTube EG

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF30P25\Ramy) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Object Explorer

MDXQuery6.mdx ~TOP_VF30P25\Ram

Cube: Sales

EmpPerformance
ObjPerProduct
Sales
Sales 1

Measures

Fact Sales
Qty

KPI

Product Dim

Product ID
Product Name
Members
All
Accessories
Books
Clothing
Components
Software

Product Name
Product Price
Time Dim
Calendar Quarter
Calendar Year
Time ID

from Sales
where [Time Dim].[Calendar Year].[2008]

select [Time Dim].[Calendar Year].allmembers on columns,
[Product Dim].[Product Name].allmembers on rows
from sales

Messages Results

	2007	2008
All	890	880
Accessories	265	110
Books	155	80
Clothing	105	110
Components	115	30
Software	130	80

Query executed successfully.

Output Ready

Ln 26 Col 1 Ch 1 ING R^ ^ ^ ENG 13:36 27/10/2023

2:49:28 / 2:57:03

A G A S OB A A HM M A D R CC Settings Share Download ...

ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشمس ENG 10:54 PM 7/24/2025

Windows Search File

www.youtube.com/watch

YouTube EG

Search

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Ramy) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Object Explorer

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Ramy) - Microsoft SQL Server Management Studio

Cube: Sales 1

Metadata Functions

Measure Group: Sales 1

Measures

Channel Dim

Customer Dim

Customer Address

Customer ID

Customer Name

Customer Phone

Product Dim

Product ID

Product Name

Product Price

Salesman Dim

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

QtrPerYear

select [Time Dim].[Calendar Year].allmembers on columns,
[Product Dim].[Product Name].allmembers on rows
from sales

select [Product Dim 1].[Product Name].allmembers on columns,
([Time Dim 1].[Calendar Year].allmembers)* on rows

Messages Results

	All	2007	2008
All	890	380	510
Accessories	365	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Software	130	50	80

Query executed successfully.

Output Ready

Ready

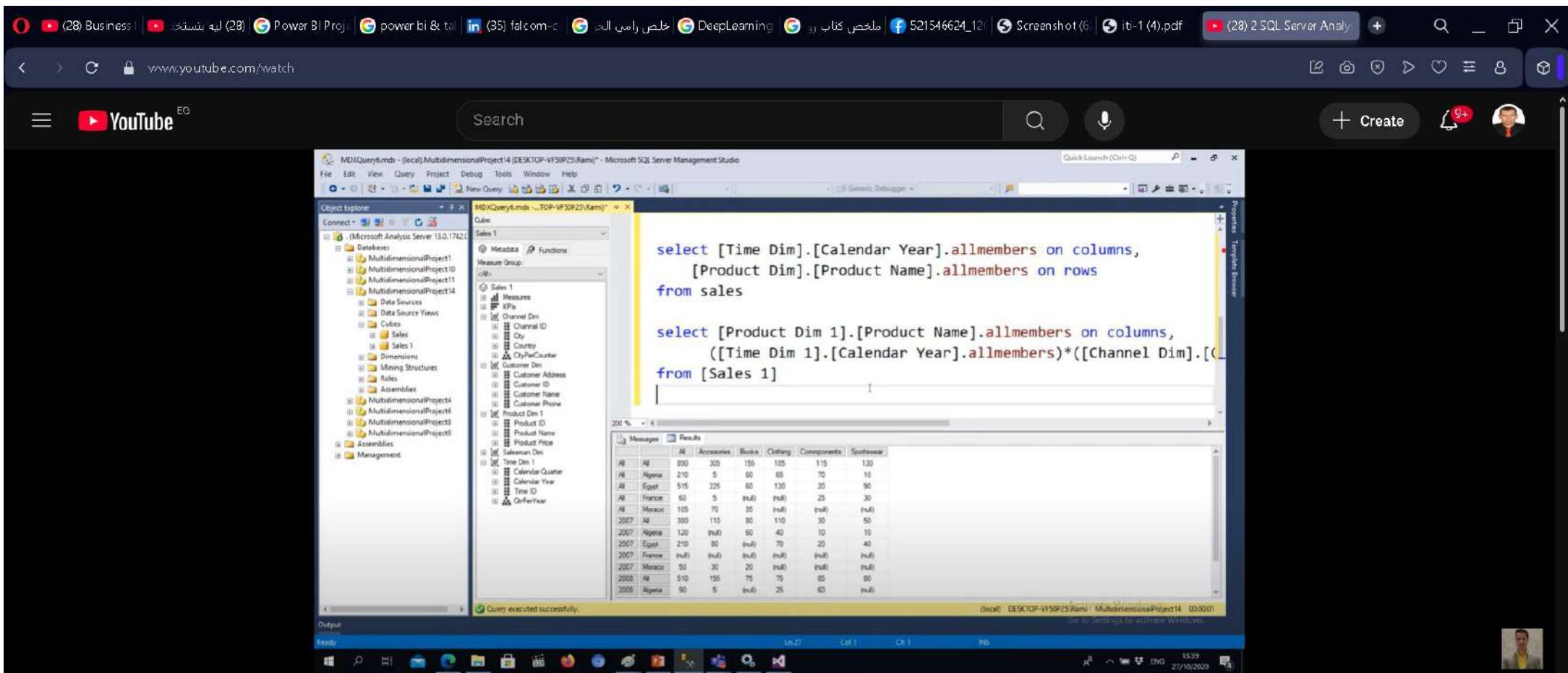
2:50:38 / 2:57:03

A G A S OB A HM M A D R

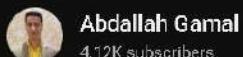
ITI Business Intelligence

Abdallah Gamal - 2 / 3

34°C مشتمل ENG 10:54 PM 7/24/2025



2 SQL Server Analysis Service-SSAS.



Subscribed

4.12K subscribers

17

1

Share

Download

ITI Business Intelligence

Abdallah Gamal - 2 / 3



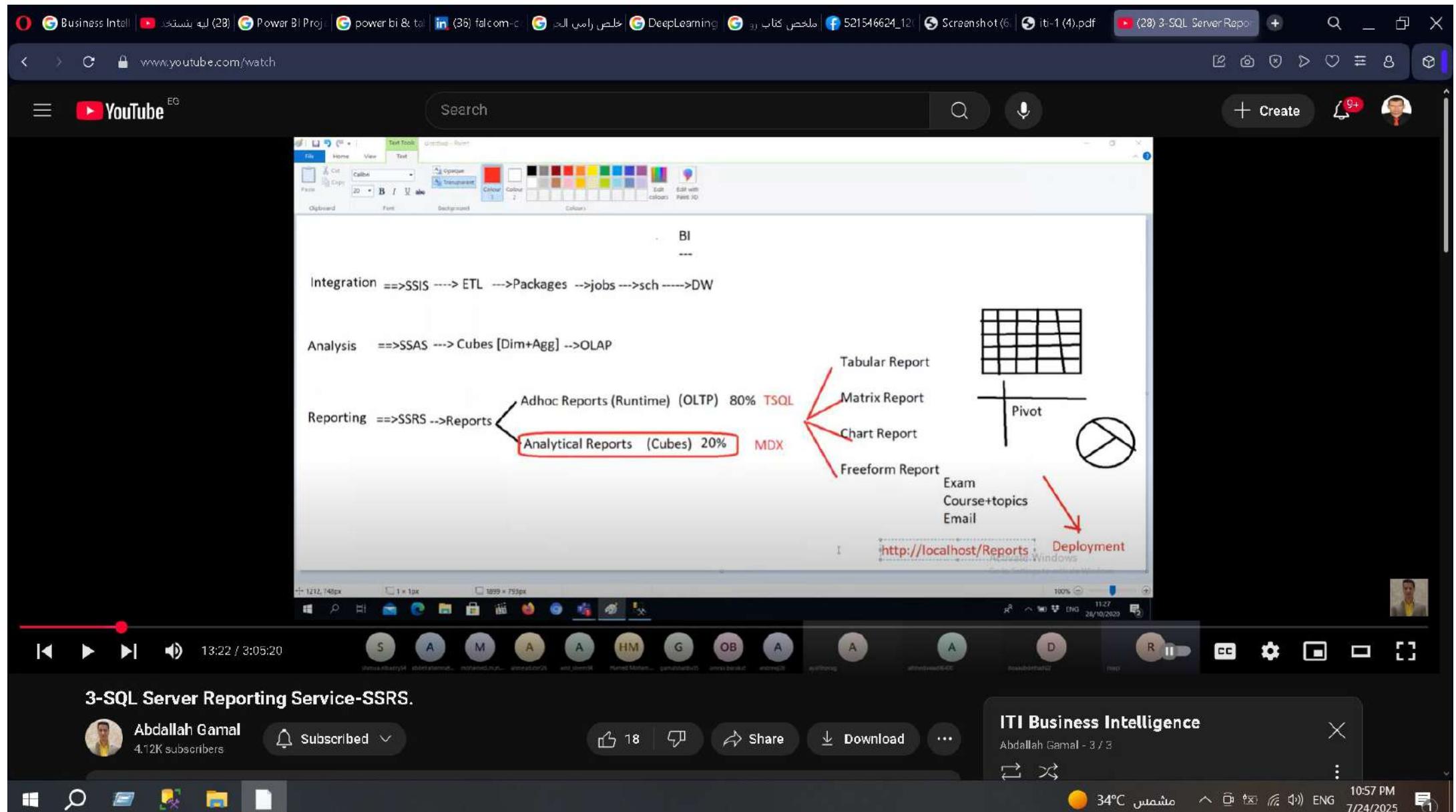
34°C

مشمس



ENG

10:54 PM
7/24/2025



Business Intel | YouTube (28) | Power BI Proj | power bi & tal | (36) falcom-c | Google DeepLearning | ملخص رامي العج | Google Screenshot (6) | iti-1 (4).pdf | (28) 3-SQL Server Repo | + | X

www.youtube.com/watch

YouTube EG

Search

Microsoft Visual Studio (Administrator)

File Edit View Debug Team Tools Architecture Test Analyze Window Help

SQL Server Object Explorer

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV11 Projects

New Project

Recent

Installed

Templates

- Business Intelligence
 - Analysis Services
 - Integration Services
 - Reporting Services
- Visual C#
- Visual Basic
- Visual F#
- Visual C++
 - SQL Server
 - Python
 - JavaScript
 - TypeScript
 - Game
 - Build Accelerator
- Other Project Types
 - Modeling Projects
- Samples

Online

Report Server Project Wizard Business Intelligence

Type: Business Intelligence

Create an empty Report Server project.

Name: Report Project14 Location: C:\Users\Amr\Documents\visual studio 2013\Projects Solution name: Report Project14

Browse... Create directory for solution Add to Source Control OK Cancel

Quick Launch (Ctrl+Q) Sign in

File Explorer Team Explorer Class View

14:52 / 3:05:20 18 Subscribed Share Download ...

ITI Business Intelligence Abdallah Gamal - 3 / 3 34°C مشتمل ENG 1057 PM 7/24/2025

M S A A HM G OB A A D R

Business Intel | YouTube (28) | Power BI Proj | power bi & tal | (36) falcom-c | DeepLearning | ملخص رامي الحجر | ملخص كتاب | 521546624_121 | Screenshot (6) | iti-1 (4).pdf | (28) 3-SQL Server Report | + | X

www.youtube.com/watch

YouTube EG

Search

SQL Server Object Explorer

File Edit View Debug Team Tools Architecture Test Analyze Window Help

Report Wizard

Select the Data Source

Shared data source

New data source

Name: DS1

Type: Microsoft SQL Server

Microsoft SQL Server
Microsoft Azure SQL Database
Microsoft Azure Platform Systems
Microsoft SQL Server Analysis Services
Microsoft SharePoint List
Oracle Database
Oracle Essbase
SAP BW
TERADATA
OLE DB
ODBC
XML
Report Server Model

Help Back Next > Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansourReports (1 project)

MansourReports

Shared Data Sources
Shared Datasets
Reports

Creating project 'MansourReports...' 11:30 28/10/2020

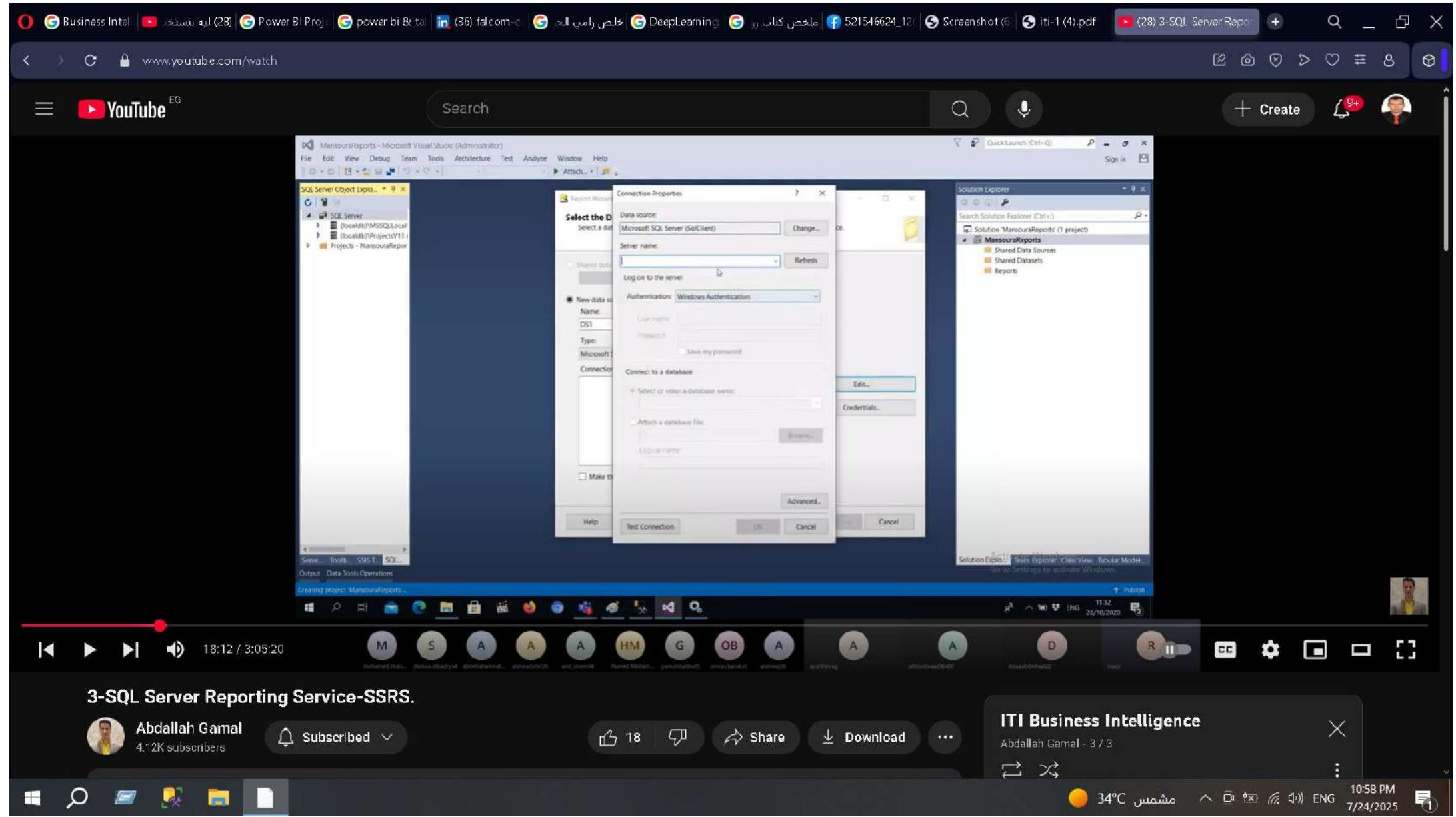
16:52 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 1057 PM 7/24/2025



Business Intel | YouTube (28) | Power BI Proj | power bi & tal | (36) falcom-c | DeepLearning | ملخص رامي الحمر | ملخص كتاب 521546624_12 | Screenshot (6) | iti-1 (4).pdf | (28) 3-SQL Server Report | + | Search | Back | Forward | Home | Refresh | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Debug Team Tools Architecture Test Analyze Window Help

SQL Server Object Explorer

Report Wizard

Design the Query

Specify a query to execute to get the data for the report.

Use a query builder to design your query.

Query Builder...

Query string:

```
select * from student
```

Help Back New Next Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

MansourReports

- Shared Data Sources
- Shared Datasets
- Reports

Creating project: MansourReports...

Output: Data Tools Operations

R 11:33 ENG 24/10/2020 Publish

19:52 / 3:05:20

M M S A A HM G OB A A D R

3-SQL Server Reporting Service-SSRS.

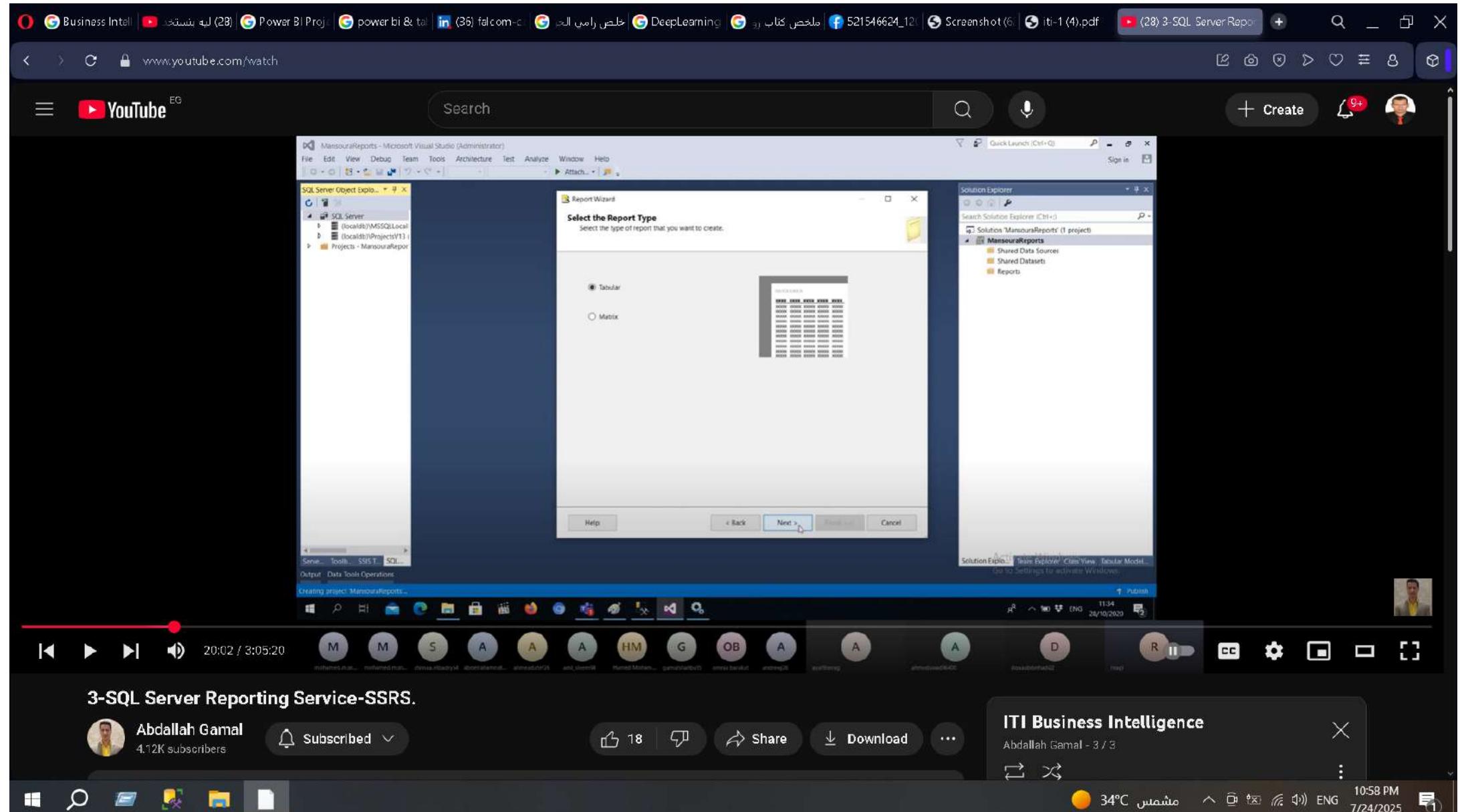
Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:58 PM 7/24/2025



Business Intel | YouTube (28) | Power BI Proj | power bi & tal | (36) falcom-c | Google DeepLearning | ملخص رامي الحمر | Screenshot (6) | iti-1 (4).pdf | (28) 3-SQL Server Report | + | Search | X

www.youtube.com/watch

YouTube EG

Search

YouTube EG

Microsoft Visual Studio (Administrator)

File Edit View Debug Team Tools Architecture Test Analyze Window Help

SQL Server Object Explorer

Report Wizard

Design the Table

Available fields:

Displayed fields:

St_Id
St_Fname
St_Lname
St_Address
St_Age
Dept_Id
St_Super

Help Next > Finish >> Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

MansourReports

Shared Data Sources
Shared Datasets
Reports

Server Tools SSMS SQL Output Data Tools Operations

Creating project: MansourReports...

20:42 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:58 PM 7/24/2025

Business Intel | YouTube (28) | Power BI Proj | power bi & tal | (36) falcom-c | DeepLearning | خلص رامي الح | ملخص كتاب | 521546624_12 | Screenshot (6) | iti-1 (4).pdf | (28) 3-SQL Server Repo | + | Search | X

www.youtube.com/watch

YouTube EG

Search

YouTube EG

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Debug Team Tools Architecture Test Analyze Window Help

SQL Server Object Explorer

Report Wizard

Completing the Wizard

Provide a name and click Finish to create the new report.

Report name: StudsReps

Report summary:

Data source: ITI_DSI

Connection string: Data Source=.;Initial Catalog=ITI

Report type: Table

Layout type: Stepped

Style: Modern

Detail: St.ID, St.Name, St.Iname, St.Address, St.Age, Dept.ID, St.super

Query: select * from student

Preview report

Help Back Next Finish Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

MansourReports

- Shared Data Sources
- Shared Datasets
- Reports

Output Data Tools Operations

Creating project 'MansourReports...' 11:34 28/10/2020

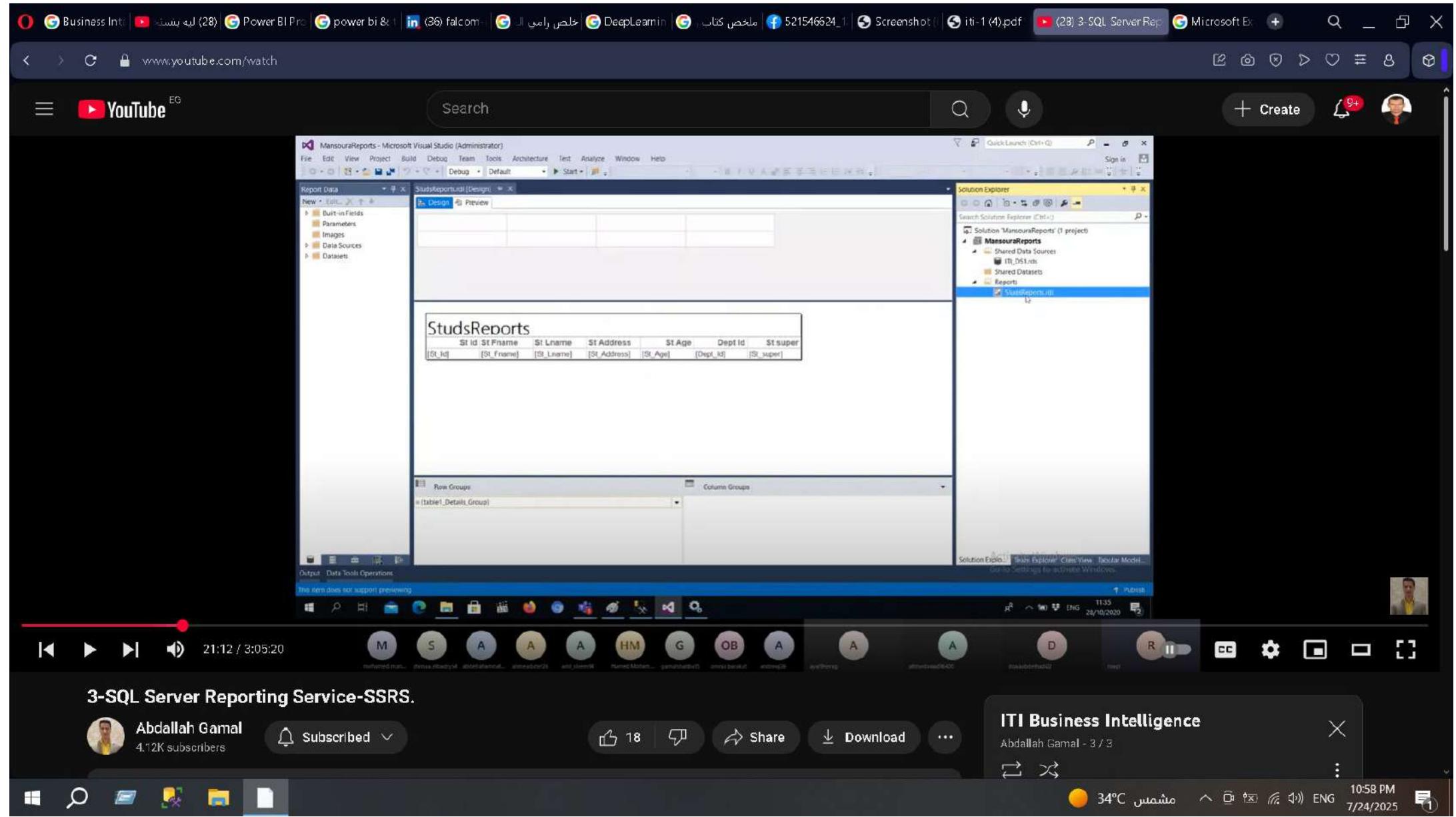
20:52 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:58 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | | | | | | | | | | |

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team XML Tools Architecture Test Analyze Window Help

Server Explorer

Solution Explorer

Quick Launch (Ctrl+Q)

Sign in

StatsReports.rdl (Design)

287 `<FontWeight>Bold</FontWeight>`

288 `<Color>#666666</Color>`

289 `</TextRun>`

290 `</TextRuns>`

291 `<Style>`

292 `<FontFamily />`

293 `<TextAlign>Right</TextAlign>`

294 `</Style>`

295 `</Paragraph>`

296 `</Paragraphs>`

297 `<rd:DefaultName>textbox6</rd:DefaultName>`

298 `<Height>0.22in</Height>`

299 `<Width>1in</Width>`

300 `<Style>`

301 `<Border>`

302 `<Color>LightGrey</Color>`

303 `</Border>`

304 `<BottomBorder>`

305 `<Style>Solid</Style>`

306 `</BottomBorder>`

307 `<FontFamily />`

308 `<PaddingLeft>2pt</PaddingLeft>`

309 `<PaddingRight>2pt</PaddingRight>`

310 `<PaddingTop>2pt</PaddingTop>`

311 `</Style>`

Solution MansourReports (1 project)

MansourReports

Shared Data Sources

Shared Datasets

Reports

StatsReports.rdl

Output Data Tools Operations

Ready

150% 100% 125% 140% 160% 180% 200%

IM 311 Col 42 Ch 42 Info

R 11:35 ENG 28/10/2020

21:22 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:58 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | | | | | | | | | |

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

StudsReports

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super
1	Ahmed	Hassan	Cairo	20	10	
2	Amr	Magdy	Cairo	21	10	1
3	Mona	Salah	Cairo	28	10	1
4	Mohamed	Alex	Alex	23	10	1
5	Mohamed	Alex	Alex	24	10	1
6	Heba	Farouk	Mansoura	25	20	
7	Alli	Hussien	Cairo	25	20	6
8		Alex		26	20	6
9	Saly	Ahmed	Mansoura	24	20	
10	Fady	Ali	Alex	24	20	9
11	mohamed ali	Ahmed	Cairo	24	20	9
12	Noha	Omar	Cairo	21	30	
13	Saad			22	30	12
14	omar	Saleh	Tanta	22	30	
15	X			22	30	
16				25	30	
17	Y			25	30	
44				25	30	
100	omar					

Solution Explorer

StudsReports.rdl

Output Data Tools Operations

Ready

22:02 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 1058 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

StudsReports

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super
1	Ahmed	Hassan	Cairo	20	10	
2	Amr	Magdy	Cairo	21	10	1
3	Mona	Saleh	Cairo	28	10	1
4		Mohamed	Alex	23	10	1
5		Mohamed	Alex	24	10	1
6	Heba	Fareed	Mansoura	25	29	
7	Alli	Hussien	Cairo	25	29	6
8			Alex	26	29	6
9	Saly	Ahmed	Mansoura	24	20	
10	Fady	Ali	Alex	24	20	9
11	mohamed ali	Ahmed	Cairo	24	20	9
12	Noha	Omar	Cairo	21	30	
13	Saad			22	30	12
14	omar	Saleh	Tanta	22	30	
15	X			22	30	
16				25	30	
17	Y			25	30	
44				26	30	
100	omar					

Output - Data Tools Operations

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q)

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansouraReports

- Shared Data Sources
- ITI_DS1.ds
- Shared Datasets
- Reports
- StudsReports.rdl

Output - Data Tools Operations

Go to Settings to activate Windows.

Ready

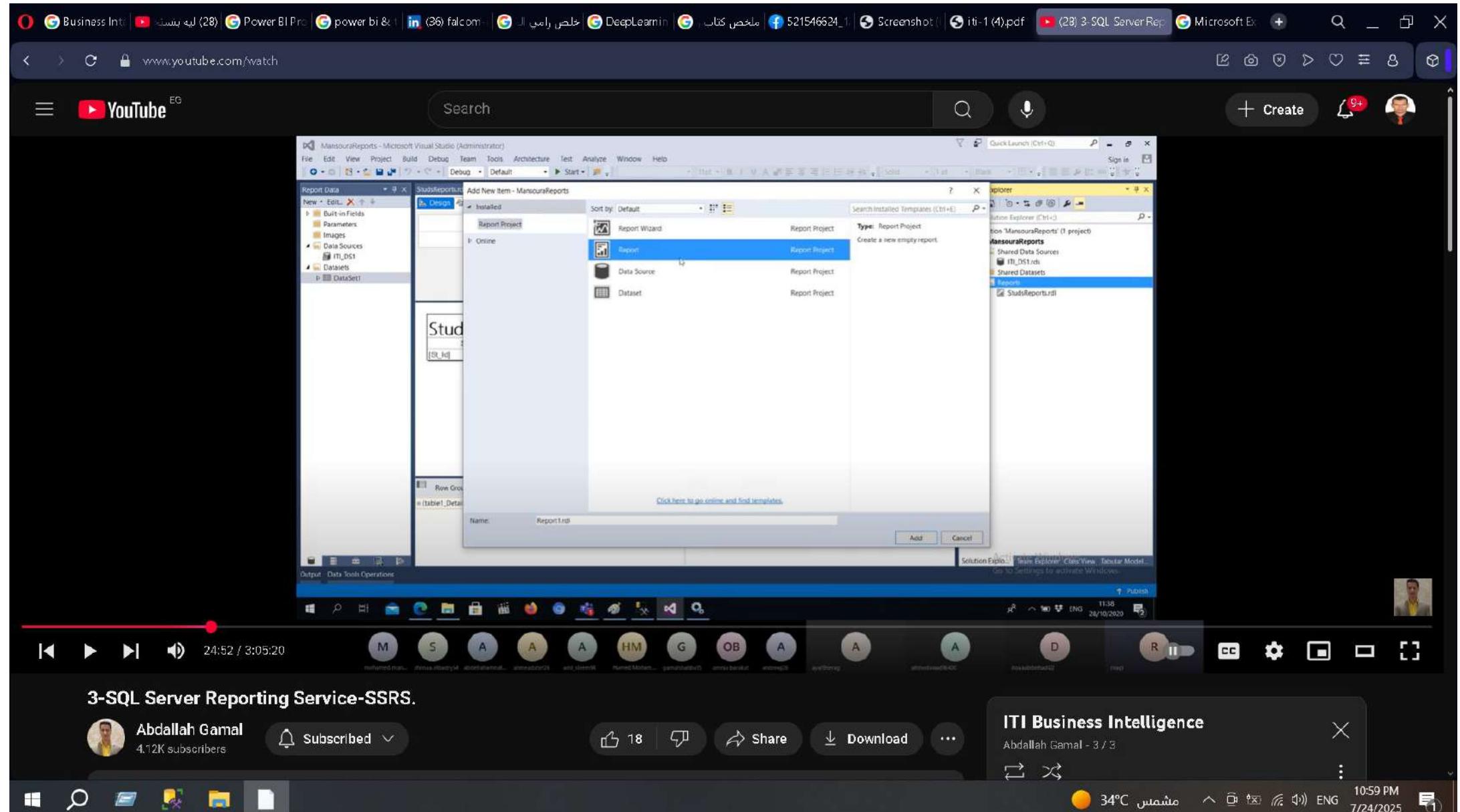
22:52 / 3:05:20

M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 1058 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data Report1rdl [Design]* Student

File Edit View Project Build Debug Team Tools Archive

Dataset Properties

Query

Choose a data source and create a query.

Name: DataSet1

Use a shared dataset.

Use a dataset embedded in my report.

Fields Options Filters Parameters

Report1rdl [Design]* Student

Report1rdl [Design]* Student

Row Groups

Output Data Tools Operations

Help OK Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

MansourReports

Shared Data Sources

ITI_DSS1.rdl

Shared Datasets

Reports

StudsReports.rdl

Report1rdl

Quick Launch (Ctrl+Q)

Sign in

26:12 / 3:05:20

HM M S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 1059 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Toolbox Report Unit [Design] | StudioReports.rdl [Design]

Report Items: Pointer, Text Box, Line, Table, Matrix, Rectangle, List, Image, Subreport, Chart, Gauge, Map, Data .NET Component, Spar, Indic.

Chart: Displays a value, field or expression as a linear or radial gauge.

General: There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report Unit [Design] | StudioReports.rdl [Design]

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

MansouraReports

Shared Data Sources

Report1.rdl

Shared Datasets

Reports

StudioReports.rdl

Report1.rdl

Quick Launch (Ctrl+Q)

Sign in

Repo... Serve... Tool... SSIS... SQL...

Output Data Tools Operations

Ready

27:02 / 3:05:20

HM M S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:59 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | | | | | | | | | | | |

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

New - Edit... X

Built-in Fields

Parameters

Images

Data Sources

DataSource1

Datasets

DataSet1

St_Id

St_Fname

St_Lname

St_Address

St_Age

Dept_ID

St_Super

Report1.rdl [Design] X

StudsReports.rdl [Design]

Design Preview

Row Groups

Column Groups

(Details)

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

MansouraReports

Shared Data Sources

St_DBS1.rdi

Shared Datasets

Reports

StudsReports.rdl

Report1.rdl

File Edit View Project Build Debug Team Report Tools Architecture Test Analyze Window Help

Quick Launches (Ctrl+Q)

Sign in

Output: Data Tools Operations

Ready

Report Server Tools SSIS SQL

R² 11:41 ENG 28/10/2020 Publish

HM M S A A HM G OB A A D R

27:42 / 3:05:20

HM Mohamed Morsi | M Mohamed Morsi | S Shams El-Din | A Ahmed Al-Shazly | A Ahmed Al-Shazly | HM Hamed Morsi | G Gamal El-Din | OB Omer Badr | A Amin Badr | A Amin Badr | D Dina El-Din | R Rania El-Din

Subscribed

18

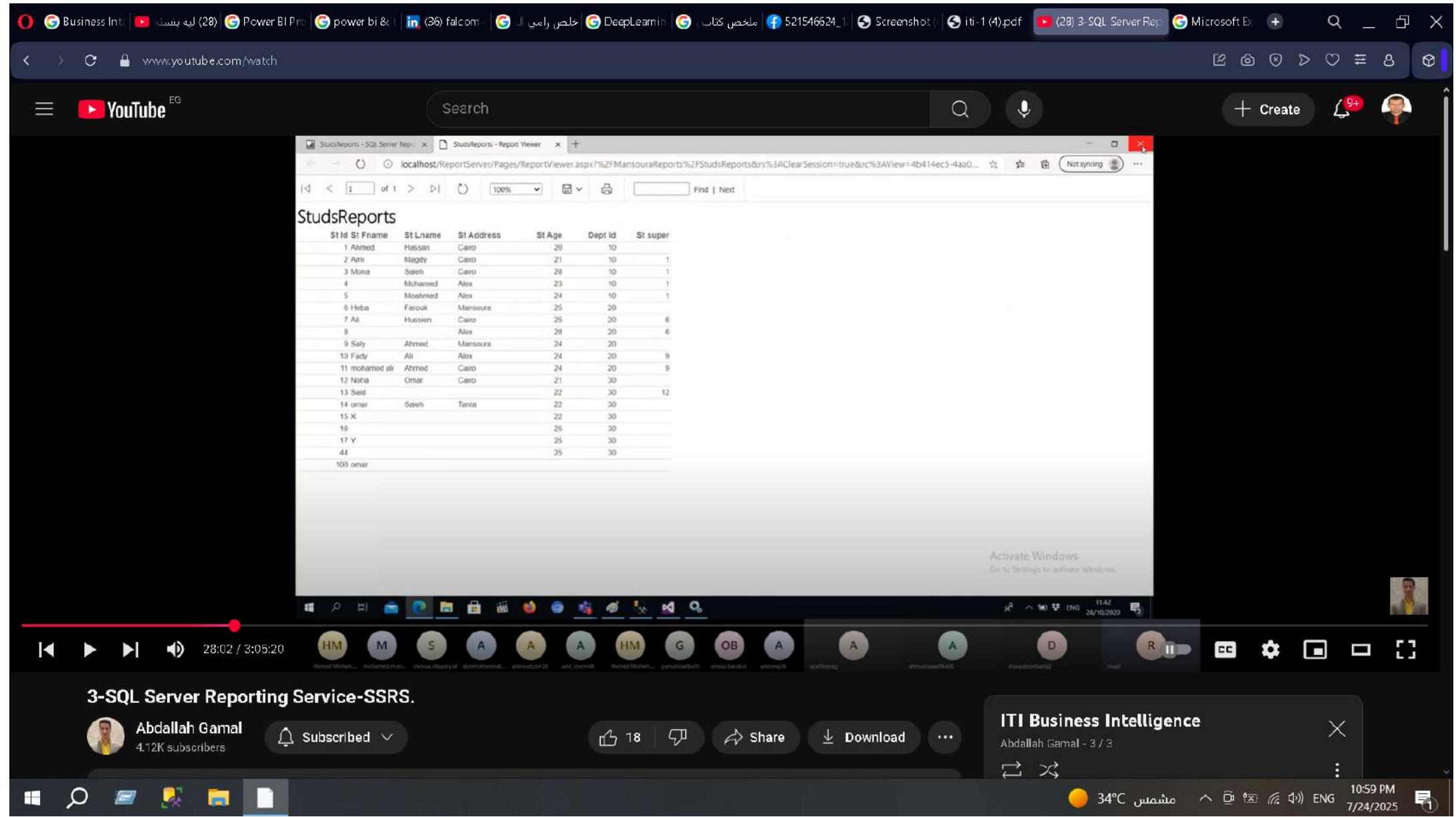
Share

Download

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 10:59 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

ReportId Expression

Set expression for Value
=Fields!St_Fname.Value

Category: Constants, Built-in Fields, Parameters, Fields (DataSet1), Datasets, Varieties, Operators, Common functions

Item: All

No constants are available for this property.

OK Cancel

Solution Explorer

Solution 'MansourReports' (1 project)
MansourReports
Shared Data Sources
ITI_DS1.rdl
Shared Datasets
Reports
StudsReports.rdl
Report1.rdl

Output: Data Tools Operations

Deploy succeeded

29:12 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

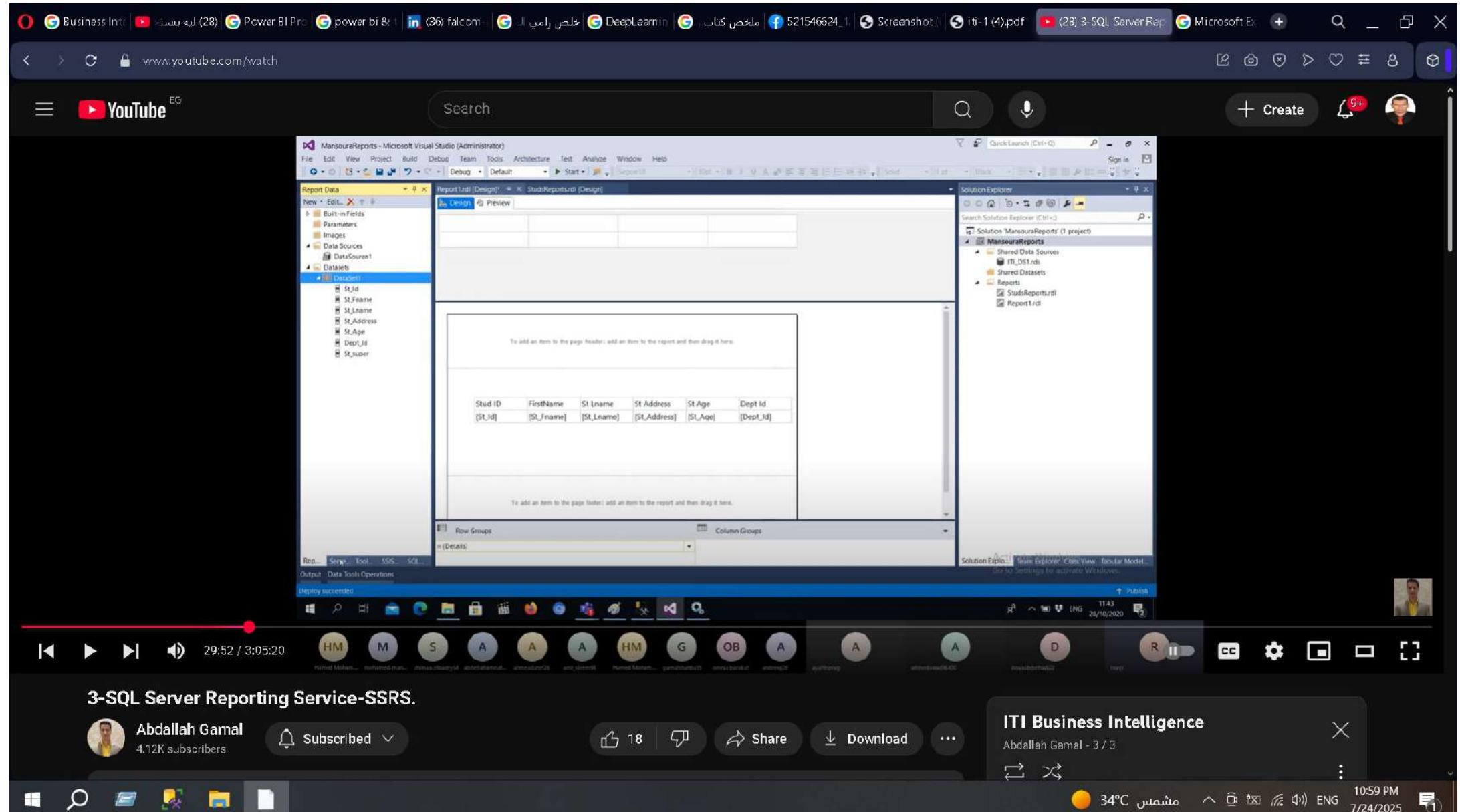
Abdallah Gamal - 3 / 3

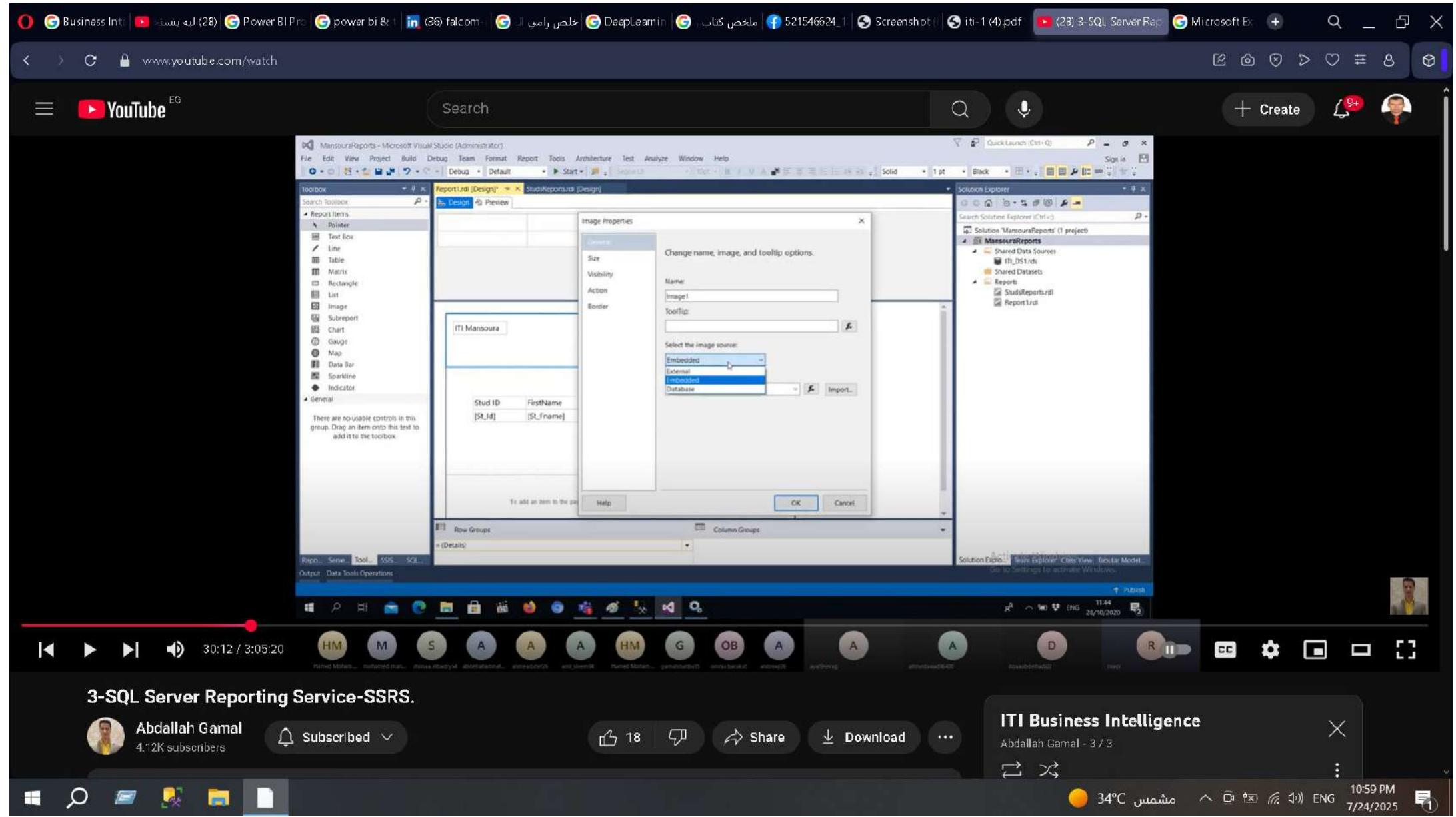
18 Share Download ...

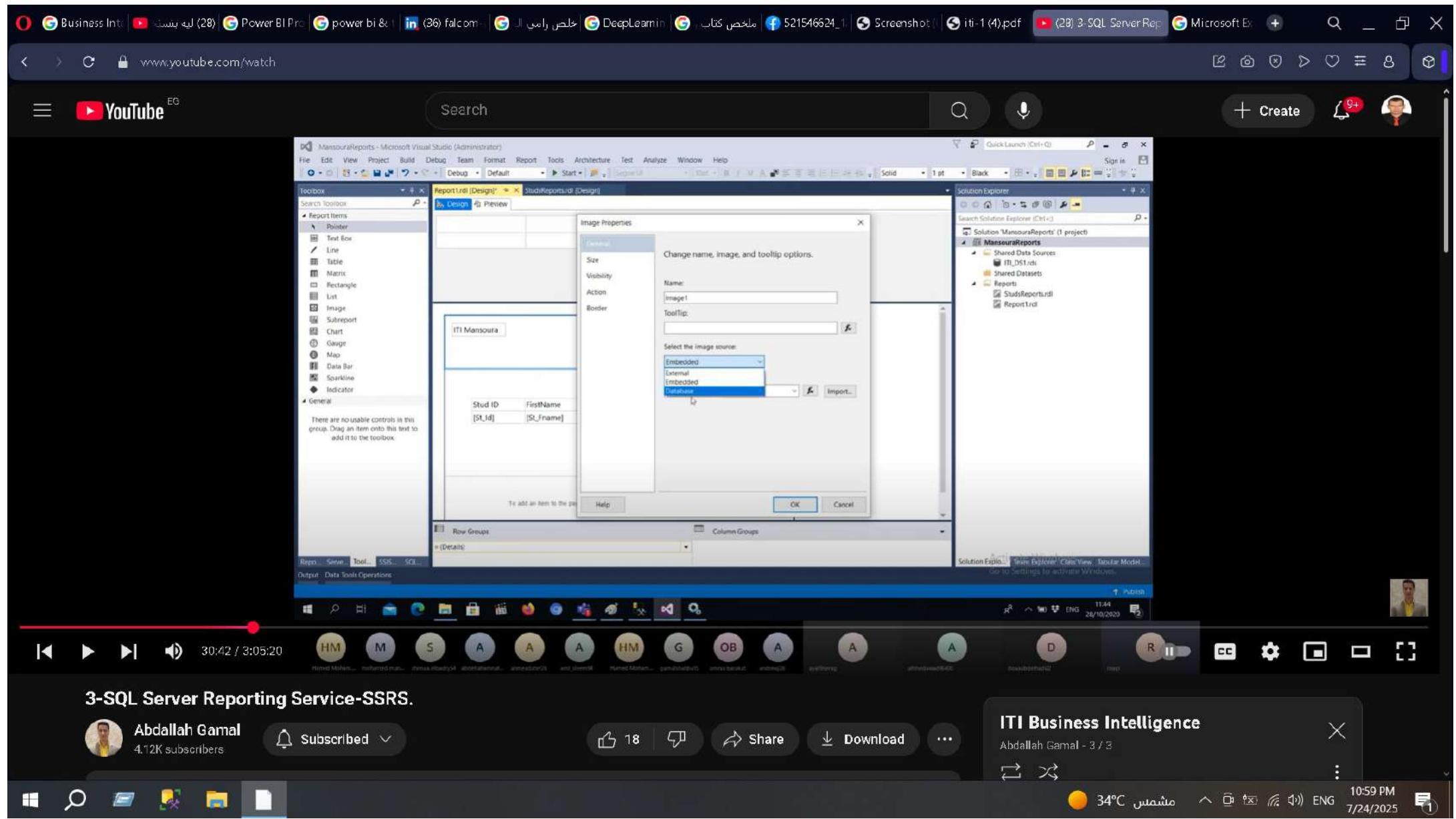
ITI Business Intelligence

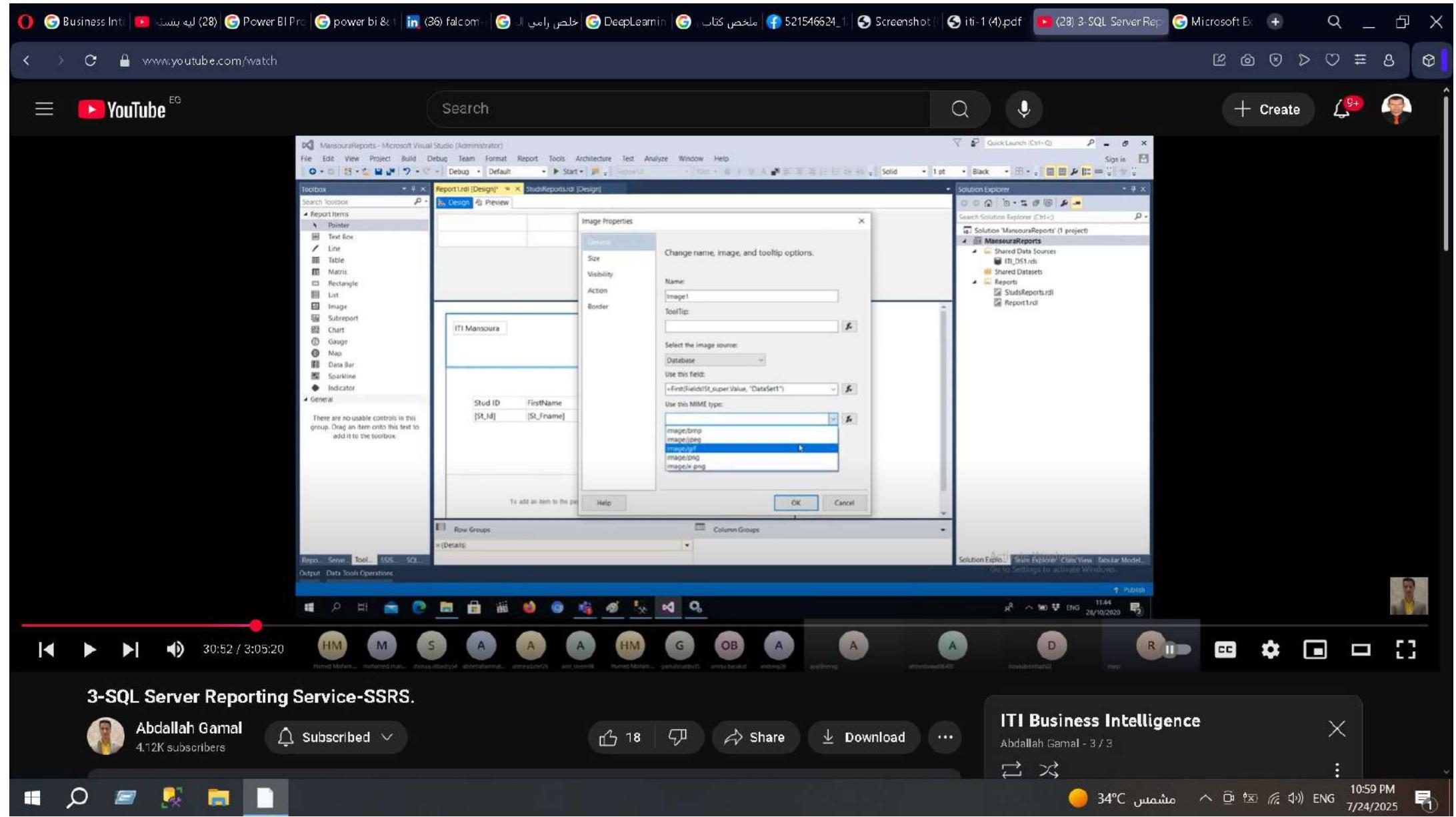
Abdallah Gamal - 3 / 3

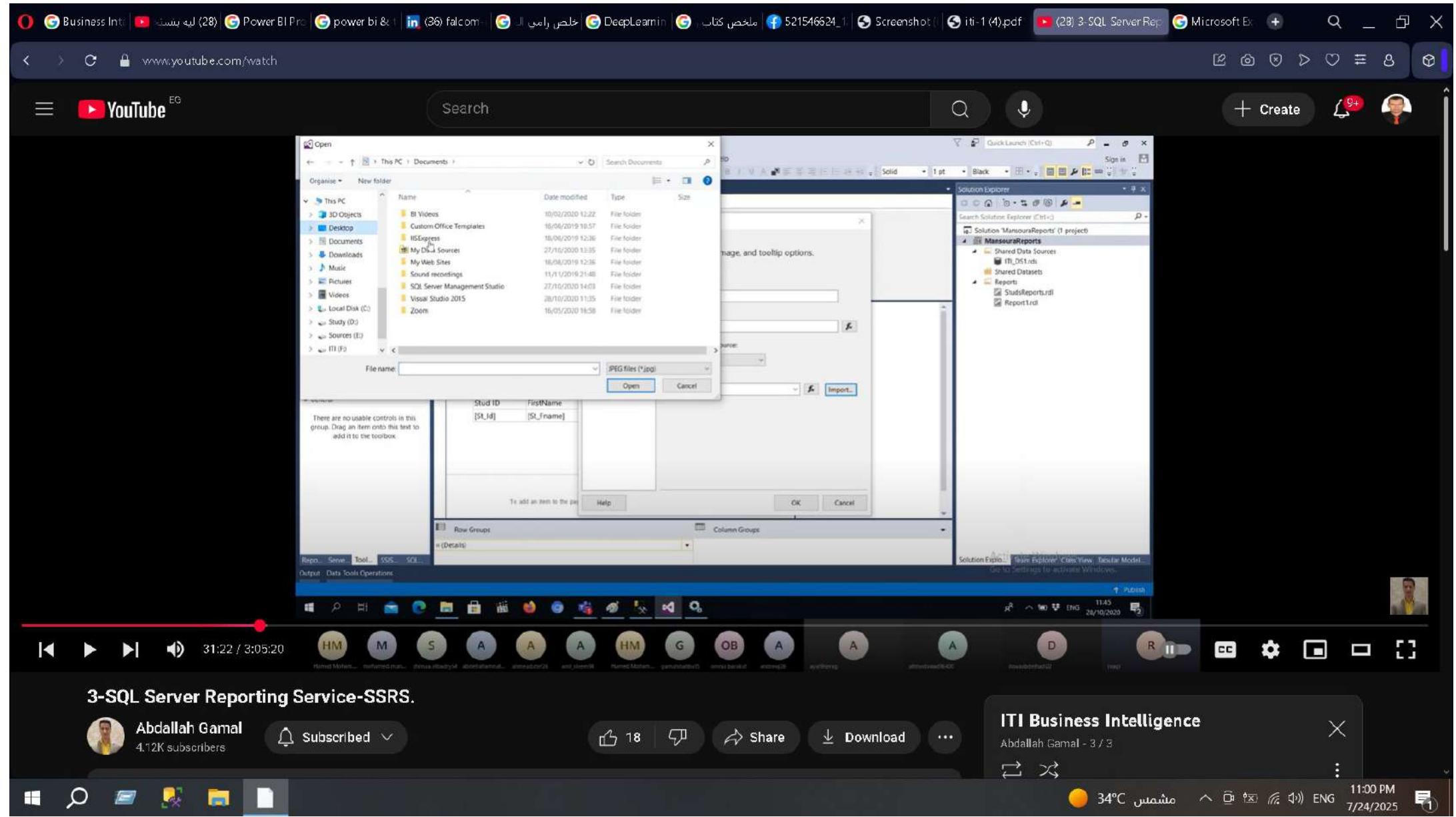
34°C مشتمل ENG 10:59 PM 7/24/2025











Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report1.rdl [Design] | StudioReports.rdl [Design]

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

ITI Mansoura

Stud ID FirstName St Lname St Address St Age Dept Id

[St_Id] [St_Fname] [St_Lname] [St_Address] [St_Age] [Dept_Id]

To add an item to the page footer, add an item to the report and then drag it here.

Row Groups

Column Groups

(Details)

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

MansouraReports

- Shared Data Sources
- ITI_DS1.rdl
- Shared Datasets
- Reports
- StudioReports.rdl
- Report1.rdl

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q)

Sign in

Repo... Serve... Tool... SSIS... SQL

Output Data Tools Operations

Ready

31:32 / 3:05:20

H M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom- | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | |

www.youtube.com/watch

YouTube EG

Report1 - Report Viewer

localhost/ReportServer/Pages/ReportViewer.aspx?%2FMansouraReports%2FReport1&rs%3AClearSession=true&rc%3AView=34cc36d6-0009-499... Not syncing

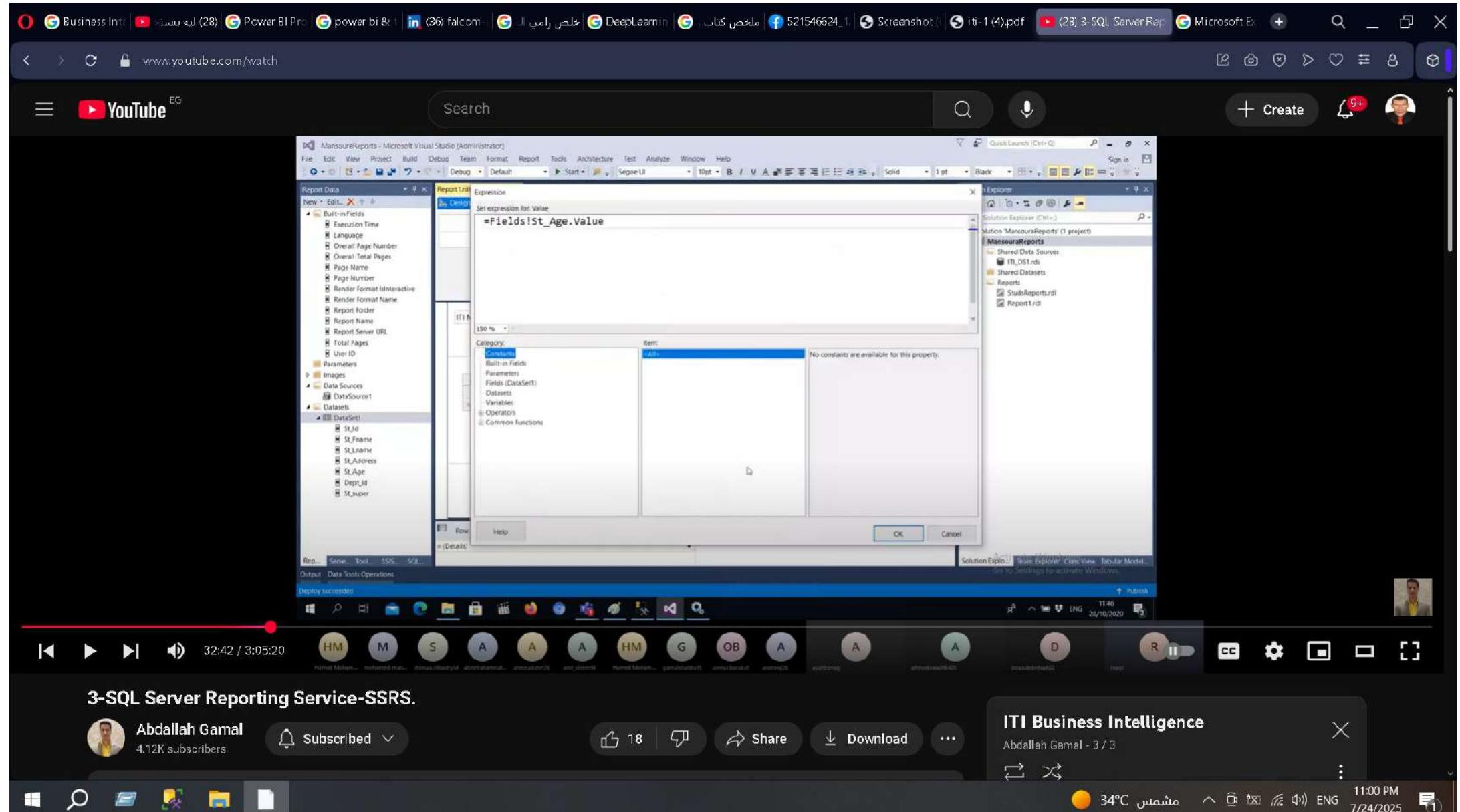
Find | Next

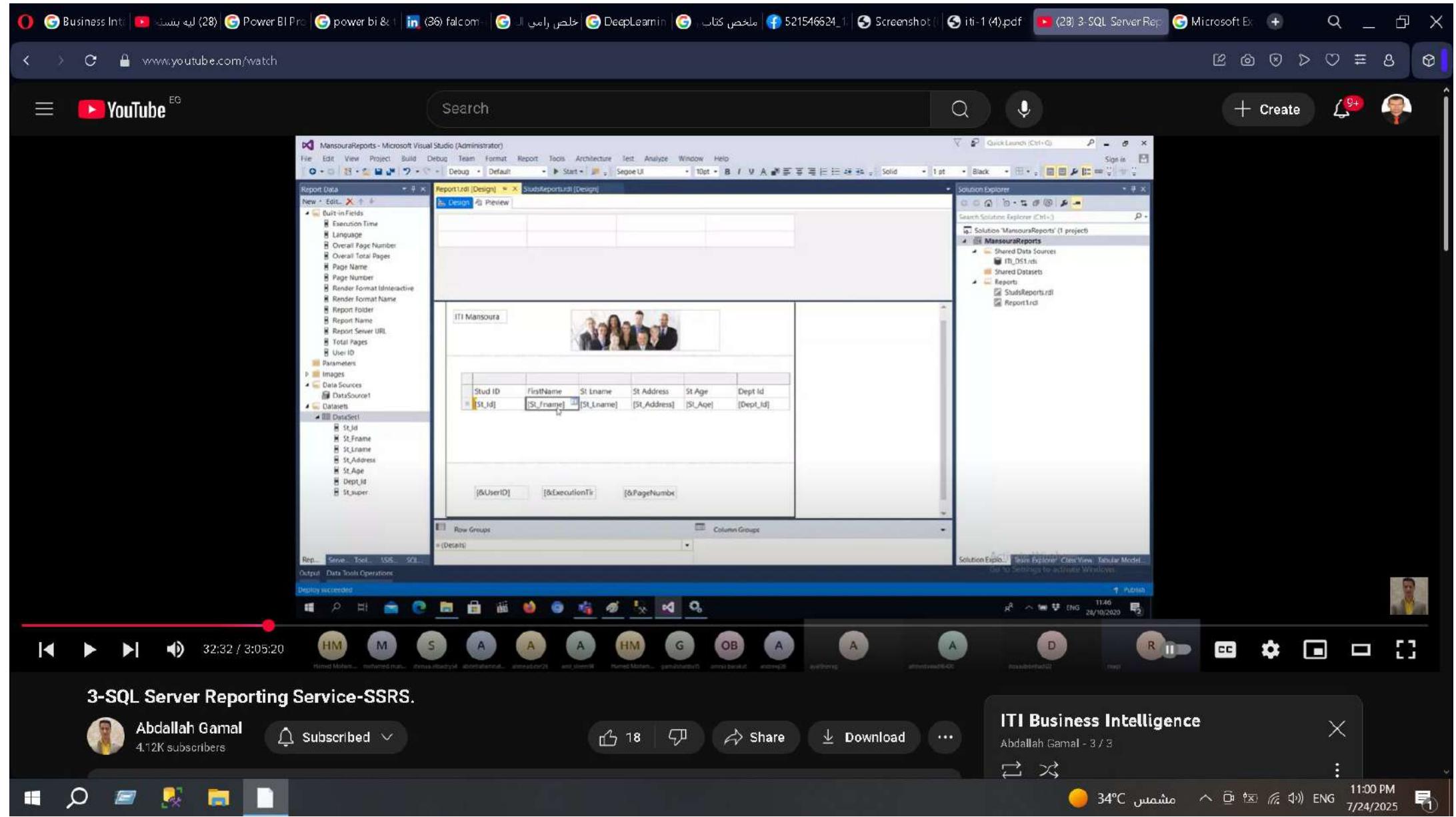
100% | Find | Print | Refresh | Back | Forward | Home | Stop | Address Bar

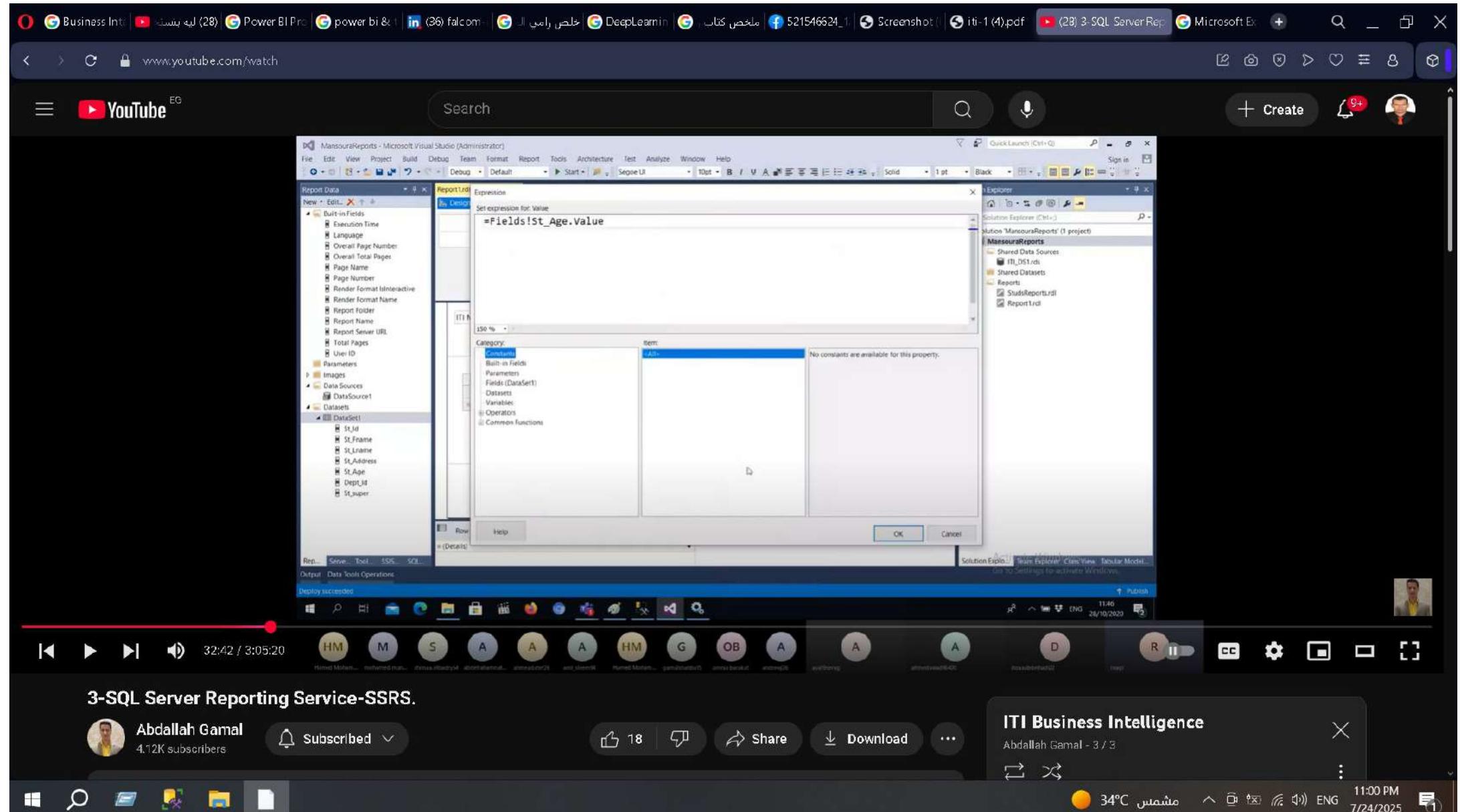
Stud ID	First Name	Surname	St Address	St Age	Dept Id
1	Ahmed	Hassan	Cairo	20	10
2	Amr	Maged	Cairo	21	10
3	Mona	Saleh	Cairo	28	10
4	Mohamed	Alex		23	10
5	Mohamed	Alex		24	10
6	Heba	Farouk	Mansoura	25	20
7	Ali	Hussien	Cairo	25	20
8		Alex		28	20
9	Saly	Ahmed	Mansoura	24	20
10	Fady	Ali	Alex	24	20
11	mohamed ali	Ahmed	Cairo	24	20
12	Noha	Omar	Cairo	21	30
13	Said			22	30
14	omar	Saleh	Tanta	22	30
15	X			22	30
16				25	30
17	Y			25	30
44				25	30
100	omar				

DESKTOP-VF50P25Rami 28/10/2020 11:46:10 Activate Windows Go to Settings to activate Windows.

HM M S A A HM G OB A A D R 32:12 / 3:05:20 Subscribed 18 Share Download ITI Business Intelligence Abdallah Gamal - 3 / 3 34°C مشتمل ENG 11:00 PM 7/24/2025







Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | | | | | | | | | | | |

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data | Report1.rdl [Design] | StudReports.rdl [Design]

File Edit View Project Build Debug Team Format Tools Architecture Test Analyze Window Help

Report1.rdl [Design] | Preview

Built-in Fields

- Execution Time
- Language
- Overall Page Number
- Overall Total Pages
- Page Name
- Page Number
- Render Format IsInteractive
- Render Format Name
- Report Folder
- Report Name
- Report Server URL
- Total Pages
- User ID

Parameters

Images

Data Sources

DataSource1

Datasets

DataSet1

- St_Id
- St_Fname
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_Super

Report Data | Report1.rdl [Design] | StudReports.rdl [Design]

Report1.rdl [Design] | Preview

ITI Mansoura

Row Groups: (Details)

Column Groups:

St_Id	First Name	St_Address	St_Age	Dept_Id
[St_Id]	[St_FirstName]	[St_Address]	[St_Age]	[Dept_Id]

[&UserID] [&ExecutionTime] [&PageNumber]

Solid - 1 pt Black

Quick Launch (Ctrl+Q)

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- MansouraReports
 - Shared Data Sources
 - ITI_DS1.rdl
 - Shared Datasets
 - Reports
 - StudsReports.rdl
 - Report1.rdl

Deploy succeeded

Output: Data Tools Operations

33:02 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | | | | | | | | | | | | | EG

www.youtube.com/watch

YouTube

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

ReportId Expression

Set expression for Value

=Fields!St_Fname.Value & Fields!St_Lname.Value

Category: DataSet1

Item: DataSet1

Values:

- Sum(St_Id)
- First(St_Fname)
- First(St_Lname)
- First(St_Address)
- Sum(St_Age)
- Sum(Dept_Id)
- Sum(St_super)

OK Cancel

Solution Explorer (Ctrl+D)

Solution 'MansourReports' (1 project)

MansourReports

Shared Data Sources

ITI_DS1.rdl

Shared Datasets

Reports

StatsReports.rdl

Report1.rdl

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Report Data

Built-in Fields

- Execution Time
- Language
- Overall Page Number
- Overall Total Pages
- Page Name
- Page Number
- Render Format IsInteractive
- Render Format Name
- Report Footer
- Report Name
- Report Server URL
- Total Pages
- User ID

Parameters

Images

Data Sources

DataSource1

Datasets

DataSet1

- St_Id
- St_Fname
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_super

Report Server Tools... SSIS... SQL...

Output Data Tools Operations

Deploy succeeded

33:32 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

- Built-in Fields
- Parameters
- Images
- Data Sources
- Datasets

Report1.rdl [Design] SubReports.rdl [Design]

ITI Mansoura

Stud ID Name St Address St Age Dept Id

[St_Id] «Expr» [St_Address] [St_Age] [Dept_Id]

[&UserID] [&ExecutionT] [&PageNumber]

Row Groups: (Details)

Column Groups:

Solution Explorer

- Solution 'MansouraReports' (1 project)
- MansouraReports
 - Shared Data Sources
 - ITI_D51.rds
 - Shared Datasets
 - Reports
 - StudsReports.rdl
 - Report1.rdl

Deploy succeeded

34:02 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | YouTube (28) | Power BI Pro | power bi & | LinkedIn (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | X

www.youtube.com/watch

YouTube EG

Search

+ Create

ITI Mansoura

Report1 - Report Viewer

localhost/ReportServer/Pages/ReportViewer.aspx?%2FMansouraReports%2FReport1&r%3AClearSession=true&rc%3AView=254262e5-8b59-463... Not syncing

Find | Next

ITI Mansoura

Stud ID Name St Address St Age Dept Id

1	Ahmed Hassan	Cairo	20	10
2	Amr Magdy	Cairo	21	10
3	Mona Saleh	Cairo	28	10
4	Mohamed	Alex	23	10
5	Mohamed	Alex	24	10
6	Heba Farouk	Mansoura	25	20
7	Ali Hussien	Cairo	25	20
8		Alex	28	20
9	Saly Ahmed	Mansoura	24	20
10	Fady Ali	Alex	24	20
11	mohamed ali Ahmed	Cairo	24	20
12	Noha Omar	Cairo	21	30
13	Said		22	30
14	omar Saleh	Tanta	22	30
15	X		22	30
16			25	30
17	Y		25	30
44			25	30
100	omar			

Activate Windows
Go to Settings to activate Windows.

HM M S A A HM G OB A A D R

34:32 / 3:05:20

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

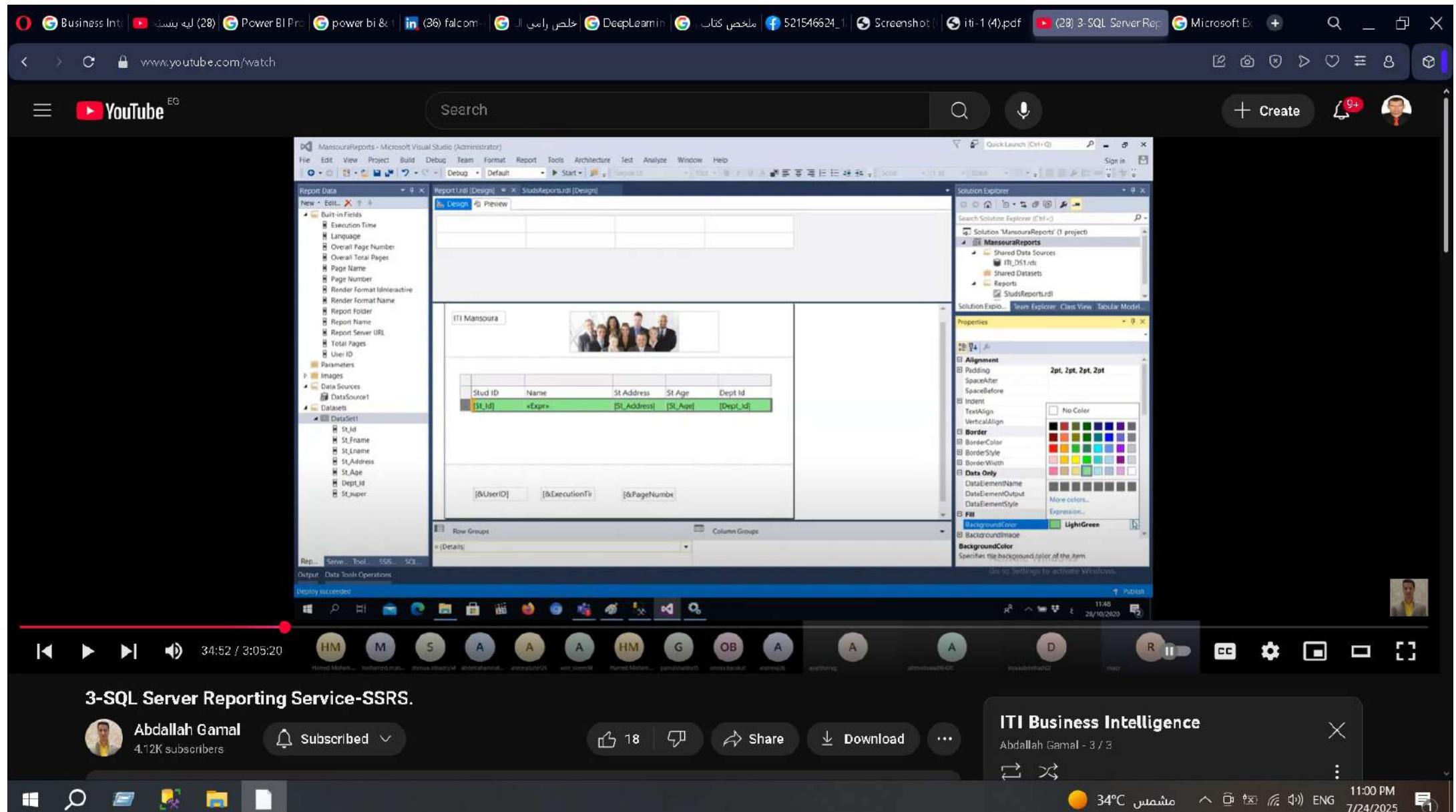
Share

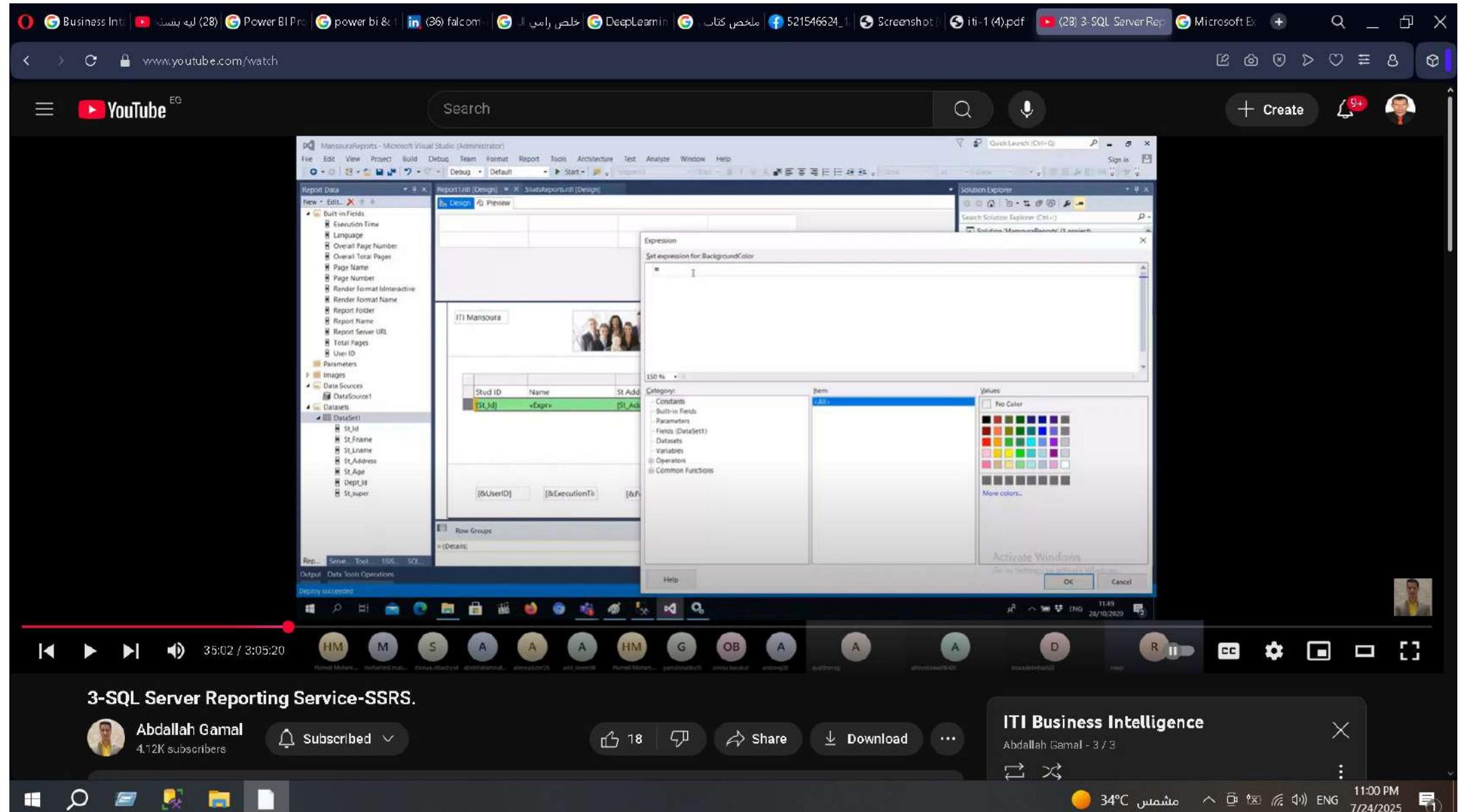
Download

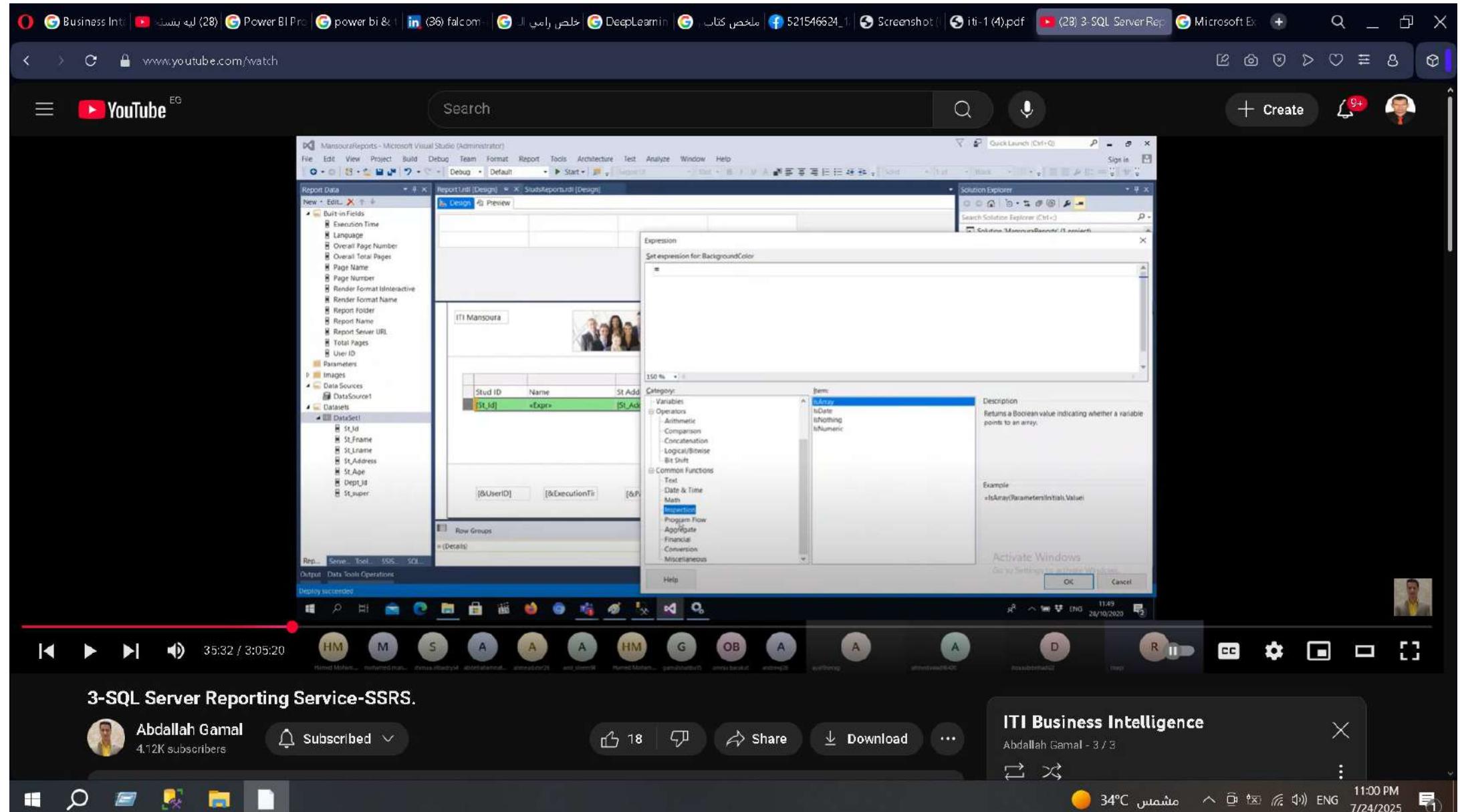
ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:00 PM 7/24/2025







Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

Built-in Fields

- Execution Time
- Language
- Overall Page Number
- Overall Total Pages
- Page Name
- Page Number
- Render Format IsInteractive
- Render Format Name
- Report Folder
- Report Name
- Report Server URL
- Total Pages
- User ID

Parameters

Images

Data Sources

DataSource

Datasets

- DataSet1
- St_Id
- St_Frame
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_Juper

Report Data

ReportUtil [Design] > StudReportsUtil [Design]

Design Preview

Expression

Set expression for: BackgroundColor

=IIF(Fields!St_Age.Value>=24,Red,yellow)

Category:

- Constants
- Built-in Fields
- Parameter
- Fields (DataSet)
- Datasets
- Variables
- Operators
 - Arithmetic
 - Comparison
 - Concatenation
 - Logical/Bitwise
 - Bit Shift
- Common Functions
 - Text
 - Date & Time
 - Math
 - Inspection

Item:

Values:

- All
- St_Id
- St_Frame
- St_Lname
- St_Address
- St_Age
- Dept_Id
- St_Juper

Activate Windows

OK Cancel

36:22 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

18 Subscribed

Share Download

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | YouTube (28) | Power BI Pro | power bi & | LinkedIn (36) | falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | +

www.youtube.com/watch

YouTube EG

Search

+ Create

94

Project management

Chat

Knowledge management

Work is Broken. We Fixed It

Visit site

ClickUp

Sponsored clickup.com

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

Share

Download

34°C مشتمل ENG 11:00 PM 7/24/2025

Business Intel | YouTube (28) | Power BI Pro | power bi & | LinkedIn (36) | falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | +

www.youtube.com/watch

YouTube EG

Search

+ Create

Work is Broken. We Fixed It clickup.com

Visit site

Sponsored clickup.com

Project management

Chat

Knowledge management

ClickUp

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal 4.12K subscribers

Subscribed

18

Share

Download

34°C مشتمل ENG 11:01 PM 7/24/2025

The everything app for work.

Business Intel | YouTube (28) | Power BI Pro | Google power bi & | LinkedIn (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | +

www.youtube.com/watch

YouTube EG

Search

+ Create

Work is Broken. We Fixed
clickUp It clickup.com

Visit site

Sponsored clickup.com

Project management

Chat

Knowledge management

ClickUp

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal 4.12K subscribers

Subscribed

18

Share

Download

34°C مشتمل ENG 11:01 PM 7/24/2025

YouTube EG

Work is Broken. We Fixed
clickUp It clickup.com

Visit site

Sponsored clickup.com

Project management

Chat

Knowledge management

ClickUp

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal 4.12K subscribers

Subscribed

18

Share

Download

34°C مشتمل ENG 11:01 PM 7/24/2025

Business Int. | YouTube (28) | Power BI Pro | power bi & | falcom | (36) | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | + | Search | X

www.youtube.com/watch

YouTube EG

Search

+ Create

94

Project management

AI

Knowledge management

Chat

Work is Broken. We Fixed It

Visit site

ClickUp

Sponsored clickup.com

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

Share

Download

...
Skip ►

ClickUp
The everything app for work.

34°C مشتمل ENG 11:01 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Microsoft Edge | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

Built-in Fields

- Execution Time
- Language
- Overall Page Number
- Overall Total Pages
- Page Name
- Page Number
- Render Format IsInteractive
- Render Format Name
- Report Folder
- Report Name
- Report Server URL
- Total Pages
- User ID

Parameters

Images

Data Sources

DataSource

Datasets

- DataSet1
- St_Id
- St_Frame
- St_LName
- St_Address
- St_Age
- Dept_Id
- St_Juper

Report Data | ReportUtil [Design] | StudReportsUtil [Design]

Design Preview

Expression

Set expression for: BackgroundColor

=IIF(Fields!St_Age.Value>=24,"Red","yellow")

Category:

- Constants
- Built-in Fields
- Parameter
- Fields (DataSet)
- Datasets
- Variables
- Operators
 - Arithmetic
 - Comparison
 - Concatenation
 - Logical/Bitwise
 - Bit Shift
- Common Functions
 - Text
 - Date & Time
 - Math
 - Inspection

Item: St_Age

Values:

- St_Id
- St_Frame
- St_LName
- St_Address
- St_Age
- Dept_Id
- St_Juper

Activate Windows

OK Cancel

Report Server Tools SQL Output: Data Tools Operations

Display succeeded

36:35 / 3:05:20

HM M S A A HM G OB A A D R CC Settings

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 11:01 PM 7/24/2025

Business Intel | YouTube (28) | Power BI Pro | power bi & | LinkedIn (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Microsoft Edge | Search | Home | Back | Forward | Refresh | Address Bar: www.youtube.com/watch

YouTube EG

Search

+ Create

ITI Mansoura

Report1 - Report Viewer

localhost/ReportServer/Pages/ReportViewer.aspx?%2FMansouraReports%2FReport1&r%3AClearSession=true&rc%3AView=68775b82-db6c-4bf... Not syncing

Find | Next

ITI Mansoura

Stud ID Name St Address St Age Dept Id

1	Ahmed Hassan	Cairo	20	10
2	Anrr Magdy	Cairo	21	10
3	Mona Saleh	Cairo	20	10
4	Mohamed	Alex	23	10
5	Mohammed	Alex	24	10
6	Khalid Fouad	Mansoura	26	10
7	Amr Hussien	Cairo	25	10
8		Alex	28	10
9	Saleh Ahmed	Mansoura	26	10
10	Eddy Ali	Zewi	24	10
11	Emad Mohamed Ali Ahmed	Cairo	26	10
12	Noha Omar	Cairo	21	30
13	Said		22	30
14	omar Saleh	Tanta	22	30
15	X		25	30
16			25	30
17			25	30
18			25	30
19			25	30
20			25	30
21			25	30
22			25	30
23			25	30
24			25	30
25			25	30
26			25	30
27			25	30
28			25	30
29			25	30
30			25	30
31			25	30
32			25	30
33			25	30
34			25	30
35			25	30
36			25	30
37			25	30
38			25	30
39			25	30
40			25	30
41			25	30
42			25	30
43			25	30
44			25	30
45			25	30
46			25	30
47			25	30
48			25	30
49			25	30
50			25	30
51			25	30
52			25	30
53			25	30
54			25	30
55			25	30
56			25	30
57			25	30
58			25	30
59			25	30
60			25	30
61			25	30
62			25	30
63			25	30
64			25	30
65			25	30
66			25	30
67			25	30
68			25	30
69			25	30
70			25	30
71			25	30
72			25	30
73			25	30
74			25	30
75			25	30
76			25	30
77			25	30
78			25	30
79			25	30
80			25	30
81			25	30
82			25	30
83			25	30
84			25	30
85			25	30
86			25	30
87			25	30
88			25	30
89			25	30
90			25	30
91			25	30
92			25	30
93			25	30
94			25	30
95			25	30
96			25	30
97			25	30
98			25	30
99			25	30
100	omar.		25	30

Activate Windows
Go to Settings to activate Windows.

36:45 / 3:05:20

HM M S A A HM G OB A A D R II CC Settings

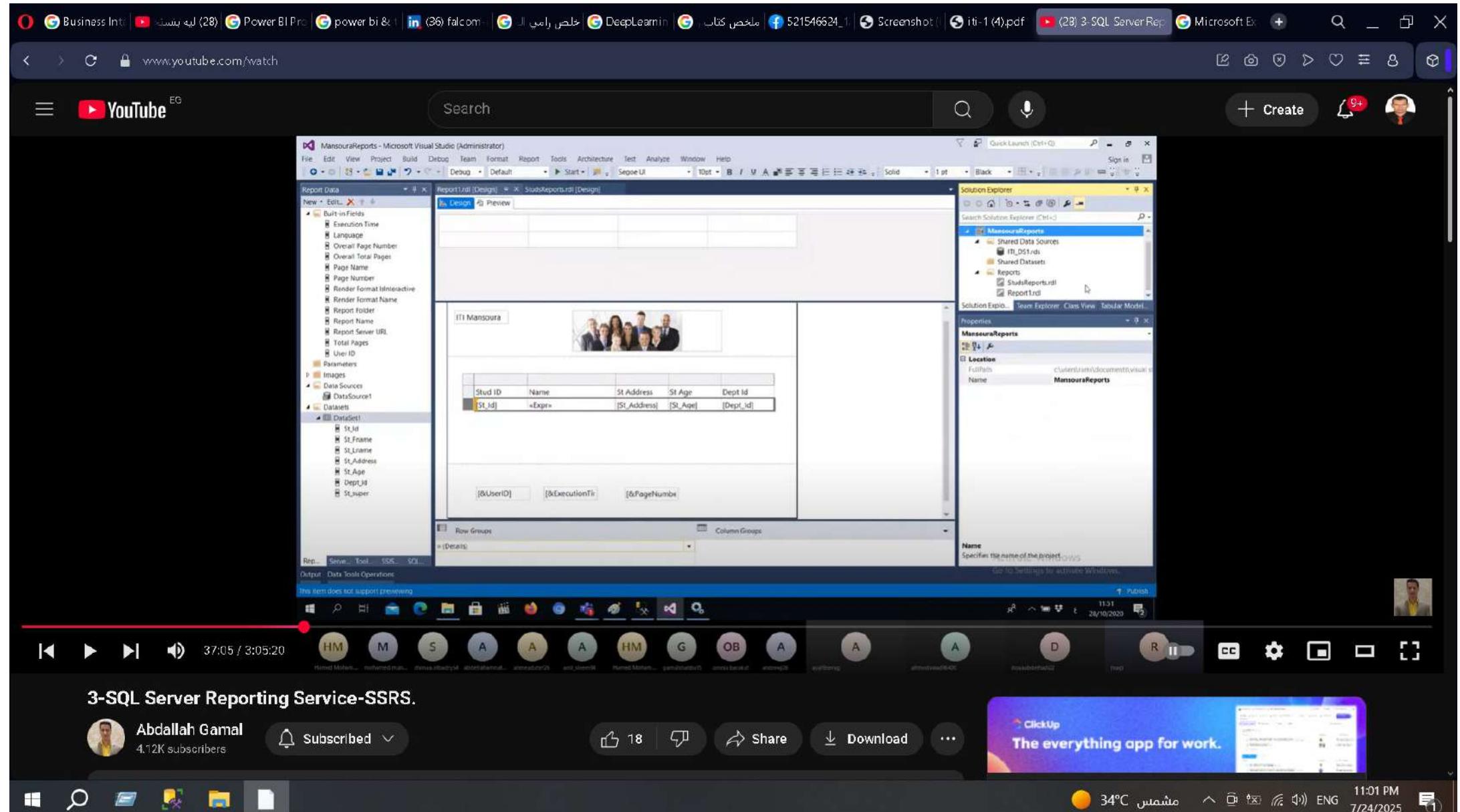
3-SQL Server Reporting Service-SSRS.

Abdallah Gamal | Subscribed | 4.12K subscribers

18 | Share | Download | ...

ClickUp | The everything app for work.

34°C مشتمل ENG 11:01 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge

www.youtube.com/watch

YouTube EG

Search

Report Data

Report Uri [Design] | StudReports.rdl

Report Wizard

Select the Data Source

Shared data source: ITI_DS1

New data source: name: DataSource1, Type: Microsoft SQL Server, Connection string: (empty)

ITI Mansoura

Stud ID Name

Row Groups: (Details)

Report Data | Report Uri | Tools | SSIS | SQL | Output | Data Tools Operations | This item does not support previewing

Solution Explorer

MansourReports

Shared Data Sources: ITI_DS1.rdl

Shared Datasets

Reports: StudReports.rdl, Report1.rdl

Properties

Reports

Location: Reports

Published

3:15 / 3:05:20

HM M S A A HM G OB A A D R CC Settings

Abdallah Gamal | Subscribed | 4.12K subscribers

18 | Share | Download | ...

ClickUp | The everything app for work.

34°C | مشتمل | ENG | 11:01 PM | 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data | ReportUtil [Design] | StudentReport

Report Wizard

Design the Table

Choose how to group the data in the table.

Available fields:

- S.v
- Sj_name
- Sj_address
- Sj_Age
- Dept_Id
- St_super

Displayed fields:

- Page >
- Group >
- Details >
- Row Groups >

Help | Next > | Finish >> | Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

- MansourReports
 - Shared Data Sources
 - ITL_D51.rdl
 - Shared Datasets
 - Reports
 - StudsReport.rdl
 - Report1.rdl

Properties

Reports

Location

Name: Reports

Output: Data Tools Operations

This item does not support previewing

File Edit View Project Build Team Tools Architecture Test Analyze Window Help

Report Util [Design] | StudentReport

Report Wizard

Design the Table

Choose how to group the data in the table.

Available fields:

- St_Id
- Name

Displayed fields:

- Page >
- Group >
- Details >
- Row Groups >

Help | Next > | Finish >> | Cancel

Row Groups

(Details)

HM M S A A HM G OB A A D R

37:35 / 3:05:20

HM Mohamed M... Mohamed M... S Mohamed S... A Mohamed A... A Mohamed A... HM Hamed M... G Hamed M... OB Hamed M... A Hamed A... A Hamed A... D Hamed D... R Hamed R...

Subscribed 4.12K subscribers

18 | Share | Download | ...

ClickUp
The everything app for work.

34°C 11:01 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data | ReportUtil [Design] | StudentReport.rdl

Report Wizard

Design the Table

Choose how to group the data in the table.

Available fields:

- [St_Id]
- [Name]
- [Dept_Id]
- [St_Address]
- [St_Id]
- [St_Fname]
- [St_Lname]
- [St_Address]
- [St_Age]
- [Dept_Id]
- [St_Super]

Displayed fields:

- Dept_Id
- St_Address

Report Util [Design] | StudentReport.rdl

Solution Explorer

MansourReports

- Shared Data Sources
- ITL_DS1.rds
- Shared Datasets
- Reports
- StudentReport.rdl
- Report1.rdl

Properties

Reports

Location

Name: Reports

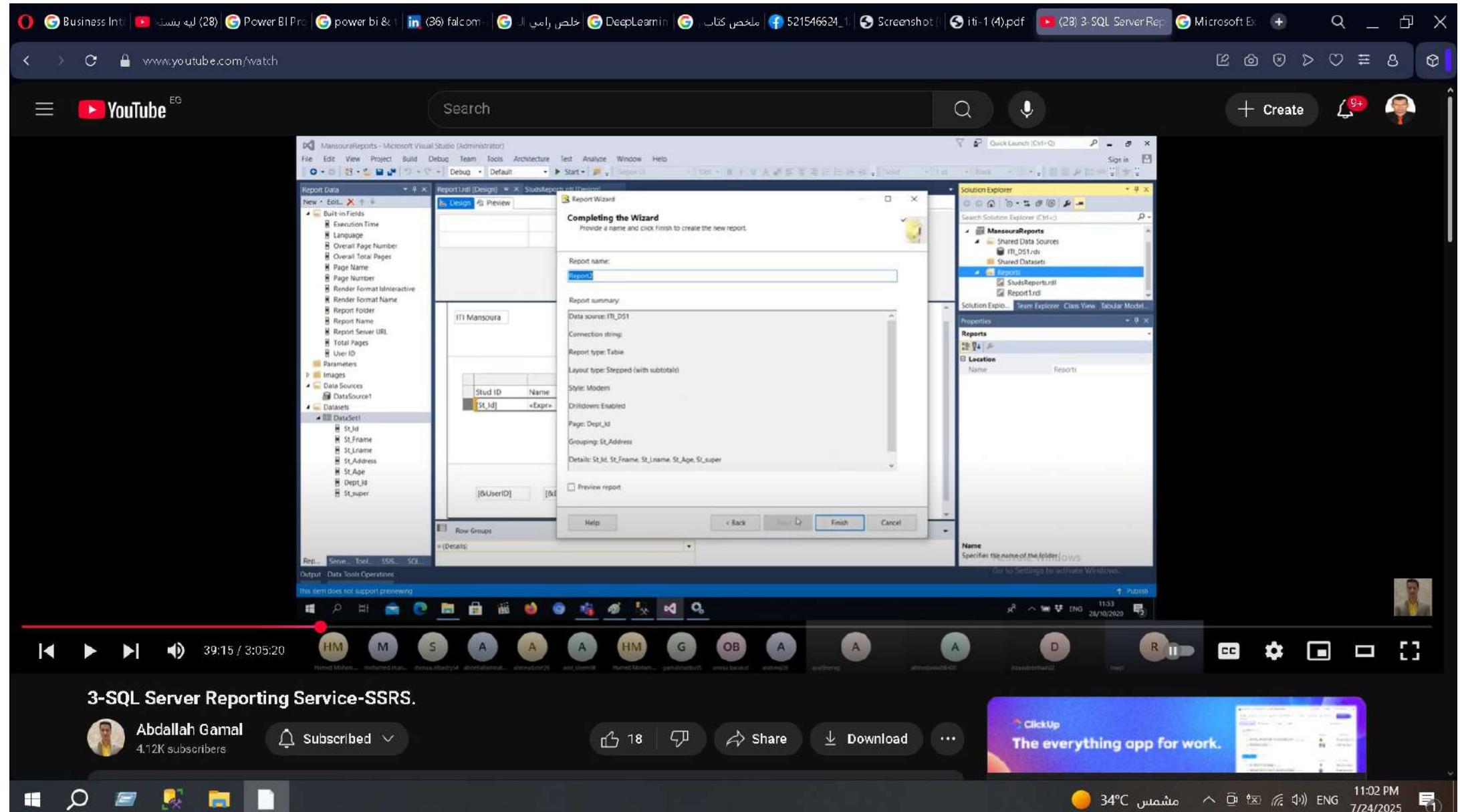
Report Util [Design] | StudentReport.rdl

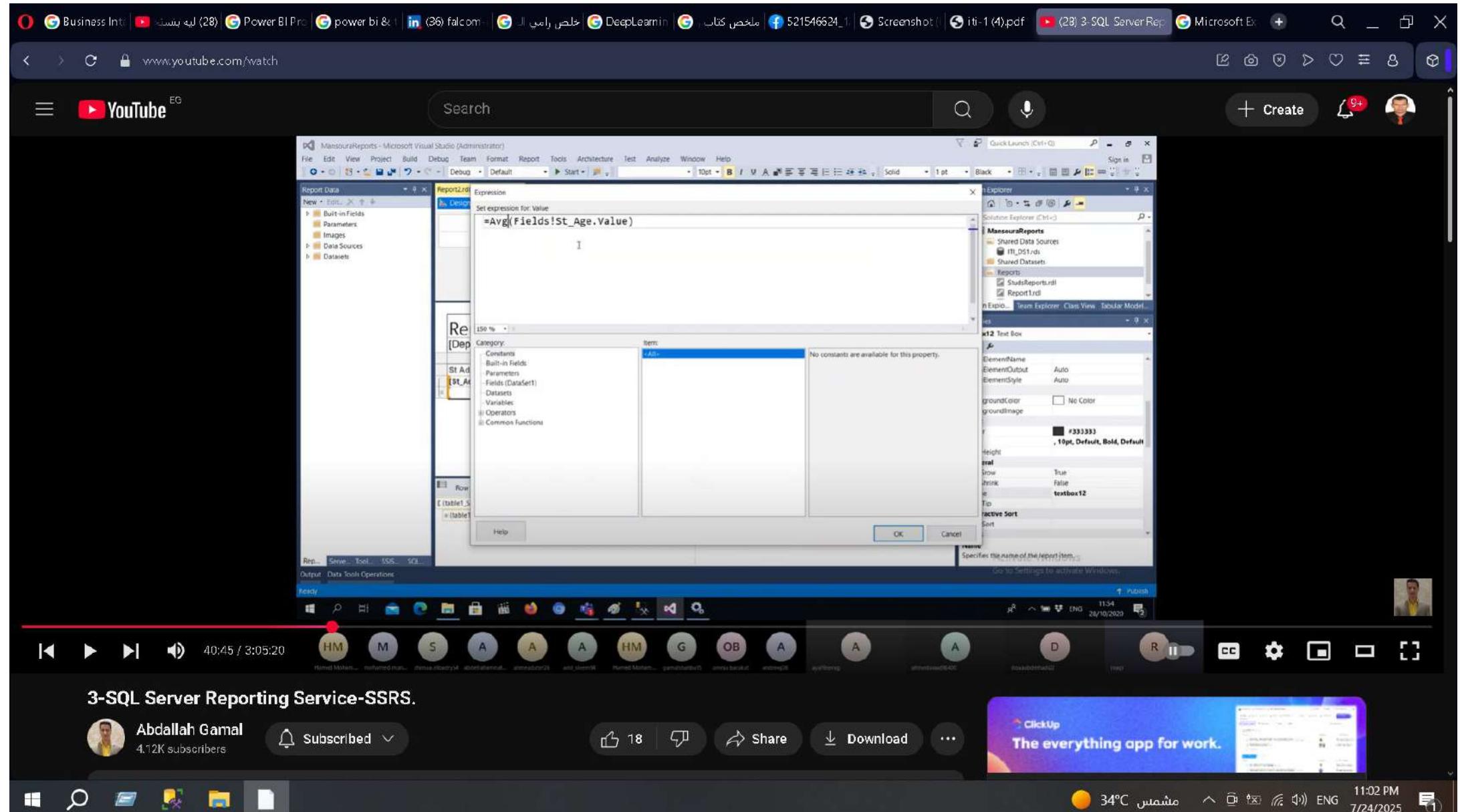
Output: Data Tools Operations

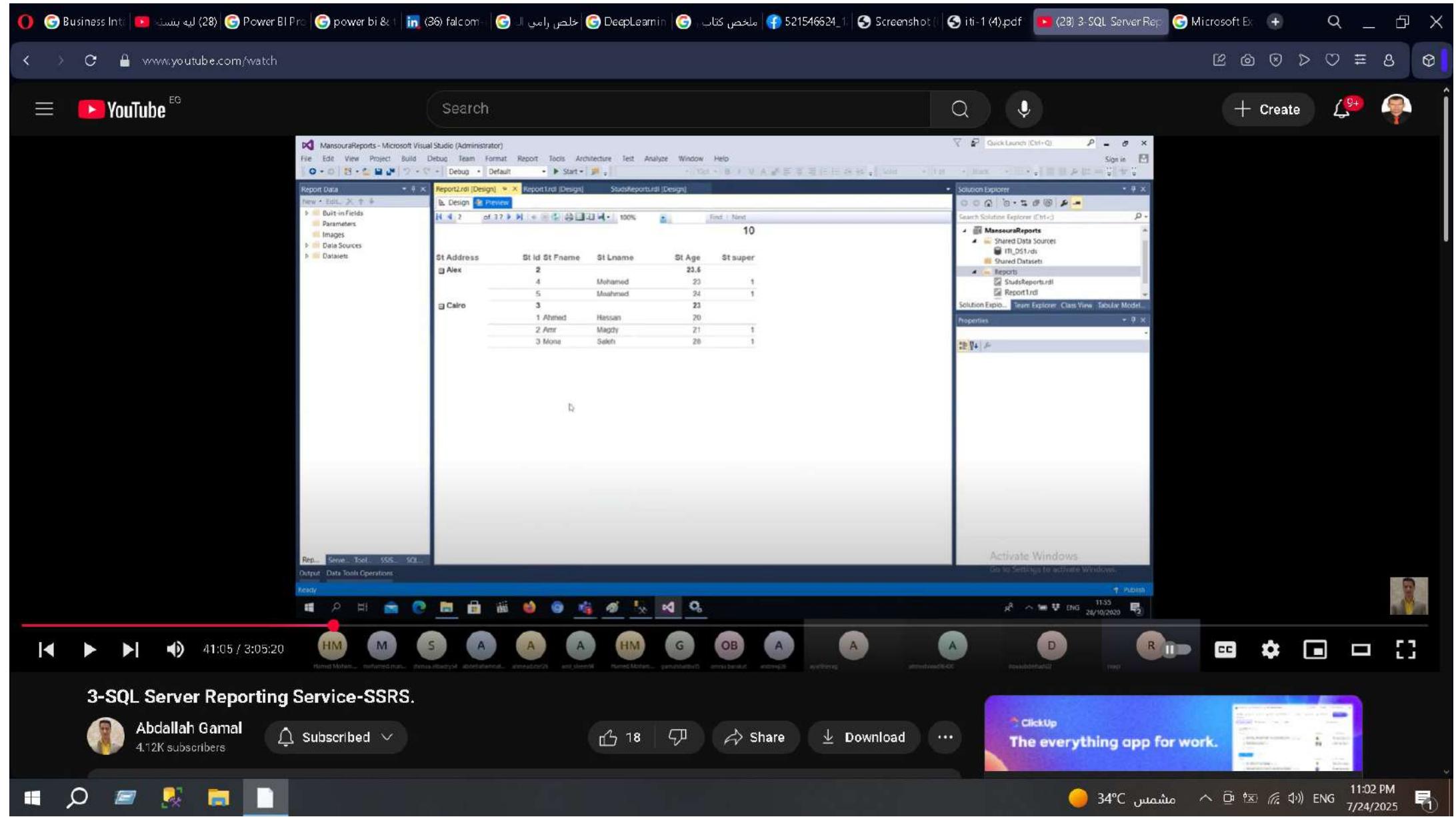
This item does not support previewing

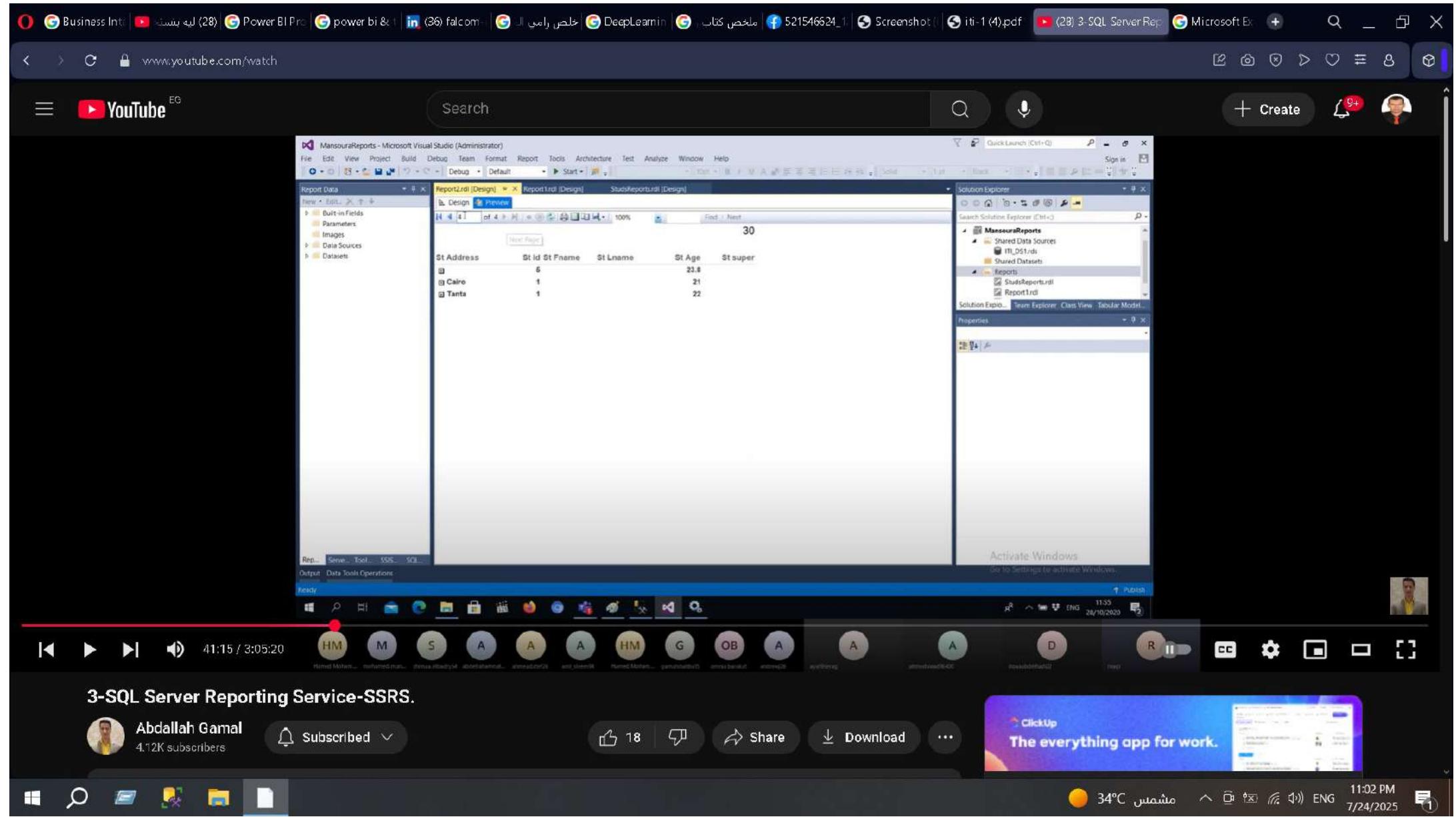
HM M S A A HM G OB A A D R 38:35 / 3:05:20 Subscribed 18 Share Download ... ClickUp The everything app for work. 34°C 11:01 PM 7/24/2025 ENG

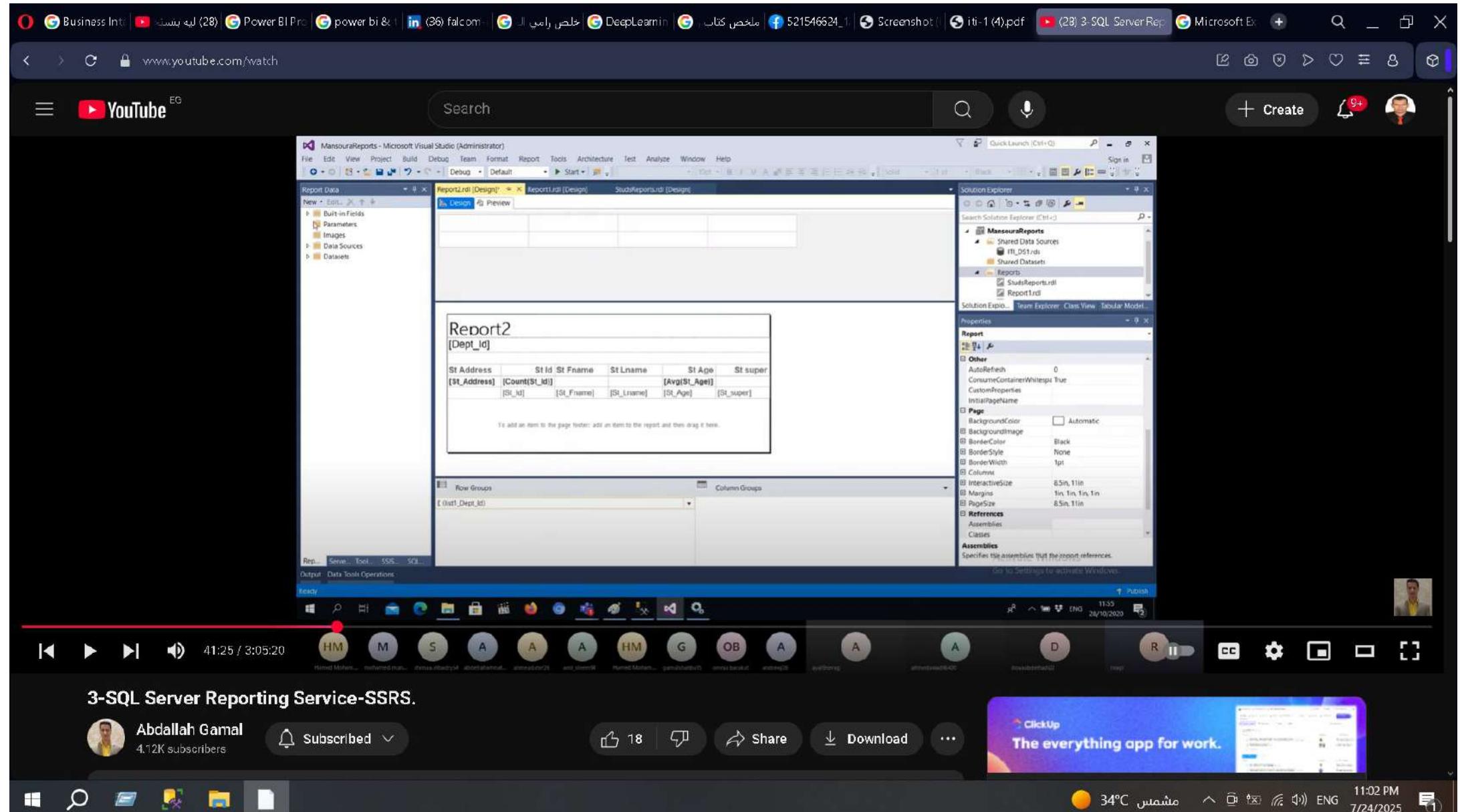
HM M S A A HM G OB A A D R 38:35 / 3:05:20 Subscribed 18 Share Download ... ClickUp The everything app for work. 34°C 11:01 PM 7/24/2025 ENG

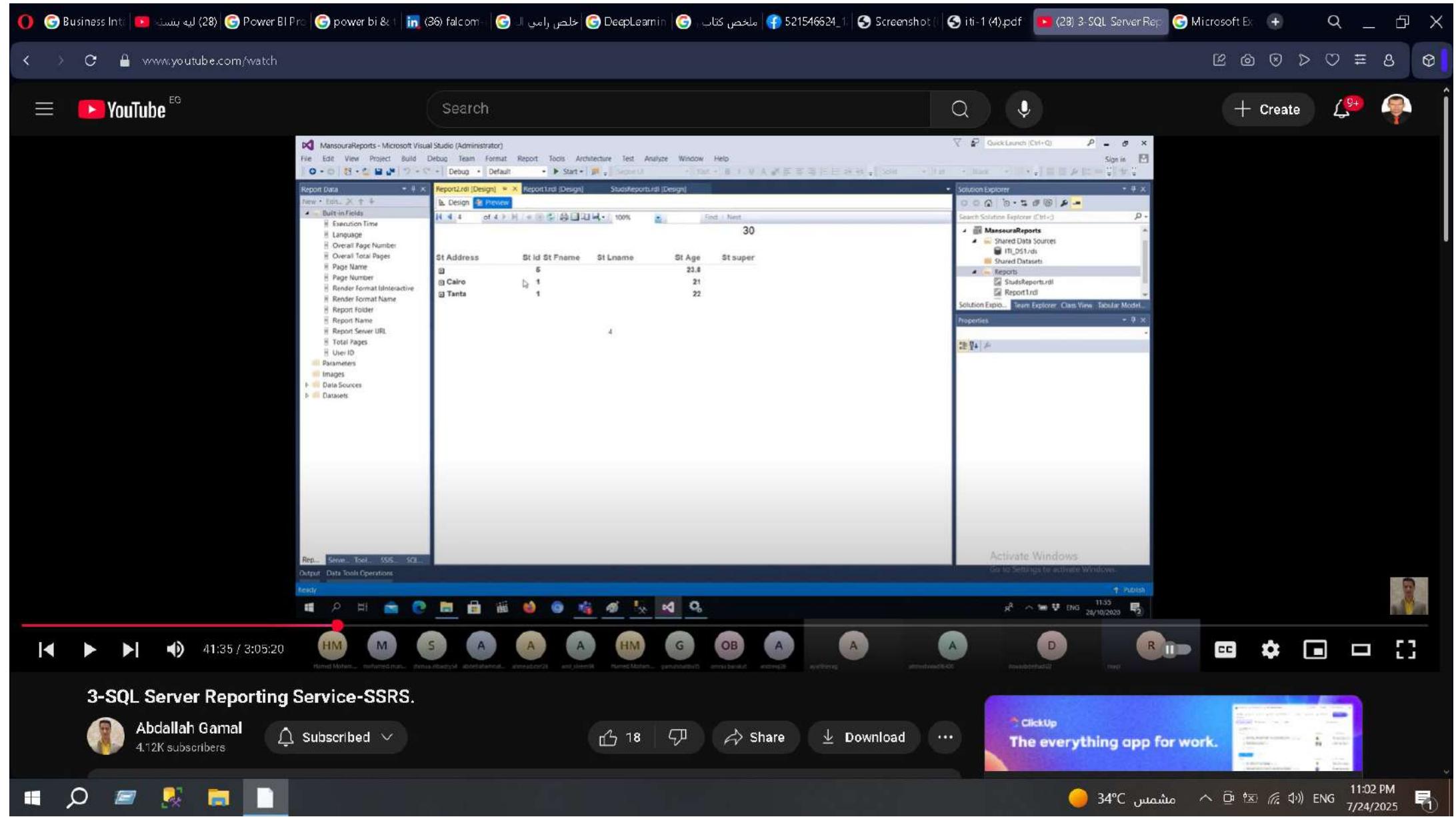


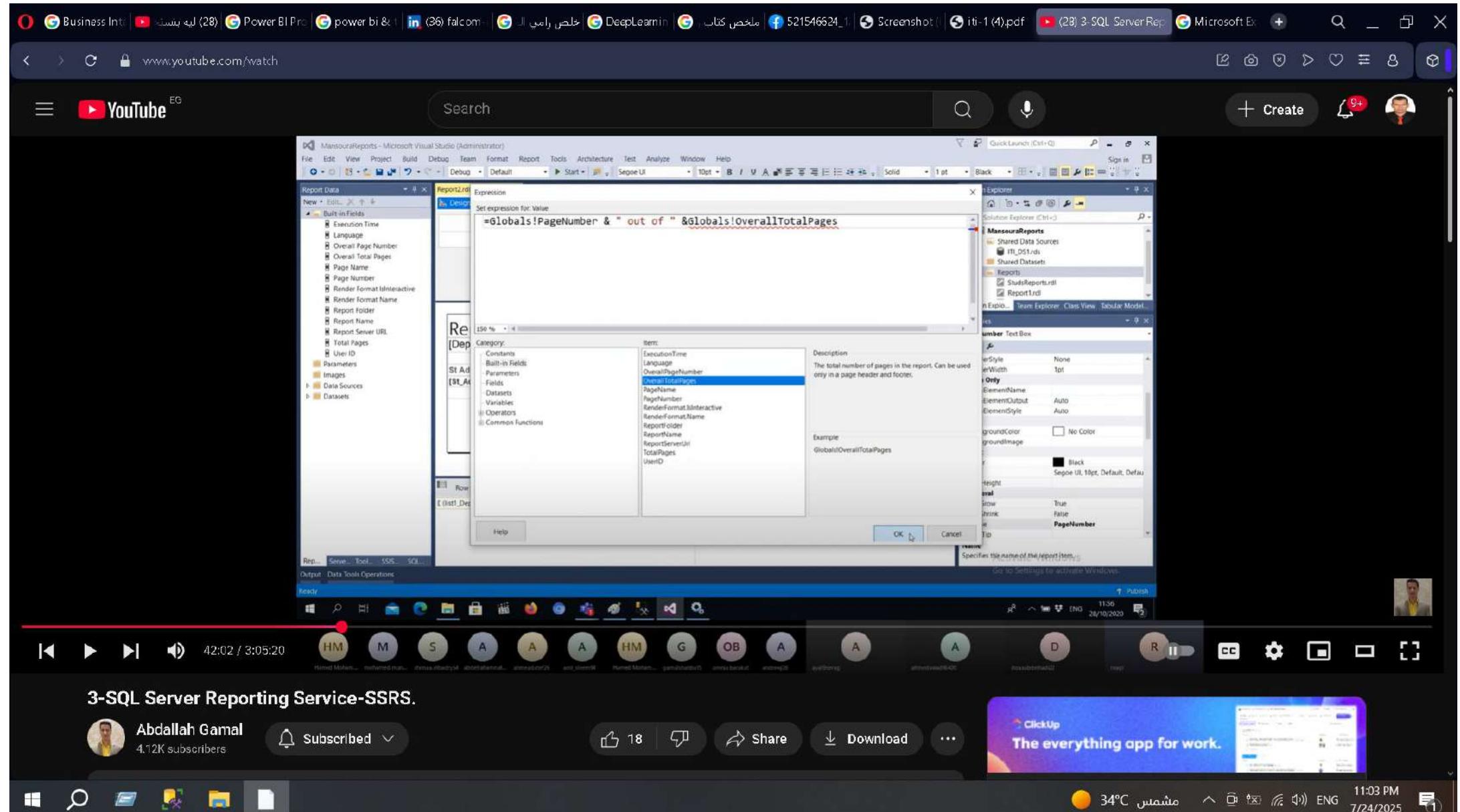












Business Intel | YouTube (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_1 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

Built-in Fields

- Execution Time
- Language
- Overall Page Number
- Overall Total Pages
- Page Name
- Page Number
- Render Format IsInteractive
- Render Format Name
- Report Footer
- Report Name
- Report Server URL
- Total Pages
- User ID

Parameters

Images

Data Sources

Datasets

ReportId [Design] ReportId.rdl

Report Wizard

Design the Query

Specify a query to execute to get the data for the report.

St Address St Id St

St Address	St Id	St
Alex	2	
Cairo	3	

Query Builder...

Query string:

Help < Back Next > Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

- Shared Data Sources
- IT_DSI.rdl
- Shared Databases
- Reports
 - StatisReports.rdl
 - Report1.rdl
 - Report2.rdl

Output: Data Tools Operations

This item does not support previewing

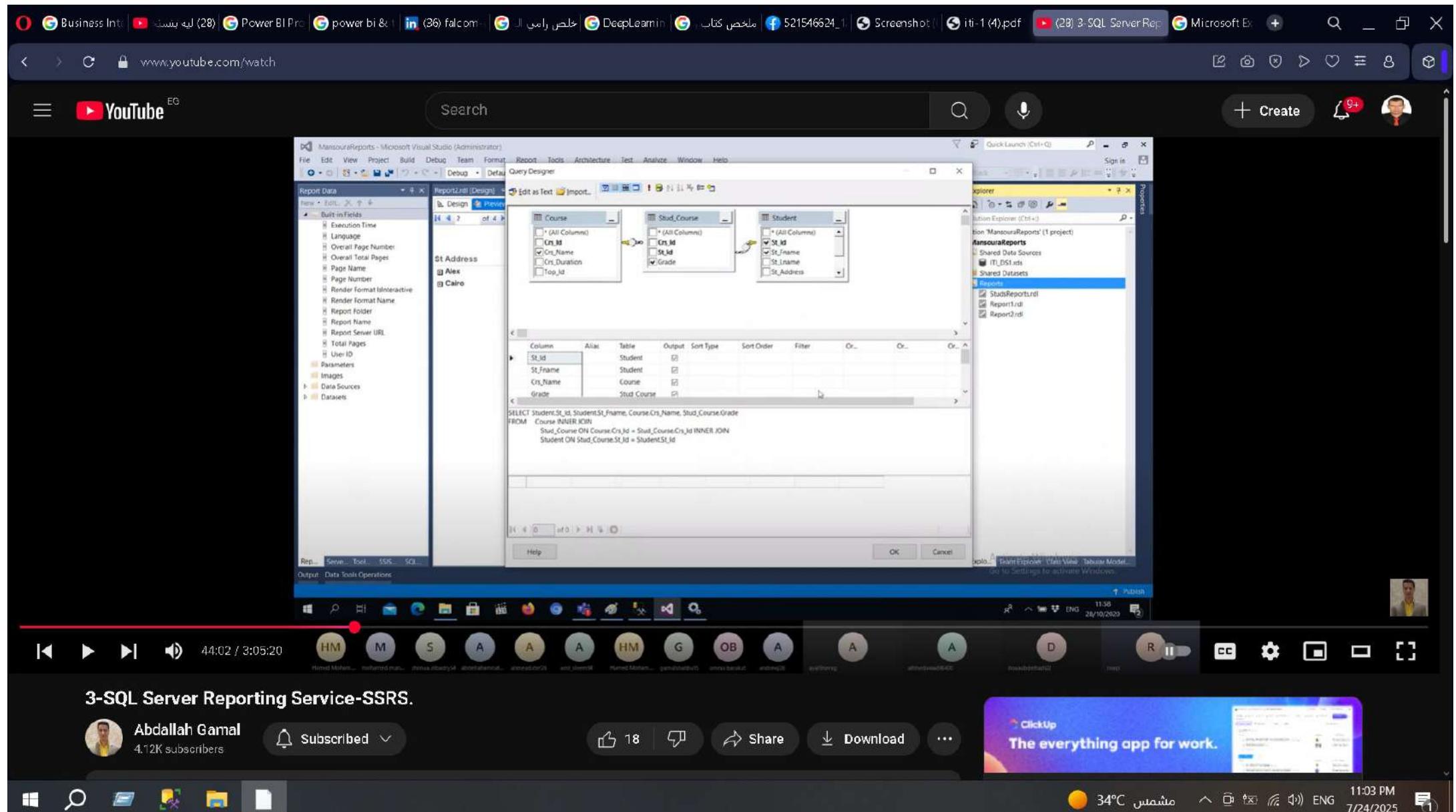
42:52 / 3:05:20

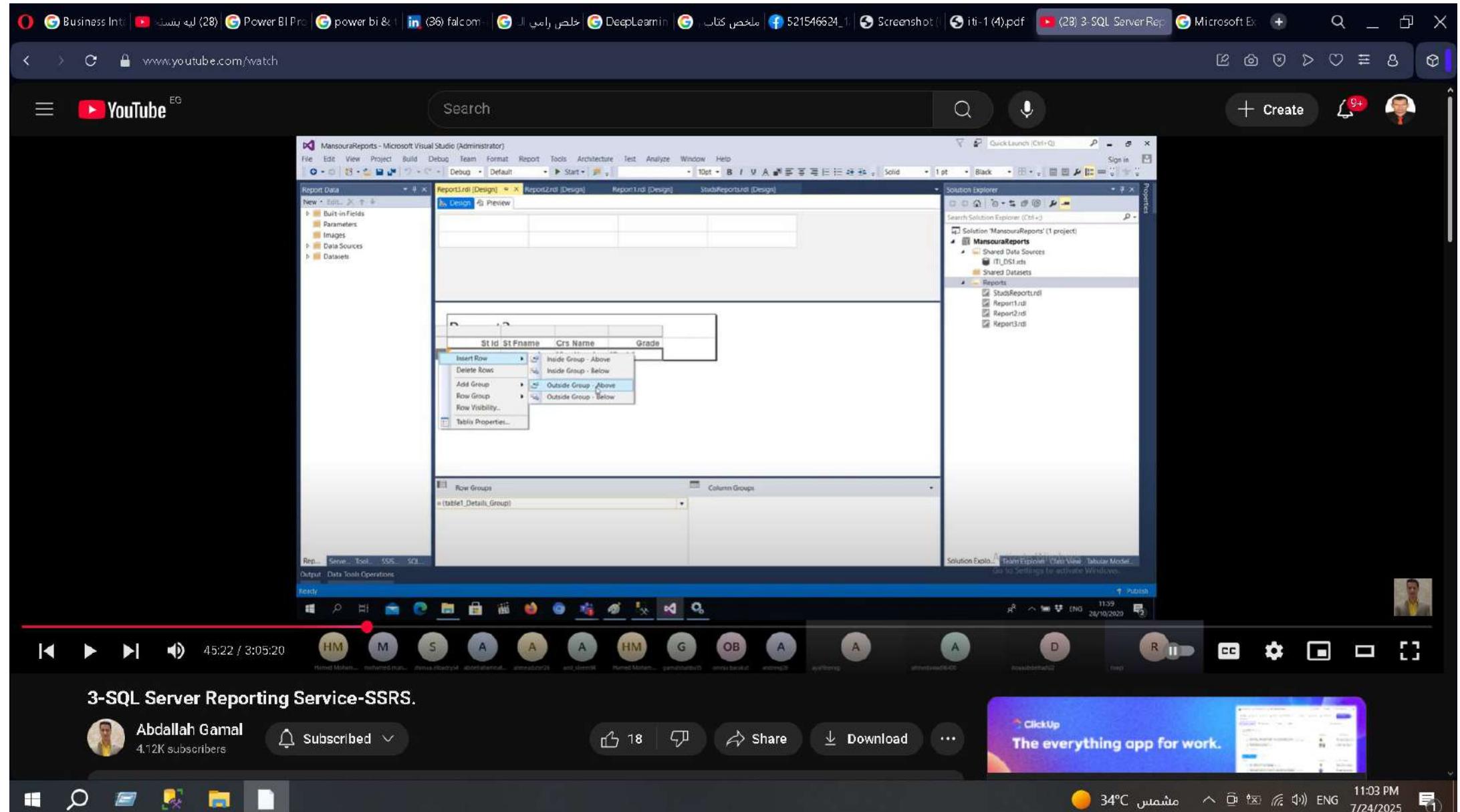
HM M S A A HM G OB A A D R

Subscribed 18 Share Download ...

ClickUp
The everything app for work.

34°C 11:03 PM 7/24/2025





Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | + | Search | | | | | | | | | | | | |

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

ReportId Expression

Set expression for Value
= "total stud= "& CountRows()

Category: Item: Description

Common Functions

CountRows

CountDistinct

CountRows

Avg

Count

CountDistinct

First

Last

Max

Min

StdDev

StdDevS

Sum

Var

VarP

RunningValue

Aggregate

Example

=CountRows()
<CountRows("GroupByInitial")>
<CountRows("GroupByInitial",Recursive)>

OK Cancel

Report Explorer (Ctrl+Q)

MansourReports (1 project)

Shared Data Sources

IT_DS1.rds

Shared Datasets

Reports

StudsReports.rdl

Report1.rdl

Report2.rdl

Report3.rdl

File Edit View Project Build Format Tools Architecture Test Analyze Window Help

Report Design

Report Data

Report Explorer

Solution Explorer

Toolbox

Properties

Task List

Output

Data Tools Operations

Ready

46:21 / 3:05:20

HM M S A A HM G OB A A D R

Abdallah Gamal

4.12K subscribers

Subscribed

18

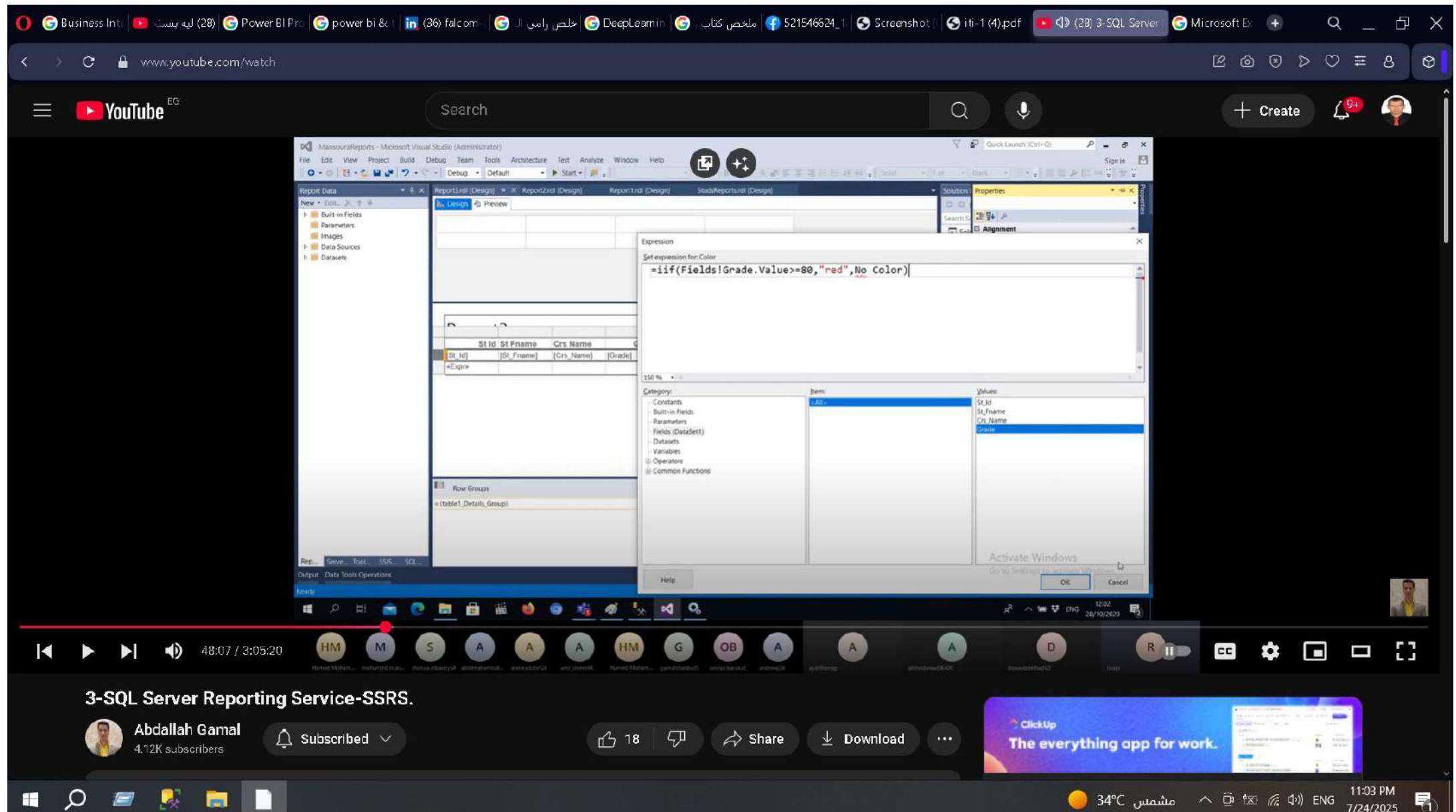
Share

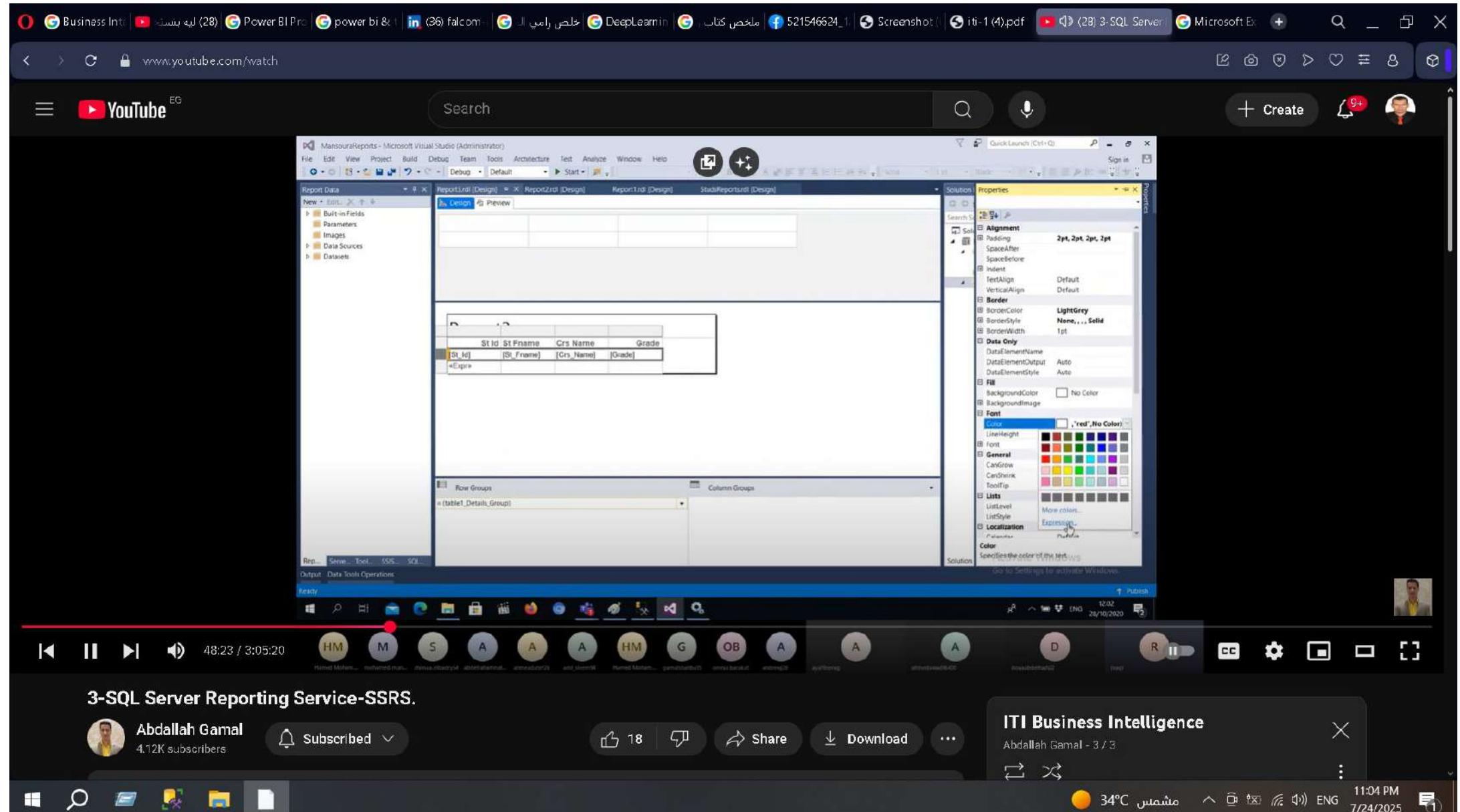
Download

ClickUp

The everything app for work.

34°C مشتمل ENG 11:03 PM 7/24/2025





Business Intell... | ... (28) | Power BI Pro | power bi & | ... (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex... | + | Microsoft Edge | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

ManjuraReports - Microsoft Visual Studio (Administrator)

Report Data

New + Edit X

Built-in Fields
Parameters
Images
Data Sources
Datasets

ReportUri [Design] | ReportZrd [Design] | ReportId [Design] | StdsReportsrd [Design]

ReportUri [Design] | ReportZrd [Design] | ReportId [Design] | StdsReportsrd [Design]

Properties

Alignment

Expression

Set expression for: Color

=iif(Fields!Grade.Value>=80,"red","No Color")

Category:

- Constants
- Built-in Fields
- Parameters
- Fields (DataSet)
- Datasets
- Variables
- Operators
- Common Functions

Item: [Color]

Values:  More colors...

Activate Windows

OK Cancel

Report Uri | Serve... | Tool... | SSIS... | SQL

Output | Data Tools Operations

Ready

48:28 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

ITI Business Intelligence

34°C مشتمل ENG 11:04 PM 7/24/2025

ITI Business Intelligence

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

ManjuraReports - Microsoft Visual Studio (Administrator)

Report Data

ReportUri [Design] ReportZrd [Design] ReportId [Design] StdReportsrd [Design]

Report Uri Design Preview

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Report Uri [Design] ReportZrd [Design] ReportId [Design] StdReportsrd [Design]

Properties

Set expression for: Color

=iif(Fields!Grade.Value>=80,"red","No Color")

Category: Constants, Built-in Fields, Parameters, Fields (DataSet), Datasets, Variables, Operators, Common Functions

Item: red

Values: A color palette with various colors, including red.

More colors...

Activate Windows

Help

Output Data Tools Operations

Ready

48:31 / 3:05:20

HM M S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:04 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data | Report1.rdl [Design] | Report2.rdl [Design] | Report3.rdl [Design] | StudentReports.rdl [Design]

Report3

StdId	StdName	Crs Name	Grade
4	C Saly	C Programming	90
5		C Programming	90
8		C Programming	70
9	Saly	C Programming	70
4		HTML	80
5		HTML	110
6	Heba	HTML	100
9	Saly	Java	100
10	Fady	Java	100
5		OOP	60
6	Heba	OOP	80
10	Fady	OOP	110
4		Oracle	60
5		Oracle	70
6	Heba	SQL Server	90
4		Unix	100
5		Unix	100
8		Web Service	60

total studs= 18

Report Data | Report1.rdl | Report2.rdl | Report3.rdl | StudentReports.rdl

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- MansouraReports
 - Shared Data Sources
 - IT_DS1.rds
 - Shared Datasets
 - Reports
 - StudentReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Report3.rdl

Report Data | Report1.rdl | Report2.rdl | Report3.rdl | StudentReports.rdl

Output | Data Tools Operations

Ready

48:36 / 3:05:20

HM M S A A HM G OB A A D R

Subscribed 18 Share Download ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:04 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي ال | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Microsoft Edge | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

New... Edit... X +

Built-in Fields
Parameters
Images
Data Sources
Datasets

ReportUnit [Design] X ReportZdrill [Design] ReportId [Design] stdReports.rpt [Design]

Report Unit Design

Properties

Alignment

Expression

Set expression for BackgroundColor

=iif(RowNumber("DataSet1") Mod 2 =0,"gray","No Color")

Category: Constants, Built-in Fields, Parameter, Fields (DataSet), Datasets, Variables, Operators, Arithmetic, Comparison, Concatenation, Logical/Bitwise, Bit Shift, Common Functions

Item: Mod

Description: Raises a number to the power of another number.

Example: =FieldsNumberCarsOwned.Value ^ 3

Activate Windows

OK Cancel

Report Unit Tools SQL Output Error List Data Tools Operations

Ready

51:58 / 3:05:20

HM M S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:04 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

Report1.rdl [Design] Report2.rdl [Design] Report3.rdl [Design] StuReports.rdl [Design]

Report3

Num	St Id	St Fname	Crs Name	Grade
1	4	C Programming	90	
2	5	C Programming	85	
3	8	C Programming	70	
4	9 Saly	C Programming	76	
5	4	HTML	80	
6	3	HTML	100	
7	6 Heba	HTML	100	
8	7 Huda	HTML	100	
9	10 Fady	Java	100	
10	5	OOP	80	
11	6 Heba	OOP	80	
12	7 Huda	OOP	100	
13	4	Oracle	80	
14	5	Oracle	76	
15	6 Heba	SQL Server	90	
16	8	DB	100	
17	5	Unix	100	
18	9	Networking	80	

total students: 18.

Report Data | Report1.rdl | Report2.rdl | Report3.rdl | StuReports.rdl | Solution Explorer | Properties | Task List | Output | Error List | Data Tools | Operations

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansouraReports

Shared Datasets

Reports

StuReports.rdl

Report1.rdl

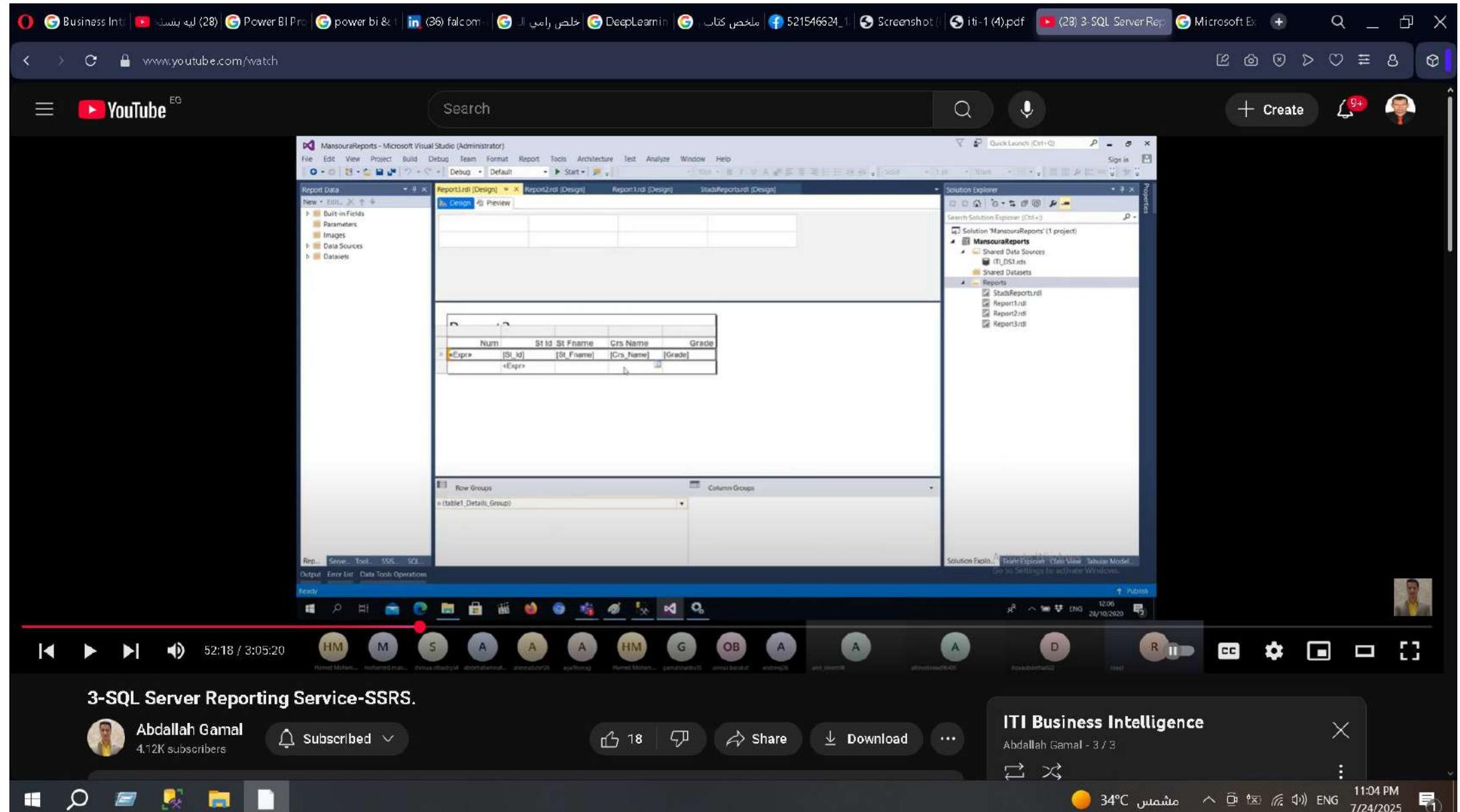
Report2.rdl

Report3.rdl

Output | Error List | Data Tools | Operations

Ready

HM M S A A HM G OB A A D R 52:08 / 3:05:20 Subscribed 18 Share Download ITI Business Intelligence Abdallah Gamal - 3 / 3 34°C مشتمل ENG 11:04 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report1.rdl [Design] Report2.rdl [Design] Report3.rdl [Design] StudsReports.rdl [Design]

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

Name: Image1

ToolTip:

Select the image source: Embedded

Use this image: Import...

Report1.rdl Tool... SQL...

Repo... Serv... Tool... SSIS... SQL...

Output Error List Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansourReports (1 project)

- Shared Data Sources
- IT_DS1.rds
- Shared Datasets
- Reports
- StudsReports.rdl
- Report1.rdl
- Report2.rdl
- Report3.rdl

Help OK Cancel

53:58 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

18 Share Download ...

34°C مشتمل ENG 11:04 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report1.rdl [Design] Report2.rdl [Design] Report3.rdl [Design] StduReports.rdl [Design]

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report3

Num	St Id	St Fname	Crs Name	Grade
1	4		C Programming	90
2	5		C Programming	90
3	8		C Programming	70
4	9 Saly		C Programming	70
5	4		HTML	80
6	5		HTML	110
7	6 Heba		HTML	100
8	9 Saly		Java	100
9	10 Fady		Java	100
10	5		OOP	80

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- MansouraReports
 - Shared Data Sources
 - IT_DS1.rds
 - Shared Datasets
 - Reports
 - StduReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Report3.rdl

Deploy succeeded

Output Enter List Data Tools Operations

R 12:06 ENG 28/10/2020 Publish

54:18 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:04 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

ReportItems

Pointer

Text Box

Line

Table

Matrix

Rectangle

List

Image

Subreport

Chart

Gauge

Map

Data Bar

Sparkline

Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Expression

Set expression for Hidden

=iif(Fields!Grade.Value>=90,False,true)

Category:

- Constants
- Built-in Fields
- Parameters
- Fields (DataSet)
- Datasets
- Variables
- Operators
- Common Functions

Item:

Values:

- All
- St.ID
- St.Fname
- Cs.Name
- Grade

OK Cancel

Properties

image1 image

MIME type

Name image1

Source Embedded

ToolTip smile

Value smile

Localization

LabelLocID

ToolTipLocID

Other

Bookmark

CustomProperties

DocumentMapLabel

Parent

RepeatWith

ZIndex 0

Position

Location 0in, 0in

Size 1in, 0.5483in

Published Report Part

ComponentDescription

ComponentID

HideUpdateNotification False

SourcePath

SynData

Size

Padding Opt, Opt, Opt, Opt

Sizing FitProportional

Visibility

Hidden False

ToggleItem

Hidden Indicates whether the report item is initially hidden.

Get 10 settings to activate Windows

Repo... Server... Tool... SSIS... SQL...

Output: Error List Data Tools Operations

Deploy succeeded

55:08 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

Indicator properties

General

Action

Value: [Sum(Grade)]

States Measurement Unit: Numeric

Indicator states:

Icon	Color	Start	End
Red	FF C0 43 3A	0	70
Yellow	FF E8 D6 2E	71	89
Green	FF 79 C7 5B	90	100

OK Cancel

Solution Explorer

MansourReports

Shared Data Sources

ITL_DSI.rdl

Shared Datasets

Reports

StudyReports.rdl

Report1.rdl

Report2.rdl

Report3.rdl

Repo... Server Tool... SSIS... SQL

Output Error List Data Tools Operations

Ready

56:58 / 3:05:20

M HM S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report1.rdl [Design] Report2.rdl [Design] Report3.rdl [Design] stdReports.rdl [Design]

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Report3

Num	St Id	St Fname	Crs Name	Grade
1	4		C Programming	90
2	5			
3	8			
4	9	Saly		
5	4			
6	5			
7	6	Heba		
8	9	Saly		
9	10	Fady	Java	100
10	5	OOP		80

Toolbox

Report Items

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Configuration: Active(Debug) Platform: N/A Configuration Manager...

Build

- ErrorLevel
- OutputPath
- Report1.rdl
- Report2.rdl
- Report3.rdl
- Report4.rdl

Debug

- Configuration
- OverwriteDatenre
- OverwriteDataSources
- TargetDatenreFolder
- TargetReportFolder
- TargetReportPartFolder
- TargetServerURL
- TargetServerVersion

StartItem

The report to execute when you start the debugger:

Report1.rdl

OK Cancel Apply

Solution Explorer

Search Solution Explorer (MnE)

MansourReports

- Shared Data Sources
- IT_DSI.rds
- Shared Datasets

Report1.rdl

Report2.rdl

Report3.rdl

Report4.rdl

Report Parts

MansourReports

Report Parts

http://localhost/ReportServer

SQL Server 2014 or later

12:11 28/10/2023

57:38 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

18 Subscribed Download ...

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report3.rdl [Design] Report2.rdl [Design] Report1.rdl [Design] StuReports.rdl [Design]

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Toolbox

ReportItems

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report3

Num	St Id	St Fname	Crs Name	Grade	Icon
1	4		C Programming	90	Smiley Face
2	5		C Programming	90	Smiley Face
3	8		C Programming	70	Red Flag
4	9 Saly		C Programming	70	Red Flag
5	4		HTML	80	Yellow Flag
6	5		HTML	110	Smiley Face
7	6 Heba		HTML	100	Smiley Face
8	9 Saly		Java	100	Smiley Face
9	10 Fady		Java	100	Smiley Face
10	5		OOP	80	Yellow Flag

Solution Explorer

Search Solution Explorer (Ctrl + F)

MansouraReports

- Shared Data Sources
- IT_DS1.rds
- Shared Datasets
- Reports
 - StuReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Report3.rdl

Output Error List Data Tools Operations

Deploy succeeded

57:58 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي ال | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Team Tools Architecture Test Analyze Window Help

ReportList [Design] | Grades.rdl [Design] | Report2.rdl [Design] | Report3.rdl [Design] | SalesReports.rdl [Design]

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

ReportList [Design] | Grades.rdl [Design] | Report2.rdl [Design] | Report3.rdl [Design] | SalesReports.rdl [Design]

Properties

textbox1 Text Box

Set expression for: BackgroundColor

=iif(Sum(Fields!Quantity.Value)>=300,"yellow","No Color")

Category:

- Constants
- Built-in Fields
- Parameter
- Fields (DataSet)
- Datasets
- Variables
- Operators
- Common Functions

Item: All

Values:

- ProductID
- SalesmanName
- Quantity

Activate Windows

OK Cancel

1:01:28 / 3:05:20

M HM S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

ReportUri [Design] | Gradesrd [Design] | ReportZrd [Design] | ReportUrd [Design] | StudReportsrd [Design]

File Edit View Project Build Tools Architecture Test Analyze Window Help

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

ReportUri [Design] | Gradesrd [Design] | ReportZrd [Design] | ReportUrd [Design] | StudReportsrd [Design]

Properties

Alignment: Center

Padding: 2pt, 2pt, 2pt, 2pt

SpaceAfter: 0pt

SpaceBefore: 0pt

Indent: 0pt

TextAlign: Center

VerticalAlign: Default

Border: LightGrey

BorderColor: LightGrey

BorderStyle: Solid

BorderWidth: 1pt

Data Only

DataElementName: SalesmanName

DataElementOutput: Auto

DataElementStyle: Auto

Fill: LightBlue

BackgroundColor: LightBlue

Font

Color: Black

LineHeight: 14pt

Font

General

CanGrow: True

CanShrink: False

ToolTip:

Lists

ListLevel: 0

ListStyle: None

Localization

Product: Product

BackgroundColor: LightBlue

Specifies the background color of the item.

Output: Error List Data Tools Operations

Repo... | Serv... | Tool... | SSIS... | SQL

Ready

1:02:38 / 3:05:20

HM S A A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C 11:05 PM 7/24/2025

Windows Taskbar

YouTube Player Controls

Microsoft Edge Taskbar

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report3

	1	2	3	4	Quantity
ahmed	130	160	150	130	440
ali	460	170	30	90	960
khalid	170	190	30	90	480
Total	760	520	180	420	1880

Toolbox

ReportItems

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansouraReports

- Shared Data Sources
- IT_DSI.rds
- Shared Datasets
- Reports
- StudyReports.rdl
- Report1.rdl
- Report2.rdl
- Grades.rdl
- Report3.rdl

Report1.rdl

Report2.rdl

Report3.rdl

Grades.rdl

StudyReports.rdl

Deploy succeeded

Output Error List Data Tools Operations

1:03:08 / 3:05:20

M H M S A A HM G OB A A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:05 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch | YouTube EG | Create | 94 | Sign in | Quick Launch (Ctrl+Q) | Search | Microphone | + Create | 8 | X |

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Reports

Toolbox ReportItems

Report1.rdl [Design] Report1.rdl Preview

Report3

salesmanName [Sum]

Total [Sum]

Row Groups Ematrix1_SalesmanName

ReportItems

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report1.rdl Report2.rdl Report3.rdl Grades.rdl Report4.rdl

Column Line Shape Bar Area Range Scatter Polar

Line

Bar

Area

Range

Scatter

Polar

3-D Exploded Pie

Area

Range

Scatter

Polar

OK Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

Shared Data Sources

IT_DSI.rds

Shared Datasets

Reports

StudyReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Report3.rdl

12:17 28/10/2020

1:03:28 / 3:05:20

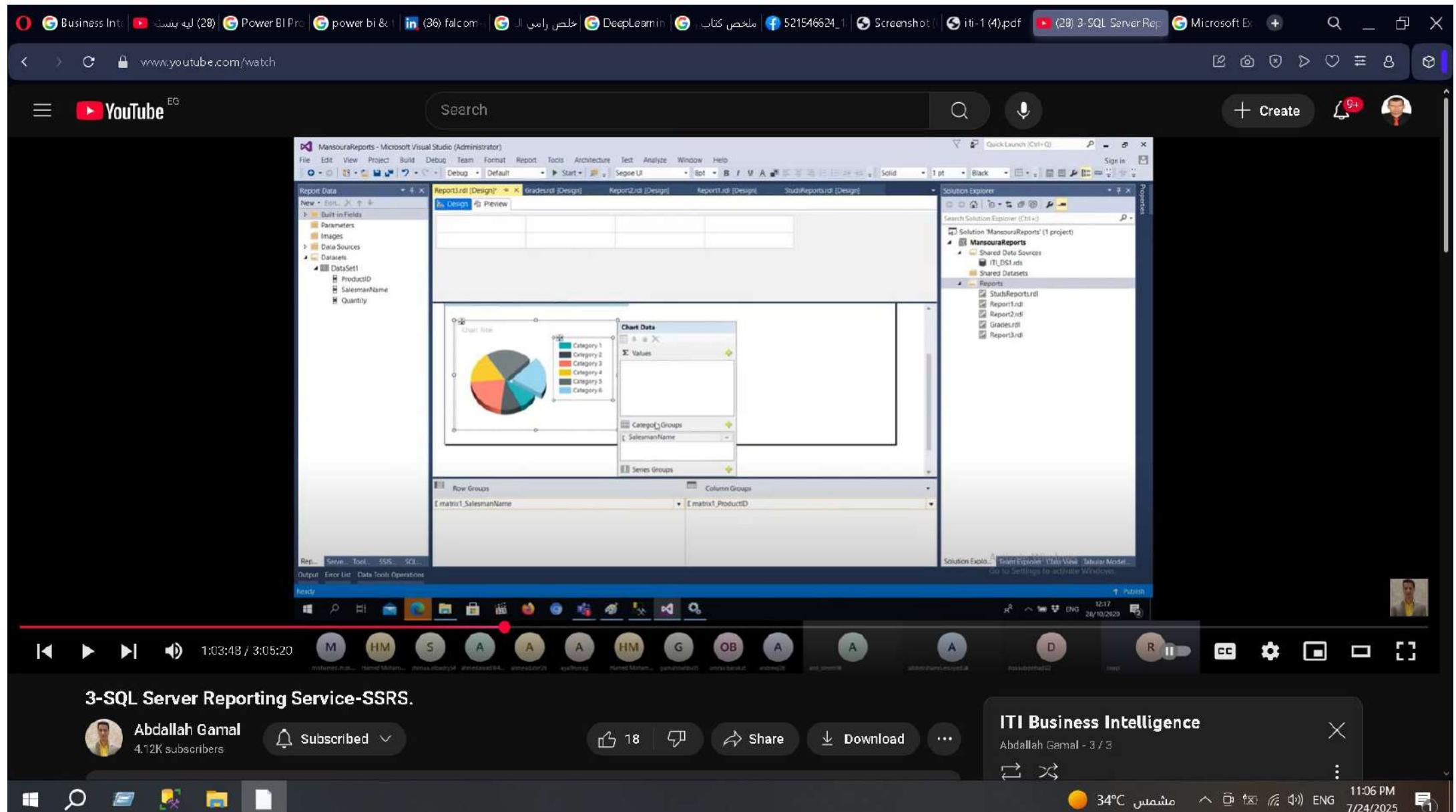
M HM S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:06 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Tools Archive

Report1.rdl [Design] | Preview

Toolbox

- Report Items
 - Pointer
 - Text Box
 - Line
 - Table
 - Matrix
 - Rectangle
 - List
 - Image
 - Subreport
 - Chart
 - Gauge
 - Map
 - Data Bar
 - Sparkline
 - Indicator
 - General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report1.rdl [Design]

SalesmanName

Total

Row Groups

Matrix:1_SalesmanName

Select Chart Type

Column

Line

Shape

Bar

Area

Range

Scatter

Polar

OK Cancel

Quick Launch (Ctrl+Q)

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

- Shared Data Sources
 - ITL_DS1.rdl
- Shared Datasets
- Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Report3.rdl

Properties

Team Explorer | Chat View | Tabular Model

Publish

1:05:18 / 3:05:20

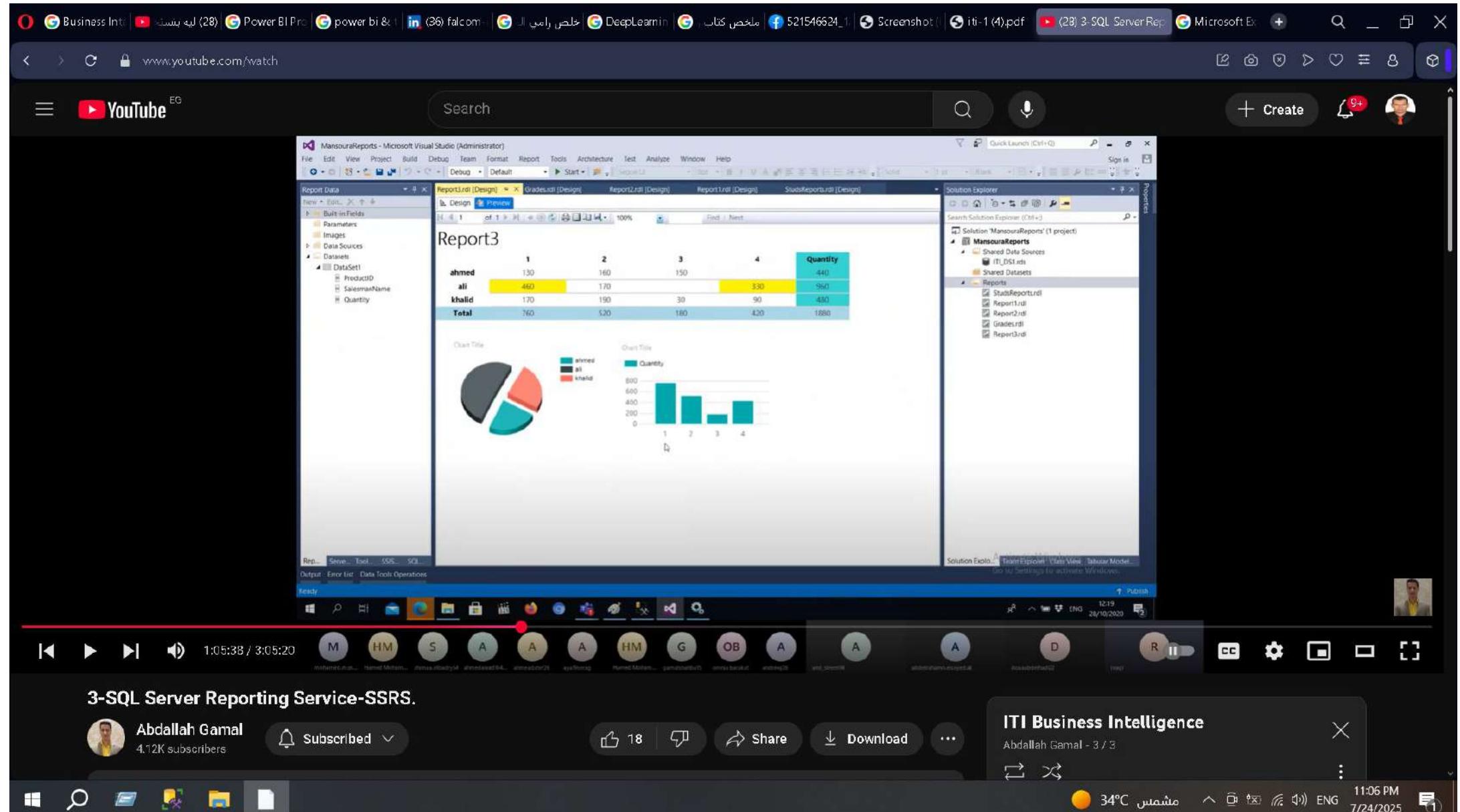
M M HM S A A HM G OB A A D R

Subscribed 18 Share Download ...

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:06 PM 7/24/2025



Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | خلص رامي الـ | 521546624_ | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | X

www.youtube.com/watch

YouTube EG

Search

Block1 - Excel (Product Activation Failed)

File Home Insert Page Layout Formula Data Review View Add-ins Team Tell me what you want to do...

Cut Copy Paste Format Painter

B I U

Font Size

Wrap Text

General Conditional Format as Table

Number %

Format Cells

Normal Good Bad Neutral

Insert Delete Format

AutoSum

Sort & Filter

Cells Editing

A12

Qty Column Labels Row Labels 2007 Grand Total

1	Qty	Column Labels	2	Row Labels	2007	Grand Total
3				Accessories	110 195	305
4				Books	80 75	155
5				Clothing	110 75	185
6				Components	30 85	115
7				Grand Total	330 430	760

Calendar Quarter

- Quarter1
- Quarter2
- Quarter3
- Quarter4

2007

Product Name

- Accessories
- Books
- Clothing
- Components

Activate Windows

Ready

Sheet1

1:08:38 / 3:05:20

M HM S A A HM G OB A A D R

Subscribed 18 Share Download

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:06 PM 7/24/2025

Business Intel | (28) | Power BI Pro | power bi & | (36) falcom | DeepLearnin | ملخص كتاب | 521546624 | Screenshot | iti-1 (4).pdf | (28) 3-SQL Server Rep | Microsoft Ex | + | Search | Microsoft Edge | www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report4.rdl [Design] Report3.rdl [Design] Graph.rdl [Design] Grade.rdl [Design] Report2.rdl [Design]

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

Report4

	2005	2006	2007	2008
Accessories	20235.364608	92735.351714	590257.585193	548844.582411
Bikes	10661722.283160	26486358.197382	34923290.240858	22579811.983131
Clothing	34376.335246	485587.156040	1011984.504384	588594.532331
Components	615474.978800	3610092.471689	5485514.831961	2091511.003980

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- MansouraReports
 - Shared Data Sources
 - IT_DSI.rds
 - Shared Datasets
 - Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grade.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl

Report4.rdl [Design] Report3.rdl [Design] Graph.rdl [Design] Grade.rdl [Design] Report2.rdl [Design]

Output Error List Data Tools Operations

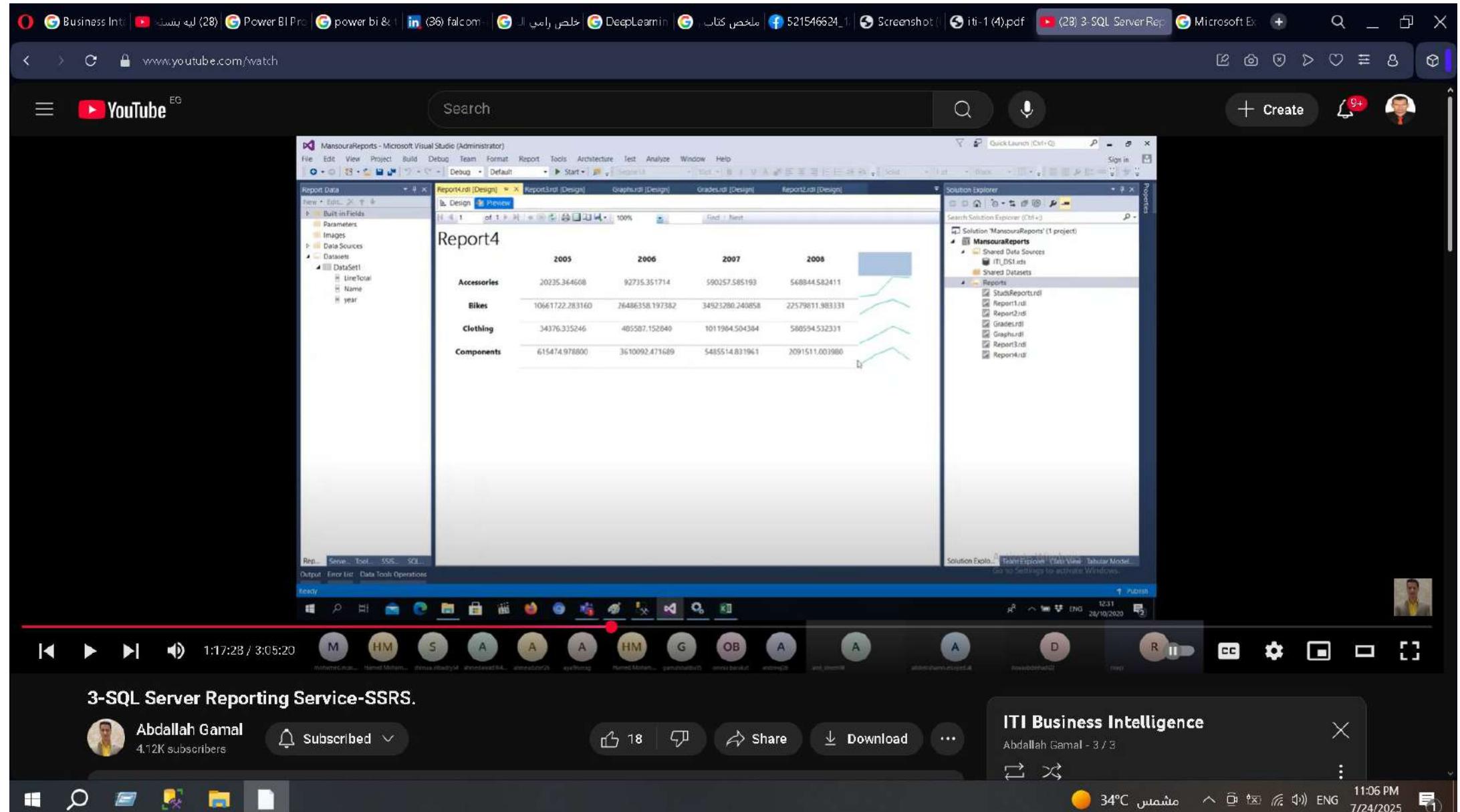
1:15:58 / 3:05:20

M HM S A A HM G OB A A D R

ITI Business Intelligence

Abdallah Gamal - 3 / 3

34°C مشتمل ENG 11:06 PM 7/24/2025



Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Object Explorer

SQLQuery1.sql - [local].ITI (DESKTOP-VF3OP23\Ram (S1)) - Microsoft SQL Server Management Studio

```
create proc Getstuds
as
Select *
from student
where st_address='cairo'

create proc GetStByAge
```

Messages

Command(s) completed successfully.

Output

Ready

File Edit View Query Project Debug Tools Window Help

Quick Launch (Ctrl+Q)

Properties Template Explorer

Local (130 RTM) : DESKTOP-VF3OP23\Ram (S1) : ITI : 00:00:00 : 0 rows

Query executed successfully.

HM M A A A S G A OB R 1:40:46 / 3:05:20

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 11:58 PM 7/24/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Microsoft SQL Server Management Studio - SQLQuery1.sql - [local].ITI (DESKTOP-VF50P23)\Rami (S11)

```
File Edit View Query Project Debug Tools Window Help
New Query Execute Debugger
Select *
from student
where st_address='cairo'

create proc GetStudByAge @age1 int,@age2 int
as
select *
from Student
where st_age |
```

Messages: Command(s) completed successfully.

Output: Ready

Query executed successfully.

Local (13.0 RTM) - DESKTOP-VF50P23\Rami (S11) - ITI - 00:00:00 - 0 rows

1:41:14 / 3:05:20

D H M M A A A S G A OB R CC Settings Full Screen Minimize Maximize

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 11:58 PM 7/24/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | Google | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Object Explorer

SQLQuery1.sql - [local].ITI (DESKTOP-VF50P23)\Rami (S1) - Microsoft SQL Server Management Studio

```
from student
where st_address='cairo'

create proc GetStudByAge @age1 int,@age2 int
as
select *
from Student
where st_age between @age1 and @age2
```

Messages

Command(s) completed successfully.

Output

Ready

Query executed successfully.

(Local) (130 RTM) : DESKTOP-VF50P23\rami (S1) - ITI : 00:00:00 - 0 rows

1:41:30 / 3:05:20

D H M M A A A S G A OB R CC Gears

3-SQL Server Reporting Service-SSRS.

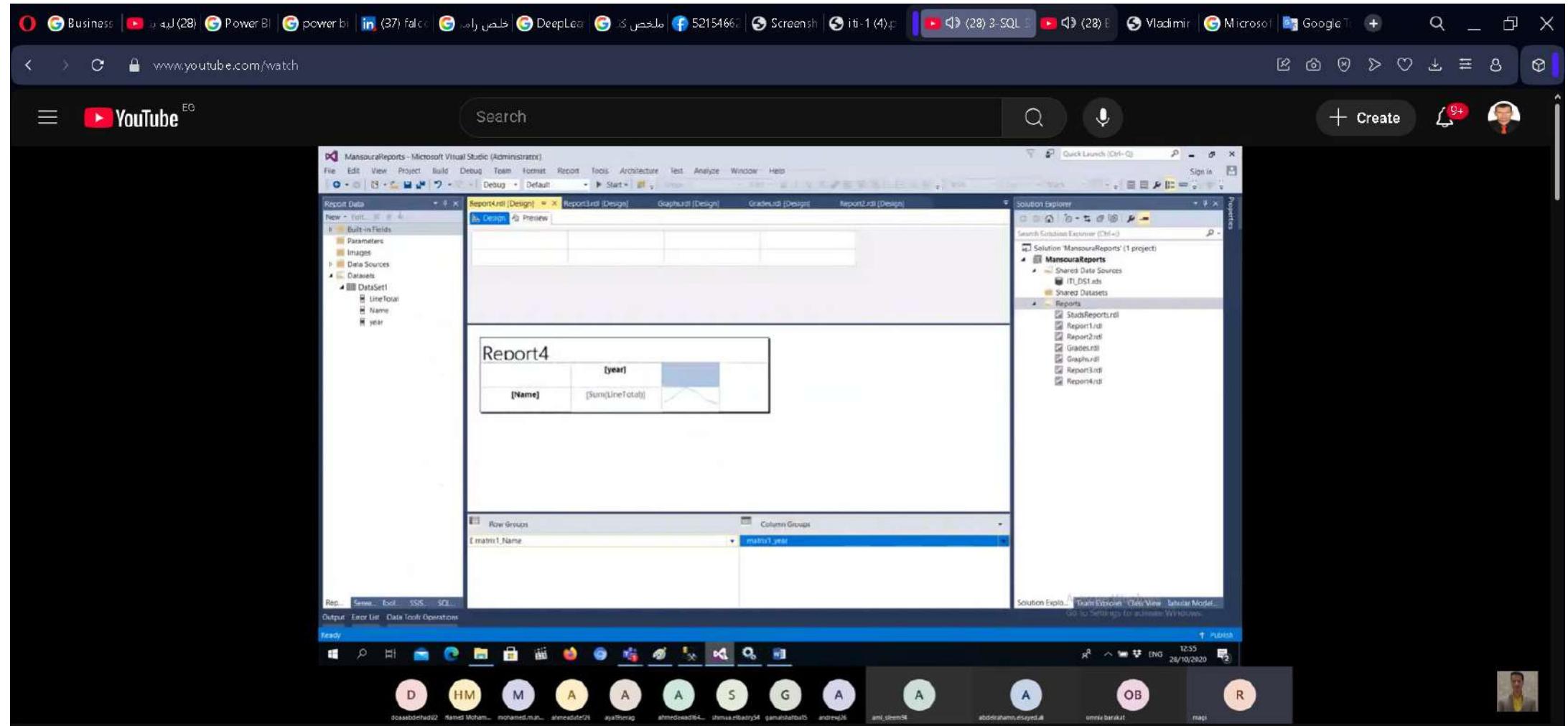
Abdallah Gamal

Subscribed 4.12K subscribers

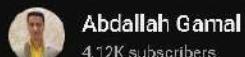
18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 11:58 PM 7/24/2025



3-SQL Server Reporting Service-SSRS.



Abdallah Gamal
4.12K subscribers

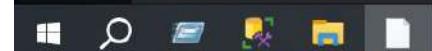
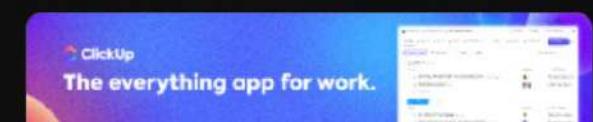


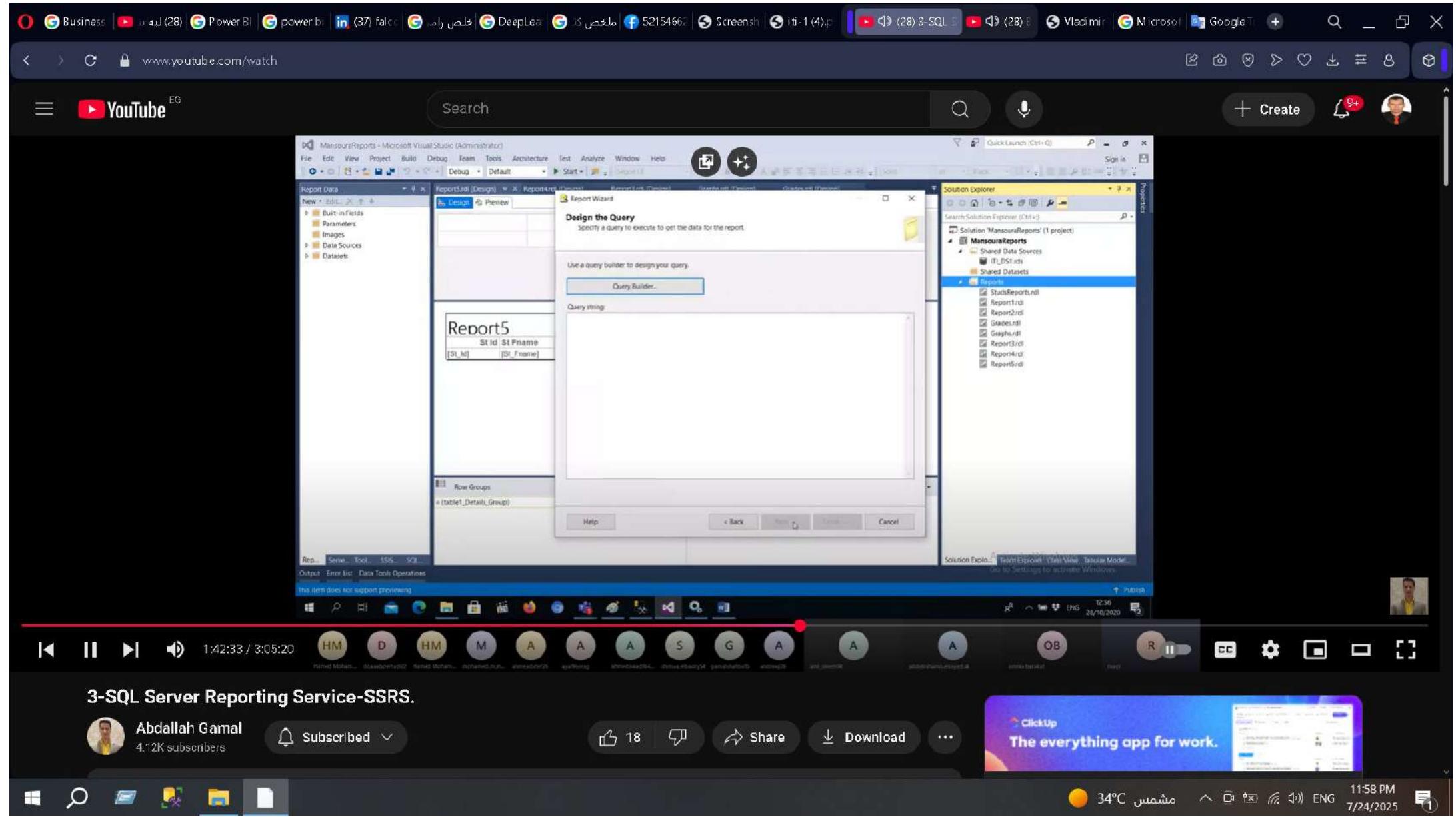
18

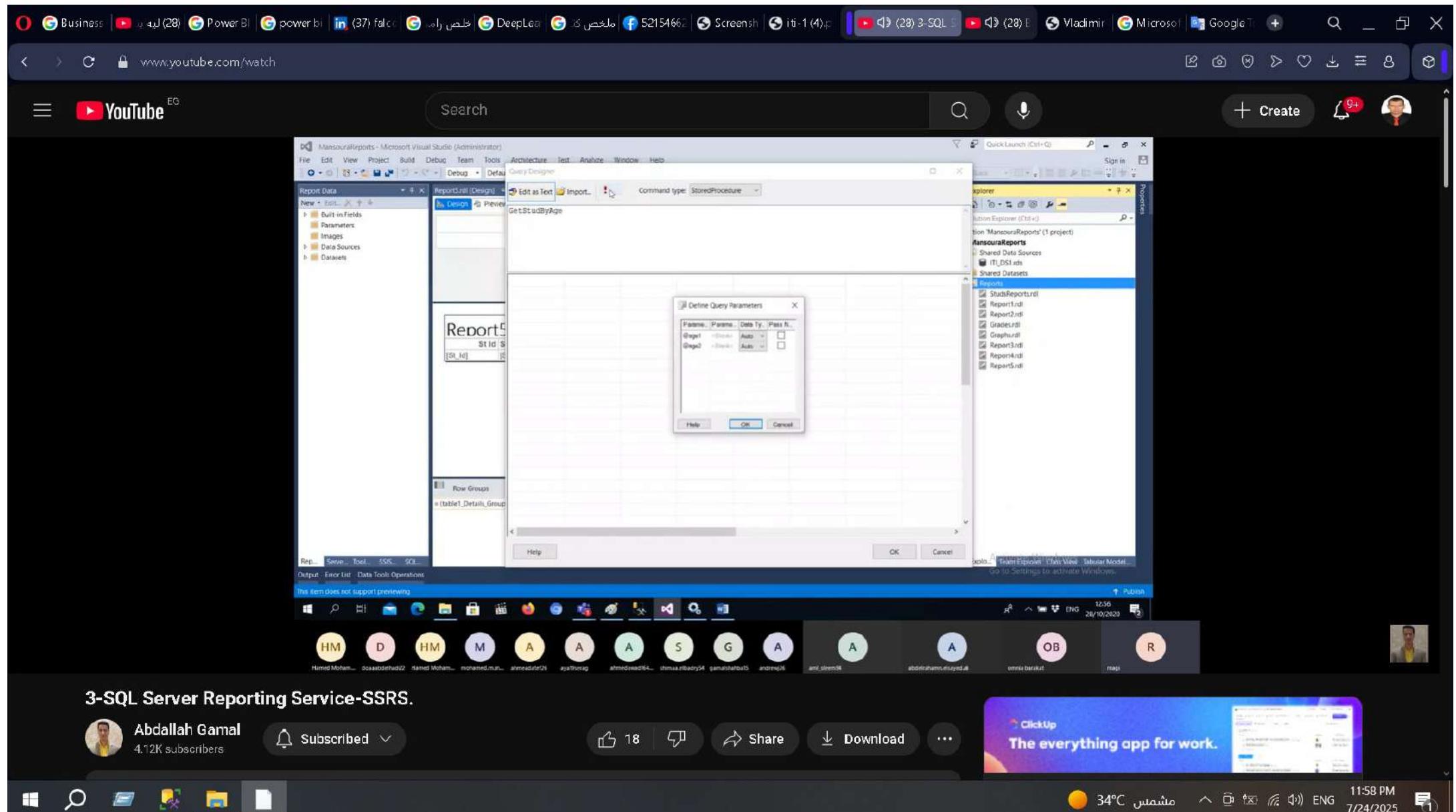
31

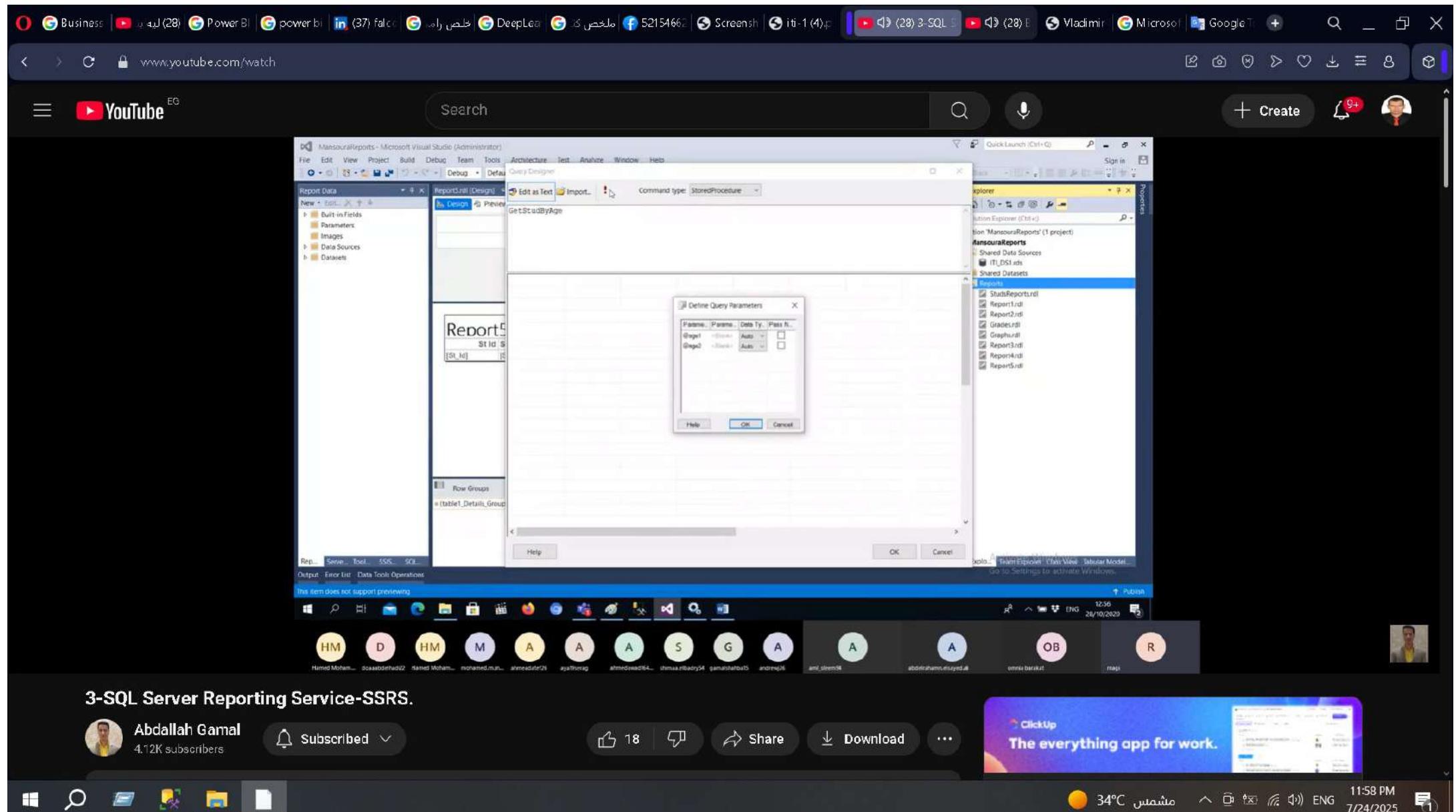


 Download









Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

ReportId1 [Design] ReportId2 [Design] ReportId3 [Design] ReportId4 [Design] ReportId5 [Design]

Report6

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super
[St_Id]	[St_Fname]	[St_Lname]	[St_Address]	[St_Age]	[Dept_Id]	[St_super]

Row Groups: (table1_Details_Group)

Column Groups:

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

MansouraReports

Shared Data Sources

ITL_DS1.rdl

Shared Datasets

Reports

StudentReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graph.rdl

Report3.rdl

Report4.rdl

Report5.rdl

Report6.rdl

Output: Excel List, Data Tools: Operations

This item does not support previewing

Rep... Serv... Tool... SSIS... SQL

HM D HM M A A A S G A OB R

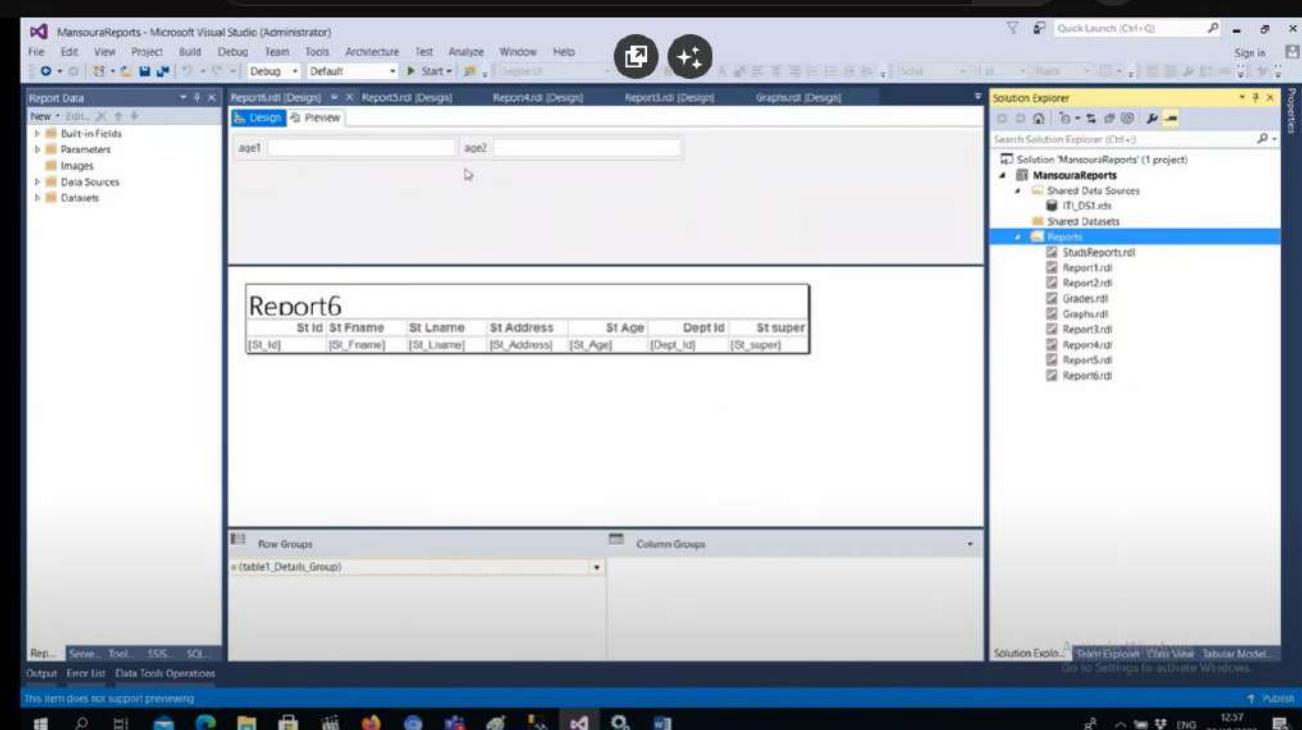
1:43:03 / 3:05:20

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 11:58 PM 7/24/2025



Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

ReportId1 [Design] ReportId2 [Design] ReportId3 [Design] ReportId4 [Design] GraphId1 [Design]

Report6

St_Id	St_Fname	St_Lname	St_Address	St_Age	Dept_Id	St_super
[St_Id]	[St_Fname]	[St_Lname]	[St_Address]	[St_Age]	[Dept_Id]	[St_super]

Row Groups: <(table1_Details_Group)>

Column Groups:

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

MansouraReports

Shared Data Sources

ITL_DSI.rdl

Shared Datasets

Reports

StudentReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graph.rdl

Report3.rdl

Report4.rdl

Report5.rdl

Report6.rdl

Output: Error List, Data Tools, Operations

Rep... Serve... Tool... SSIS... SQL

This item does not support previewing

HM D HM M A A A S G A A OB R

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

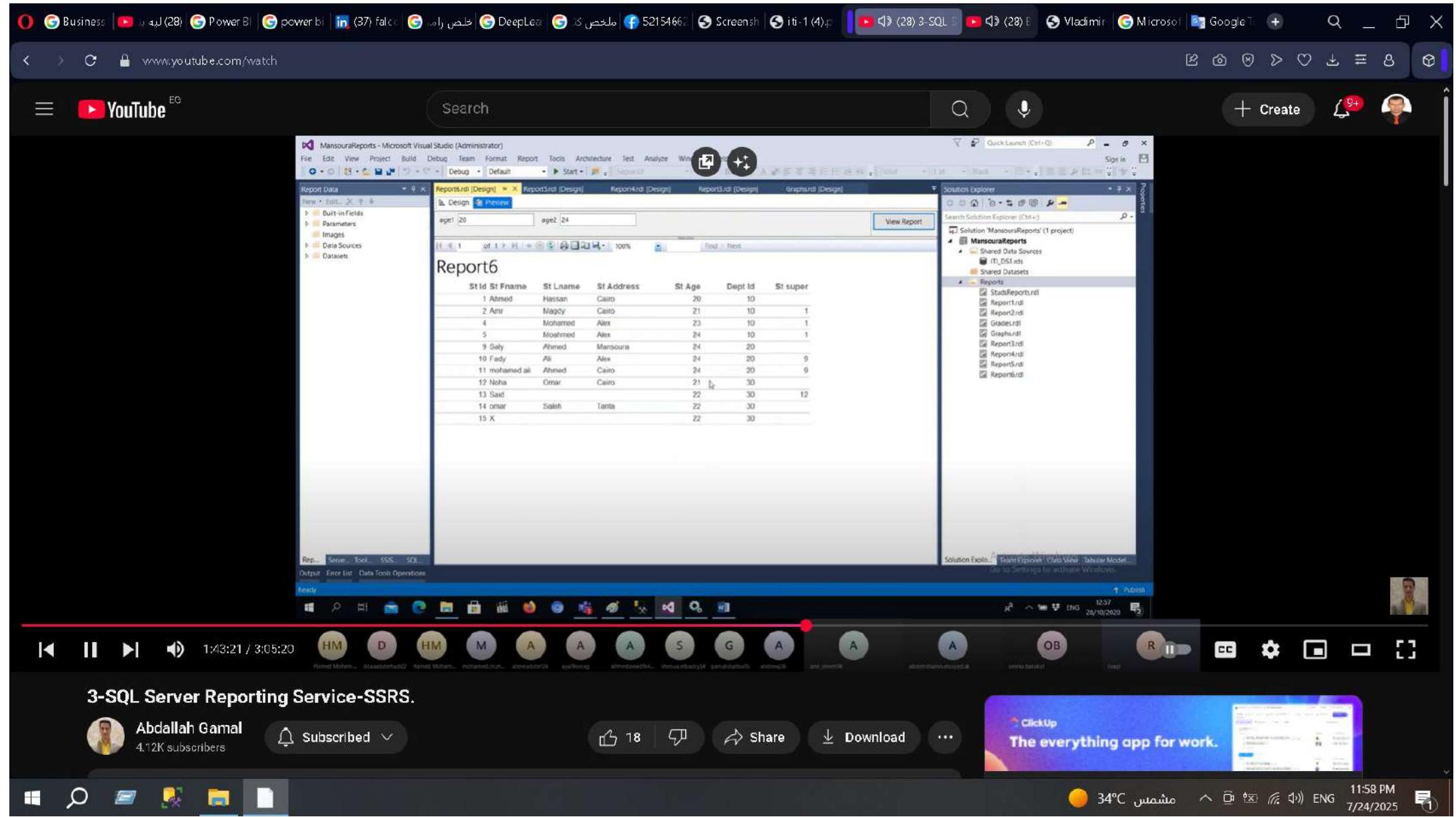
Share

Download

ClickUp

The everything app for work.

34°C 11:58 PM 7/24/2025



Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Report Tools Architecture Test Analyze Window Help

ReportItems

age1

Set expression for Value

= "stud data between " & Parameters!age1.Value &

Category: Constants, Built-in Fields, Parameters, Fields, Databases, Variables, Operators, Common Functions

Item: All Values: age1, age2

OK Cancel

Toolbox

ReportItems

Text Box, Line, Table, Matrix, Rectangle, List, Image, Subreport, Chart, Gauge, Map, Data Bar, Sparkline, Indicator

Report

Report1.rdl, Report2.rdl, Report3.rdl, Report4.rdl, Report5.rdl

Shared Data Sources: IT_DSI.rds

Reports: StudReports.rdl, Report1.rdl, Report2.rdl, Grades.rdl, Graph.rdl, Report3.rdl, Report4.rdl, Report5.rdl

File Explorer (Ctrl+E)

Solution Explorer

Output

Repo... Server Tools SSIS SQL

Ready

1:44:00 / 3:05:20

HM HM M A A A S G A OB R

Subscribed 18 Share Download ...

ClickUp The everything app for work.

34°C 11:59 PM 7/24/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report6.rdl [Design] Report5.rdl [Design] Report4.rdl [Design] Report3.rdl [Design] Report2.rdl [Design]

Toolbox

Report Items

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

Report6

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super

Solution Explorer

- Shared Data Sources: ITI_DSI.ds
- Reports:
 - StudyReport.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl

Output

```
Show output from: Build
Deploying report: /Report6.rdl
Deploying report: /Report5.rdl - Item is up to date.
Deploying report: /Report4.rdl - Item is up to date.
Deploying report: /Report3.rdl - Item is up to date.
Deploying report: /Report2.rdl - Item is up to date.
Build complete -- 0 errors, 0 warnings
----- Deploy started: Project: MansouraReports, Configuration: Debug -----
Deploying to http://localhost/reportServer
Deploying data source /Data Sources/ITI_DSI.
Warning : Cannot deploy data source ITI_DSI to the server because it already exists and OverwriteDataSources is not specified.
Deploying report /MansouraReports/StudyReport1.
Deploying report /MansouraReports/Report1.
Deploying report /MansouraReports/Report2.
Deploying report /MansouraReports/Grades.
Deploying report /MansouraReports/Graphs.
Deploying report /MansouraReports/Reports3.
```

Activate Windows

Deploy started...

Windows Taskbar icons: D, HM, D, HM, M, A, A, A, S, G, A, A, OB, R

Abdallah Gamal | Subscribed | 4.12K subscribers

18 | Share | Download | ...

ClickUp | The everything app for work.

34°C | 11:59 PM | 7/24/2025 | ENG | مشتمل

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رامز | ملخص كي | 5215466 | Screenshot | iti-1 (4) | YouTube (28) 3-SQL | Vladimir | Microsoft | Google | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Report6 - Report Viewer

localhost/ReportServer/Pages/ReportViewer.aspx?%2FMansouraReports%2FReport6

age1: 20 age2: 23

View Report

stud data between 20 and 23

Report6

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super
1	Ahmed	Hossen	Cairo	20	10	
2	Amr	Megdy	Cairo	21	10	1
4		Mohamed	Alex	23	10	1
12	Noha	Omar	Cairo	21	30	
13	Saad			22	30	12
14	omar	Saleh	Tanta	22	30	
15	X			22	30	

Activate Windows
Go to Settings to activate Windows.

1:45:05 / 3:00

D HM D HM M A A A S G A A OB R

abdallahabd22 Hamed Moham... dassababd22 Hamdi Moham... mohamed.mun... ahmedabd22 ayaabd22 ahmedabd22 ihmasebdawy54 samanabd25 andrew26 amr_sleem98 abdrahaman.ayyad22 omnia.batalut mapi

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

Share

Download

ClickUp
The everything app for work.

34°C 11:59 PM 7/24/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report6 [Design] Report6.rdl Report6.rdlx Report6.iReport Reports.rdlx Reports.rdl

File Edit View Project Build Format Tools Architecture Test Analyze Window Help

Toolbox

Report Items

- Pointer
- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report6

St Id St Fname
[St_Id] [St_Fname]

Row Groups

(table1_Details_Group)

Query Wizard

Design the Query

Specify a query to execute to get the data for the report.

Use a query builder to design your query.

Query Builder...

Query string:

Select

Help Back Next > Finish > Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansourReports (1 project)

- Shared Data Sources
- IT_DSI.rds
- Shared Datasets
- Reports
- StudyReports.rdl
- Report1.rdl
- Report2.rdl
- Grades.rdl
- Graph.rdl
- Report3.rdl
- Report4.rdl
- Report5.rdl
- Report6.rdl

Task List

Class View

Object Browser

Toolbox

SSIS

SQL

Output Error List Data Tools Operations

This item does not support previewing

1:45:27 / 3:05:20

HM HM M A A A S G A A OB R CC Settings

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal

4.12K subscribers

Subscribed

18

Share

Download

ClickUp

The everything app for work.

34°C مشتمل ENG 11:59 PM 7/24/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report6 [Design] Report6.rdl

Report Wizard

Design the Query

Specify a query to execute to get the data for the report.

Query Builder...

Query string:

```
Select *  
from student  
where dept_id=0
```

Report6

St Id St Fname

[St_Id] [St_Fname]

Row Groups

(table!_Details_Group)

Toolbox

Report Items

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Report Server Tools SQL

Output Error List Data Tools Operations

This item does not support previewing

Solution Explorer

Search Solution Explorer (Ctrl + V)

Solution 'MansourReports' (1 project)

- MansourReports
- Shared Data Sources
- IT_DS1.rds
- Shared Datasets
- Reports
- StudyReports.rdl
- Report1.rdl
- Report2.rdl
- Grades.rdl
- Graph.rdl
- Report3.rdl
- Report4.rdl
- Report5.rdl
- Report6.rdl

File Edit View Project Build Debug Team Format Report Tools Architecture Test Analyze Window Help

Start | Segoe UI 10pt B I A Solid 1 pt Black

Quick Launch (Ctrl + Q)

Sign in

Help Back Next > Previous < Cancel

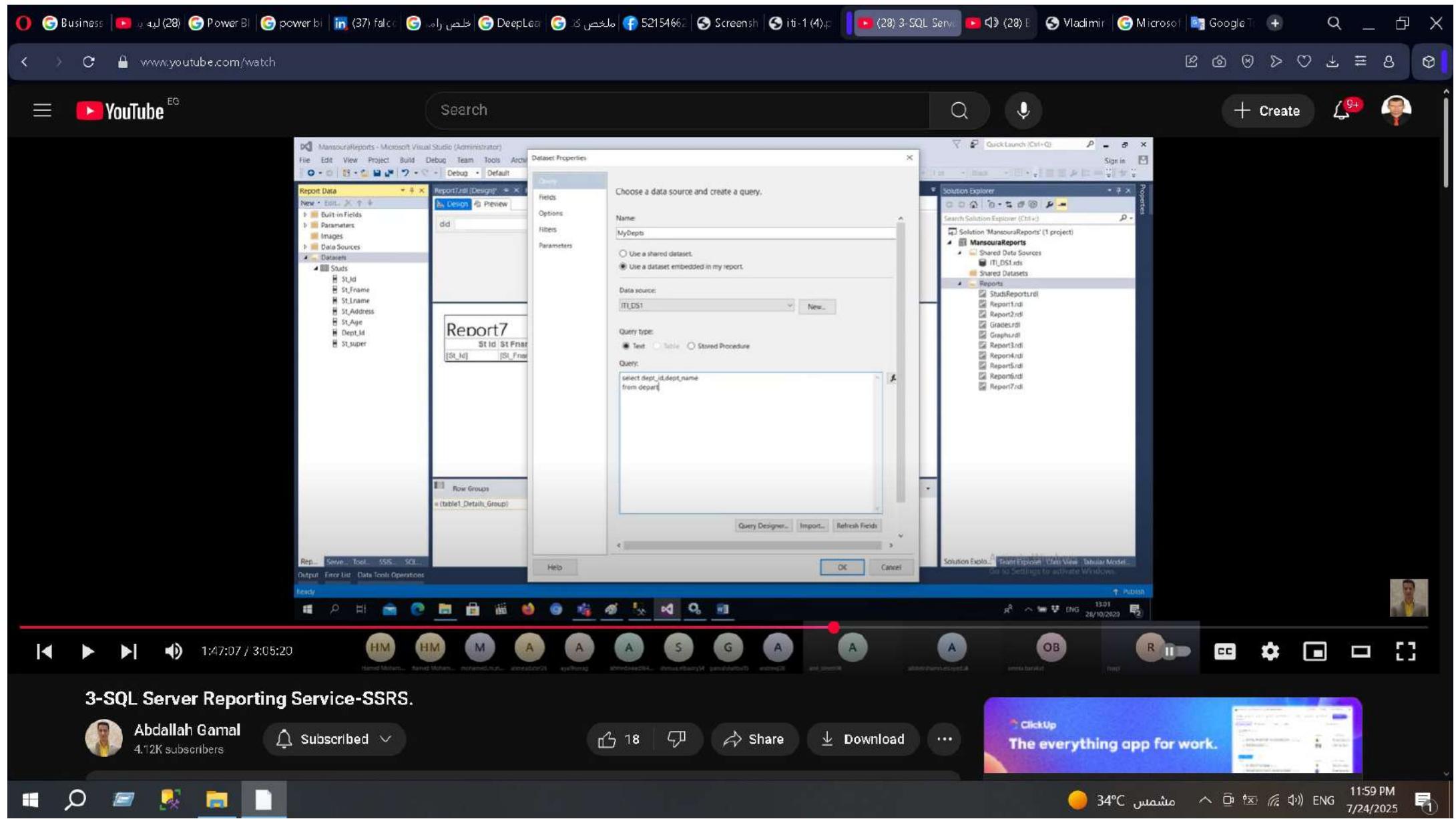
1:45:37 / 3:05:20

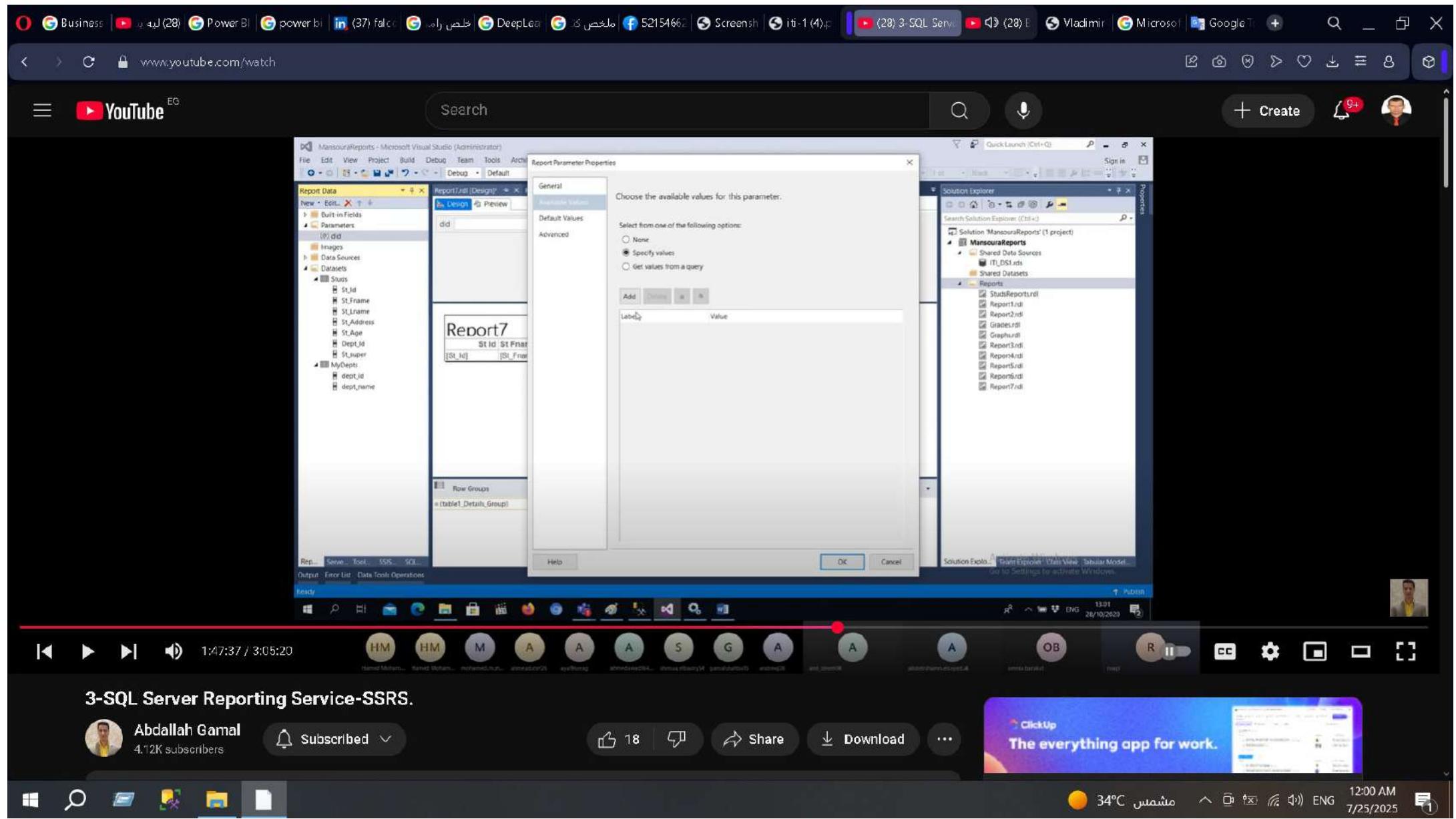
D HM HM M A A A S G A OB R

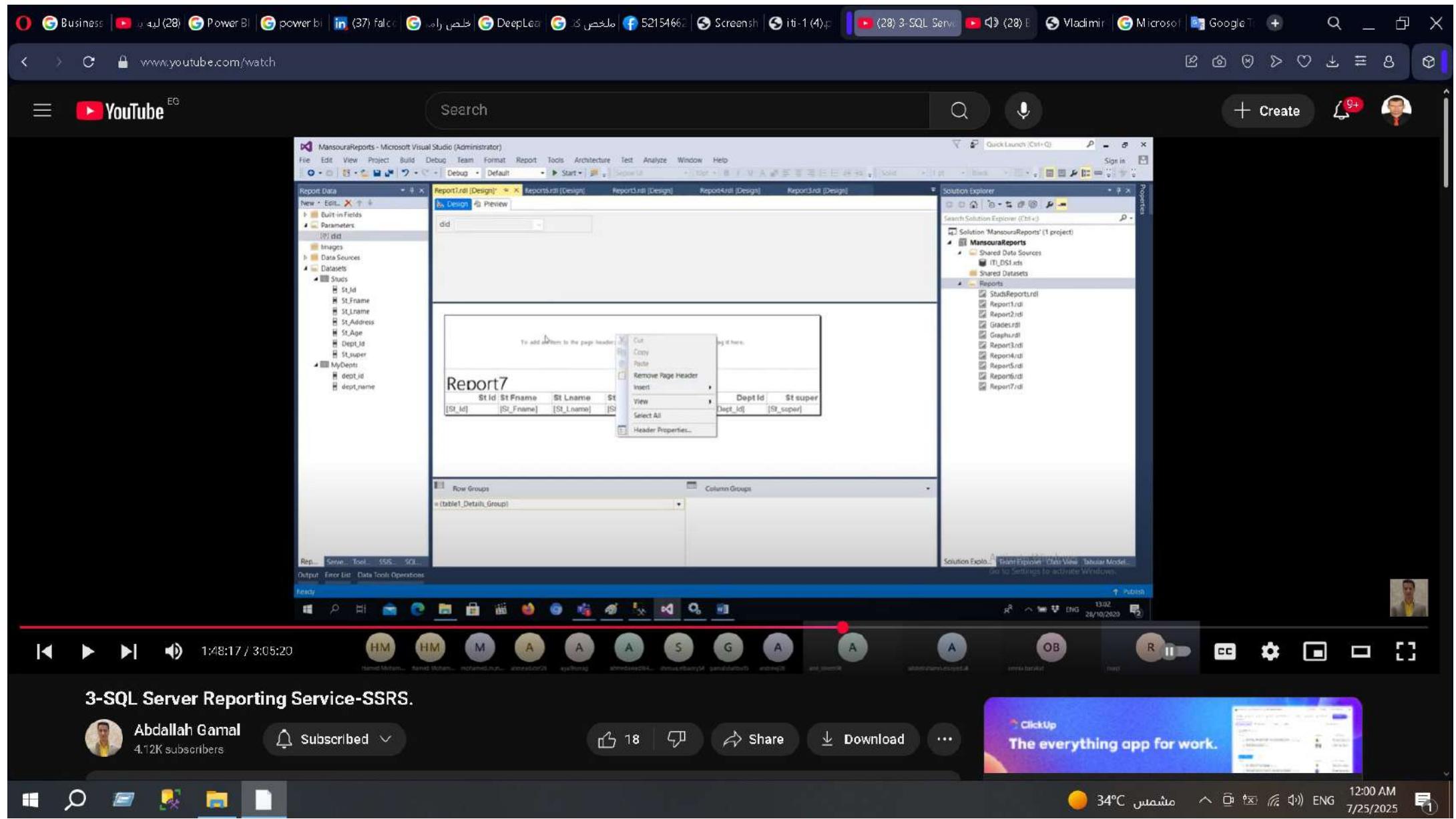
Subscribed 18 Share Download ...

ClickUp The everything app for work.

34°C 11:59 PM 7/24/2025 ENG







Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

ReportItems did

did = "dept=" & Parameters!did.Label

Category: Constants, Built-in Fields, Parameters, Fields, Datasets, Variables, Operators, Common functions

OK Cancel

Report Explorer [Ctrl+Shift+F10]

in 'MansourReports' (1 project)

MansourReports

Shared Data Sources

ITL_DS1.rdl

Shared Datasets

Reports

StudsReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graph.rdl

Report3.rdl

Report4.rdl

Reports.rdl

Report7.rdl

Output Error List Data Tools Operations

1:48:47 / 3:05:20

HM HM M A A A S G A OB R CC Settings Full Screen Minimize Maximize

Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C 12:00 AM 7/25/2025 ENG

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report7.rdl [Design] Report1.rdl [Design] Report5.rdl [Design] Report4.rdl [Design] Report3.rdl [Design]

Toolbox

Report Items

- Text Box
- Line
- Table
- Matrix
- Rectangle
- List
- Image
- Subreport
- Chart
- Gauge
- Map
- Data Bar
- Sparkline
- Indicator

General

dept=SD

Report7

St Id	St Fname	St Lname	St Address	St Age	Dept Id	St super
1	Ahmed	Hassan	Cairo	20	10	
2	Anr	Maged	Cairo	21	10	1
3	Mona	Saleh	Cairo	28	10	1
4	Mohamed	Alex	Alex	23	10	1
5	Mohamed	Alex	Alex	24	10	1

Solution Explorer

- Solution 'MansouraReports' (1 project)
 - Shared Data Sources
 - IT_DS1.rds
 - Shared Datasets
 - Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Reports.rdl
 - Report5.rdl
 - Report7.rdl

Report7.rdl

Output: Error List | Data Tools: Operations

1:48:57 / 3:05:20

HM HM M A A A S G A OB R CC ENG 34°C 12:00 AM 7/25/2025

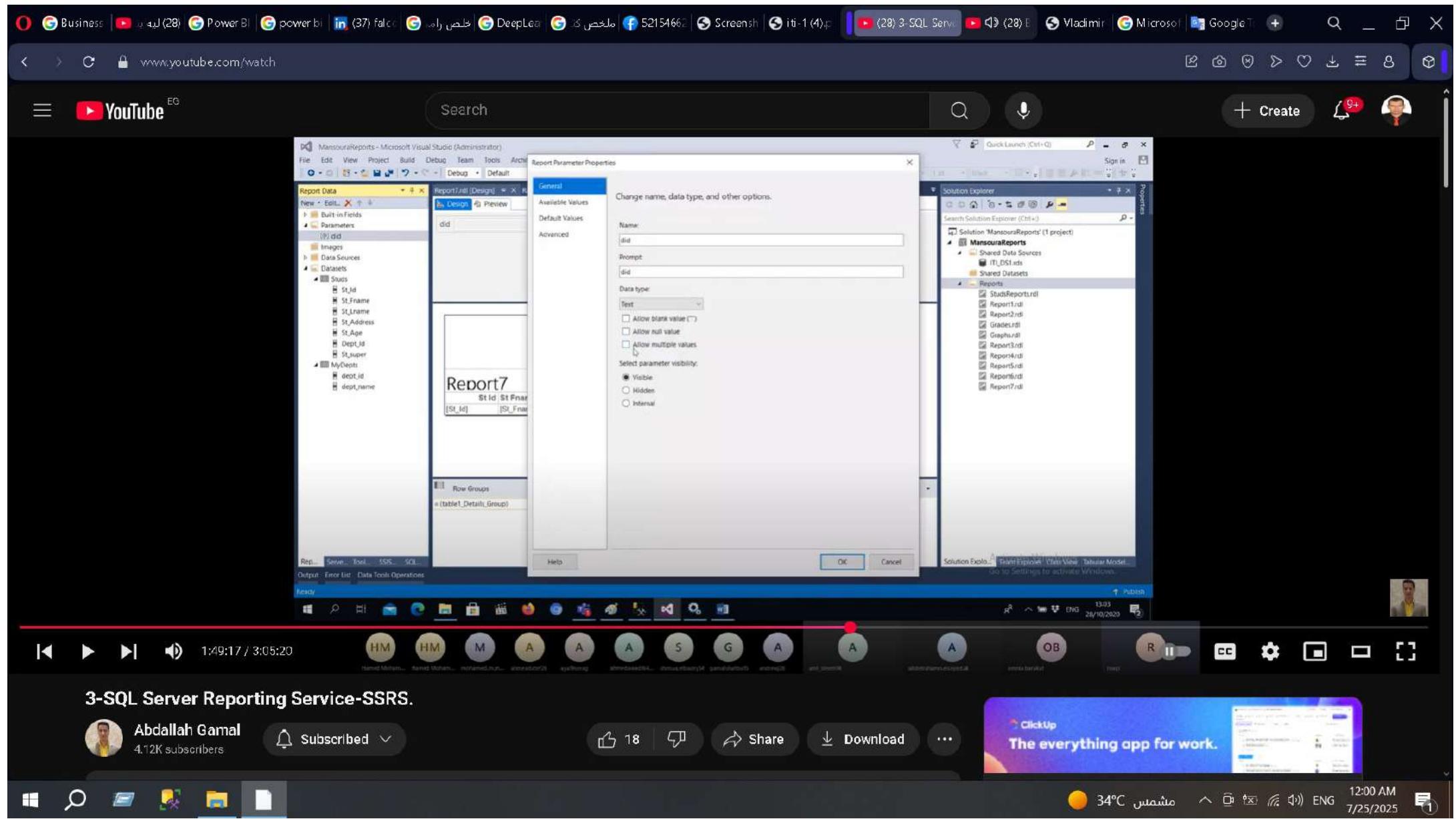
Abdallah Gamal
4.12K subscribers

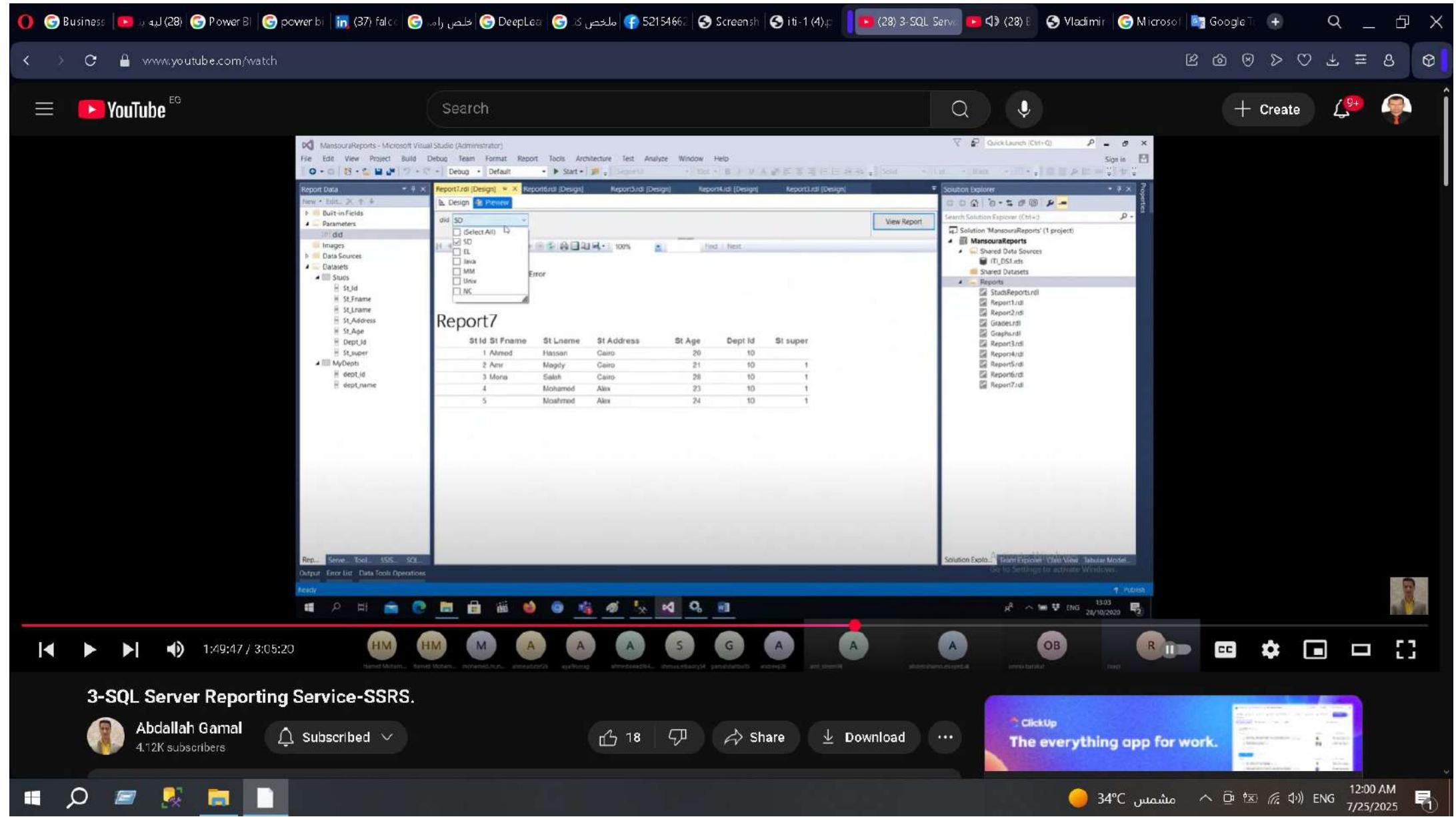
Subscribed

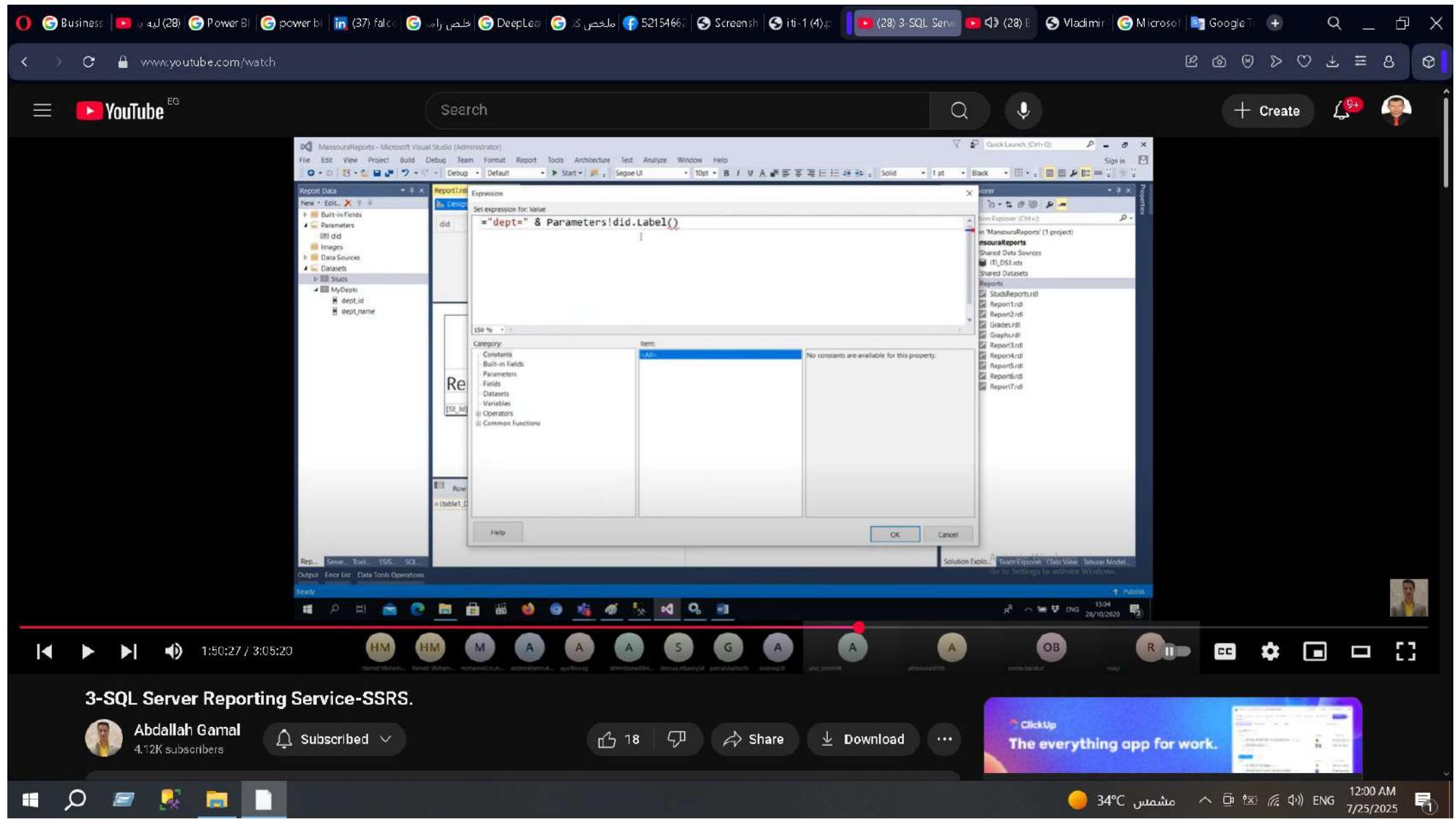
18 Share Download ...

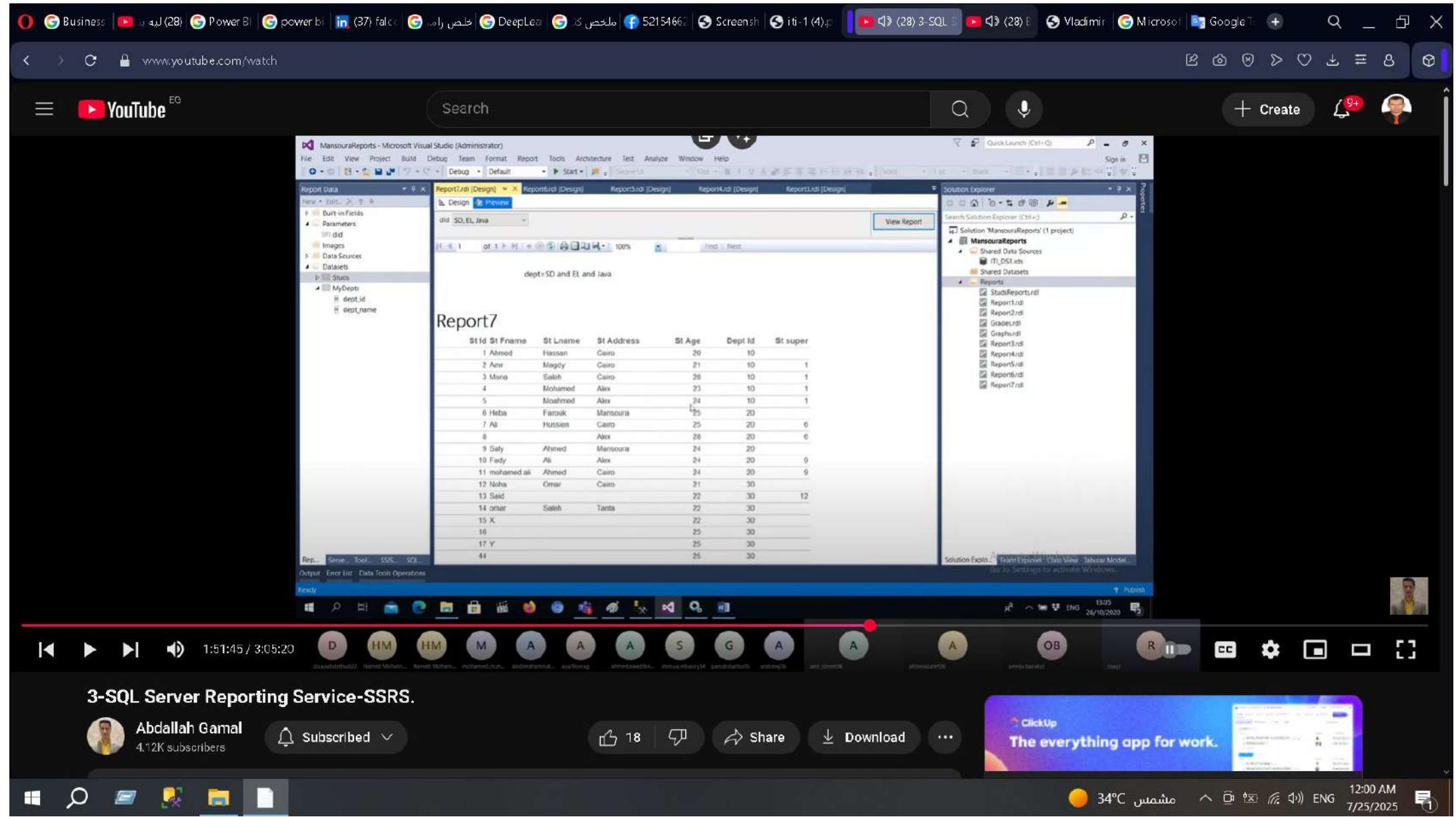
ClickUp
The everything app for work.

Windows Taskbar









Business | YouTube (28) | Power BI | Google | LinkedIn (37) | DeepLearning | ملخص رام | ملخص كارلا | 5215466 | Screenshot | iti-1 (4) | 3-SQL | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Report Data

New | Edit | X | Report1.rdl [Design] | B| Design | Preview

File | Edit | View | Project | Build | Debug | Team | Format | Tools | Help

Datasets

Studs

St_Id, St_Fname, St_Lname, St_Address, St_Age, Dept_Id, St_Super, MyDept, dept_id, dept_name

Report7

St_Id, St_Fname

[St_Id], [St_Fname]

Row Groups

(table1_Details_Group)

Dataset Properties

Choose a data source and create a query.

Name: Studs

Use a shared dataset.

Use a dataset embedded in my report.

Data source: ITLDS1

Query type: Text

Query:

```
Select * from student where dept_id in(@did) order by St_Fname
```

Query Designer | Import... | Refresh Fields | OK | Cancel | Help

Solution Explorer

Search Solution Explorer (Ctrl+F)

1 pt | Black | Quick Launch (Ctrl+Q) | Sign in |

Solution 'MansourReports' (1 project)

MansourReports

Shared Data Sources

ITLDS1.rdl

Shared Datasets

Reports

StudsReports.rdl, Report1.rdl, Report2.rdl, Grades.rdl, Graph.rdl, Report3.rdl, Report4.rdl, Reports.rdl, Reports2.rdl, Report7.rdl

28/10/2023

1:52:00 / 3:05:20

D H M M A A A S G A OB R CC Gears

Abdallah Gamal

4.12K subscribers

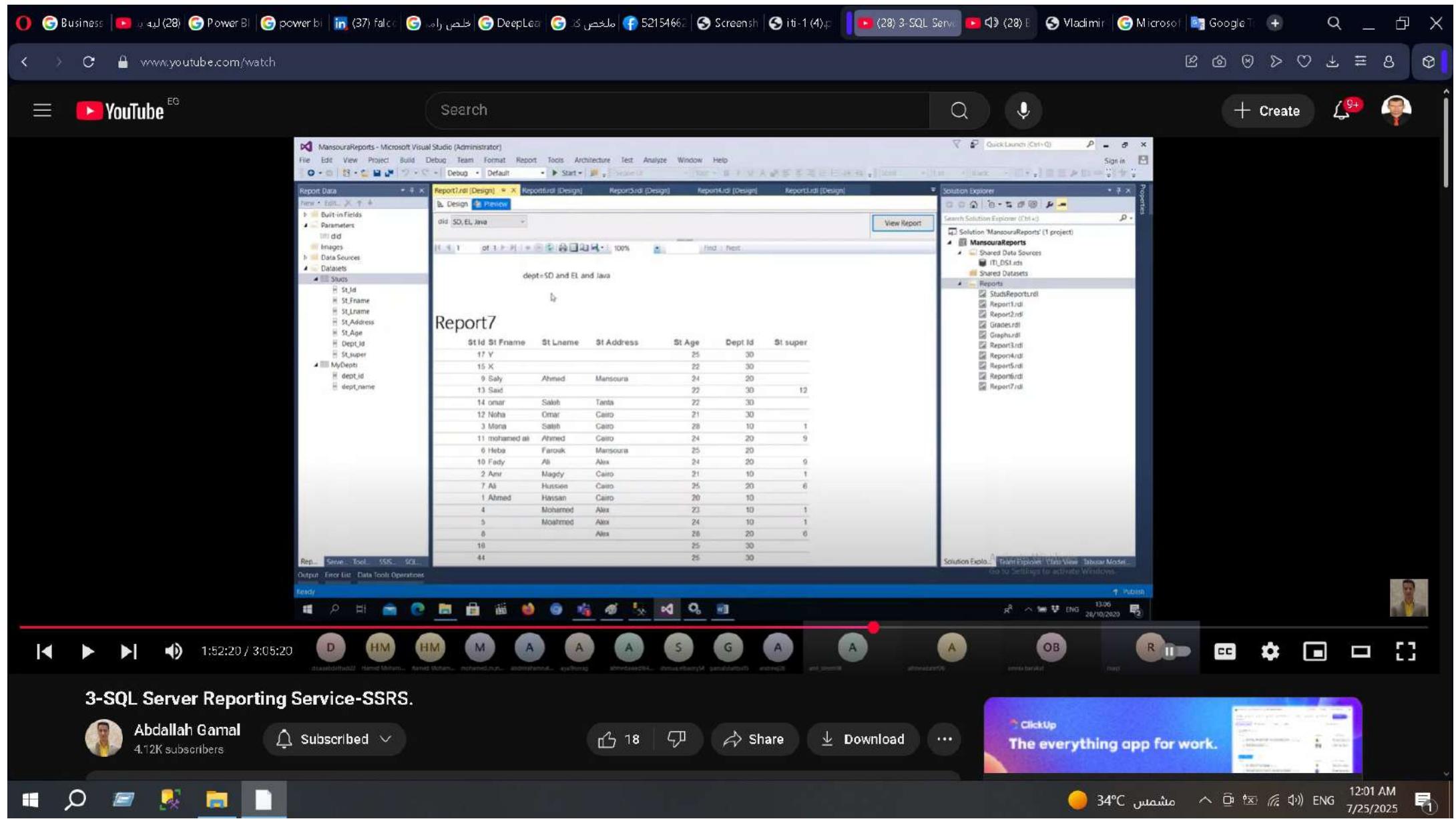
Subscribed

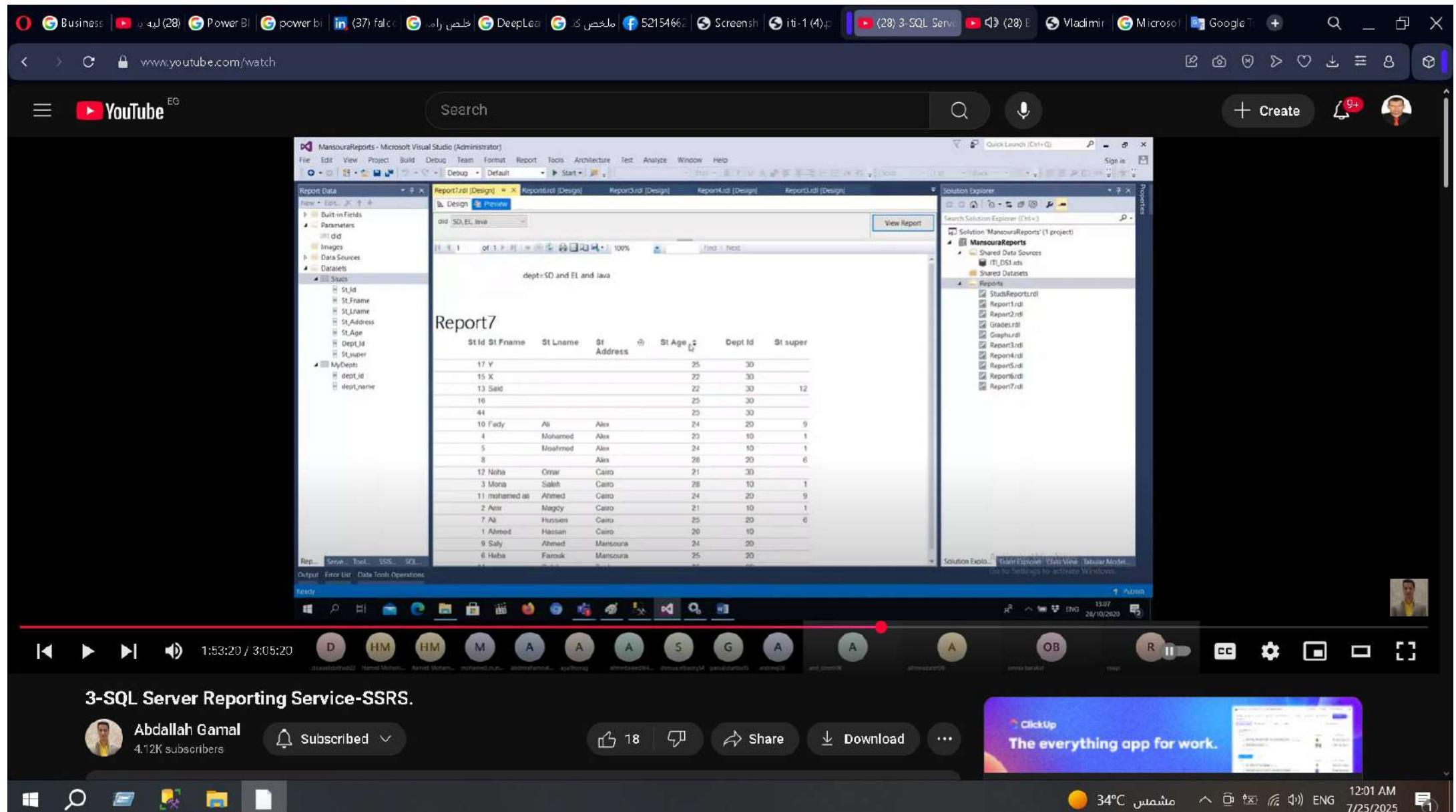
18 | Share | Download | ...

ClickUp

The everything app for work.

34°C | مشتمل | ENG | 12:01 AM | 7/25/2025





Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data

Report1.rdl [Design] Report2.rdl [Design] Report3.rdl [Design] Report4.rdl [Design] Report5.rdl [Design]

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansouraReports

- Shared Data Sources
 - IT_DS1.rds
- Reports
 - StudyReport.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP	80	

Report3.rdl [Design] Preview

Report3

Num	St Id	St Fname	Crs Name	Grade	
1	4		C Programming	90	
2	5		C Programming	90	
3	8		C Programming	70	
4	9 Saly		C Programming	70	
5	4		HTML	80	
6	5		HTML	110	
7	6 Heba		HTML	100	
8	9 Saly		Java	100	
9	10 Fady		Java	100	
10	5		OOP</td		

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Dataset Properties

Choose a data source and create a query.

Name: DataSet1

Use a shared dataset. (radio button)

Data source: ITLDS1

Query type: Text (radio button)

Query:

```
SELECT StudentSt.Id, StudentSt.Name, Course.Crs_Name, Stud_Course.Grade
FROM Course INNER JOIN
    Stud_Course ON Course.Crs_Id = Stud_Course.Crs_Id INNER JOIN
    Student ON Stud_Course.St_Id = StudentSt.Id
WHERE (Stud_Course.Grade >= 50) AND
ORDER BY Course.Crs_Name
```

OK Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution MansourReports (1 project)

- Shared Data Sources
 - ITLDS1.rdl
- Shared Datasets
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grade.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl
- Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grade.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl

1:54:30 / 3:05:20

D HM HM M A A A S G A OB R

Subscribed 18 Share Download ...

ClickUp
The everything app for work.

34°C 12:01 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

Dataset Properties

Choose a data source and create a query.

Name: DataSet1

Use a shared dataset.

Use a dataset embedded in my report.

Data source: ITLDS1

Query type:

Text Table Shared Procedure

Query:

```
SELECT StudentSt.Id, StudentSt.Fname, Course.Crs.Name, Stud_Course.Grade
FROM Course INNER JOIN
    Stud_Course ON Course.Crs.Id = Stud_Course.Crs.Id INNER JOIN
    Student ON Stud_Course.St.Id = StudentSt.Id
WHERE (Stud_Course.Grade >= 50) AND
ORDER BY Course.Crs.Name
```

Query Designer Import... Refresh Fields OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansourReports' (1 project)

- MansourReports
 - Shared Data Sources
 - ITLDS1.rdl
 - Shared Datasets
 - ITLDS1
 - Reports
 - StudentReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grade.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl
 - Report8.rdl

Taskbar

1:54:30 / 3:05:20

D HM HM M A A A S G A OB R CC Settings Full Screen Minimize Maximize Close

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 12:02 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كار | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data Report7.rdl [Design] Report7.rdl [Preview]

File Edit View Project Build Debug Team Tools Archive

New : Edit... X + Report7.rdl [Design] Report7.rdl [Preview]

Report Data

- Built-in Fields
- Parameters
- Images
- Data Sources
- Datasets
- MyDepts
- dept_id
- dept.name

Report7

St Id St Fname
[St_Id] [St_Fname]

Row Groups

(table1_Details_Group)

Dataset Properties

Query

Name: Studs

Use a shared dataset.

Use a dataset embedded in my report.

Data source: ITLDS1

Query type: Text

Query:

```
Select * from student where dept_id in @did
Order by St_Fname desc
```

Query Designer Import Refresh Fields OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- Shared Data Sources
- ITLDS1.rdl
- Shared Datasets
- Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl

Quick Launch (Ctrl+Q)

Sign in

Search Solution Explorer (Ctrl+F)

Solution 'MansouraReports' (1 project)

- Shared Data Sources
- ITLDS1.rdl
- Shared Datasets
- Reports
 - StudsReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report4.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl

Help

1:56:00 / 3:05:20

D HM HM M A A A S G A OB R

Subscribed 18 Share Download ...

ClickUp The everything app for work.

34°C 12:02 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Object Explorer

SQLQuery1.sql - [local].ITI (DESKTOP-VF5OP23)\Rami (BT) - Microsoft SQL Server Management Studio

```
from student  
where st_address='cairo'  
  
create proc GetStudByAge @age1 int,@age2 int  
as  
select *  
from Student  
where st_age between @age1 and @age2
```

Commands(s) completed successfully.

Output

Query executed successfully.

Local (13.0 RTM) - DESKTOP-VF5OP23\Rami (BT) - ITI - 00:00:00 - Drowsy

200% 200% 200%

2:00:10 / 3:05:20

D HM HM M A A A S G A OB R II CC Gears

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 12:02 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Object Explorer

SQLQuery1.sql - [local].ITI (DESKTOP-VF5OP23)\Rami (BT) - Microsoft SQL Server Management Studio

```
from student  
where st_address='cairo'  
  
create proc GetStudByAge @age1 int,@age2 int  
as  
select *  
from Student  
where st_age between @age1 and @age2
```

Commands(s) completed successfully.

Output

Query executed successfully.

Local (13.0 RTM) - DESKTOP-VF5OP23\Rami (BT) - ITI - 00:00:00 - Drowsy

200% 200% 200%

2:00:10 / 3:05:20

D HM HM M A A A S G A OB R II CC Gears

3-SQL Server Reporting Service-SSRS.

Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C مشتمل ENG 12:02 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansouraReports - Microsoft Visual Studio (Administrator)

Report Data | ReportList [Design] | Design | Preview

File Edit View Project Build Debug Team Format Reports Report Data ReportList.rdl

New Edit Save As... Import From XML SQL Output Error List Data Tools Operations

Report Data ReportList.rdl

Built-in Fields Parameters Images Data Sources Datasets

To add an item to the report

Row Groups

Help OK Cancel

Data Source Properties

Change name, type, and connection options.

Name: DataSource1

Embedded connection:

Type: Microsoft SQL Server

Connection string: Click here to type or paste a connection string

Use shared data source reference: IT_DSS

Use single transaction when processing the queries

OK Cancel

Solution Explorer

Search Solution Explorer ('Ctrl+F') Sign in

Solution 'MansouraReports' (1 project)

MansouraReports

Shared Data Sources

IT_DSS.rdl

Shared Datasets

Reports

StudyReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graphs.rdl

Report3.rdl

Report4.rdl

Report5.rdl

Report6.rdl

Report7.rdl

Report8.rdl

Help Explorer | Class View | Tabular Model

Go to Settings to activate Windows

Ready

2:02:00 / 3:05:20

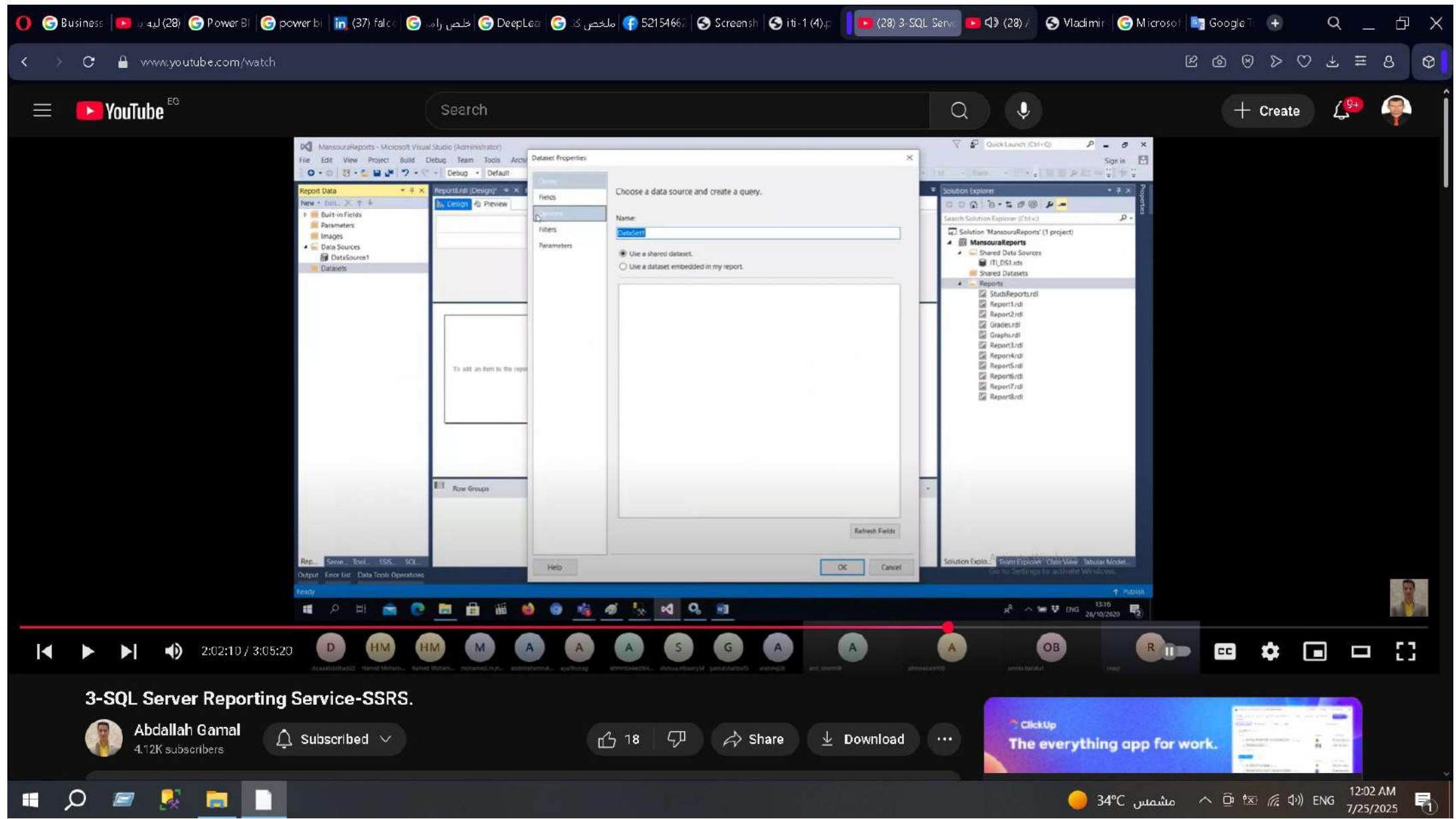
D HM HM M A A A S G A OB R

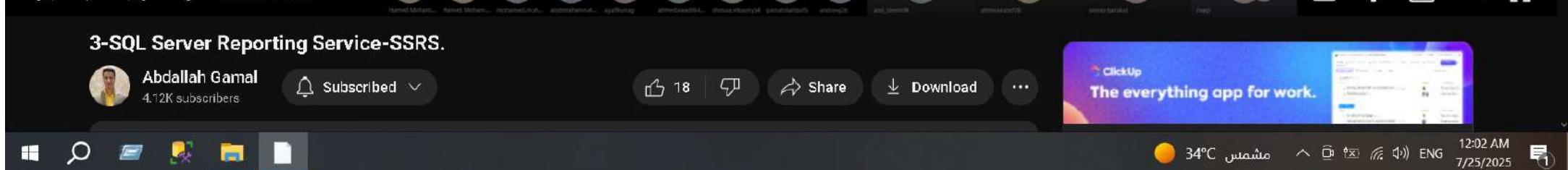
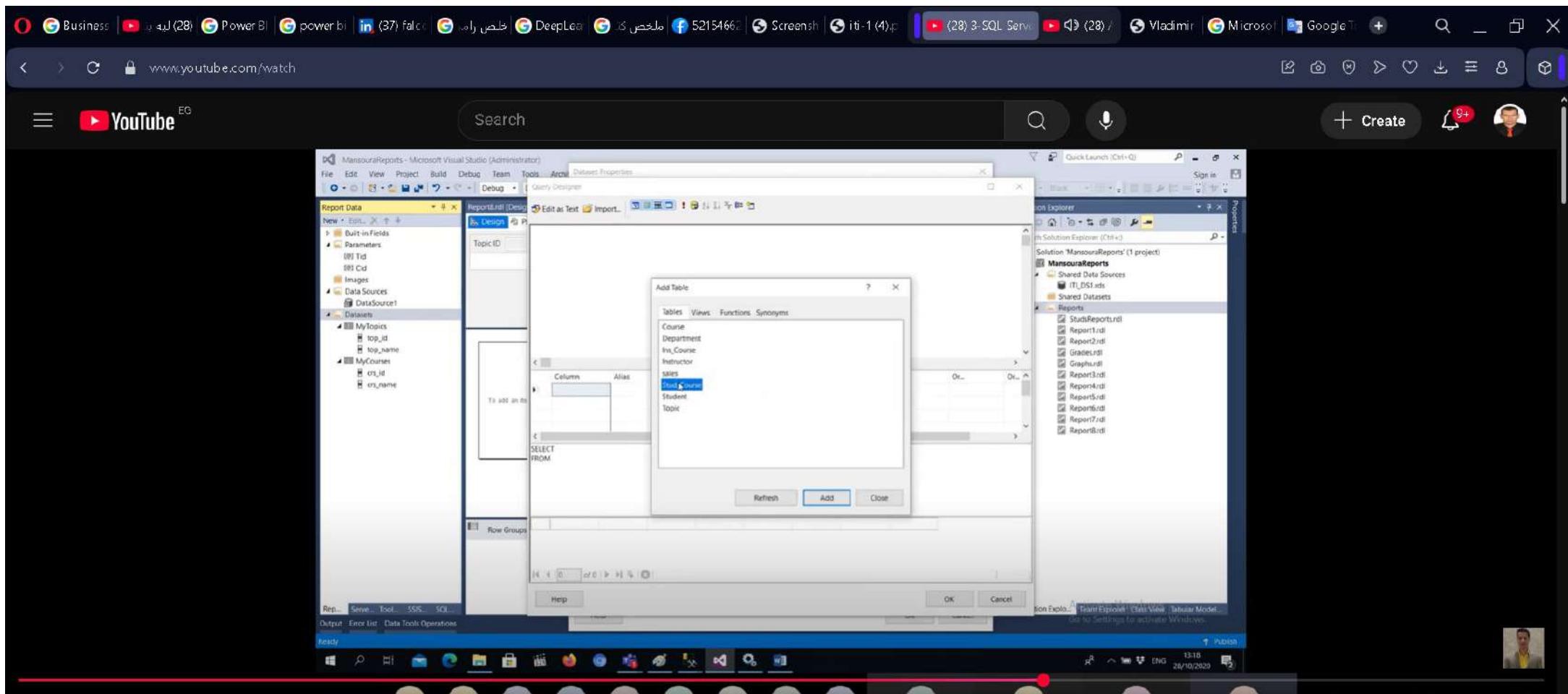
Abdallah Gamal Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C 12:02 AM 7/25/2025





Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Report Data

ReportId: [Design] Report7.rdl (Current) Report7.rdl (Modified) ReportsWithMeasure ReportsWithMeasures

Report Wizard

Select the Data Source

Shared data source

New data source

Name: AS

Type: Microsoft SQL Server

Row Groups

Help Back Next > Back Step Forward Cancel

Solution Explorer

MansourReports (1 project)

- Shared Data Sources
 - ITL_DSI.rds
- Shared Databases
- Reports
 - StudyReports.rdl
 - Report1.rdl
 - Report2.rdl
 - Grades.rdl
 - Graph.rdl
 - Report3.rdl
 - Report5.rdl
 - Report6.rdl
 - Report7.rdl
 - Report8.rdl

2:08:40 / 3:05:20

D HM HM M A A A S G A OB R

Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C 12:03 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

Report Data

Report1 [Design] | Report1.rdl (Preview)

Report Wizard

Select the Report Type

Select the type of report that you want to create.

Tabular

Matrix

Topic ID

MyTopics

MyCourses

MyGrades

Crs_Id Crs_Nm

Crs_Id

Row Groups

(Details)

Help Back Next > Cancel

Solution Explorer

Search Solution Explorer (Ctrl+F)

MansourReports (1 project)

Shared Data Sources

IT_DS1.rdl

Shared Datasets

Reports

StudsReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graph.rdl

Report3.rdl

Report4.rdl

Report5.rdl

Report6.rdl

Report7.rdl

Report8.rdl

Output Error List Data Tools Operations

This item does not support previewing

2:09:50 / 3:05:20

D HM HM M A A A S G A OB R

Subscribed 4.12K subscribers

18 Share Download ...

ClickUp The everything app for work.

34°C 12:03 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | ملخص زكي | ملخص مصطفى | 5215466 | Screenshot | iti-1 (4) | 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

SSRS.ppt - Paint

Search

+ Create

94

YouTube

BI

Integration ==> SSIS --> ETL --> Packages --> jobs --> sch --> DW

Analysis ==> SSAS --> Cubes [Dim+Agg] --> OLAP

Reporting ==> SSRS --> Reports

Adhoc Reports (Runtime) (OLTP) 80% TSQL

Analytical Reports (Cubes) 20% MDX

Tabular Report

Matrix Report

Chart Report

Freeform Report

Pivot

Exam

Course+topics

Email

Deployment

http://localhost/Reports

Activate Windows

1071x335px 1059x793px 45.1KB

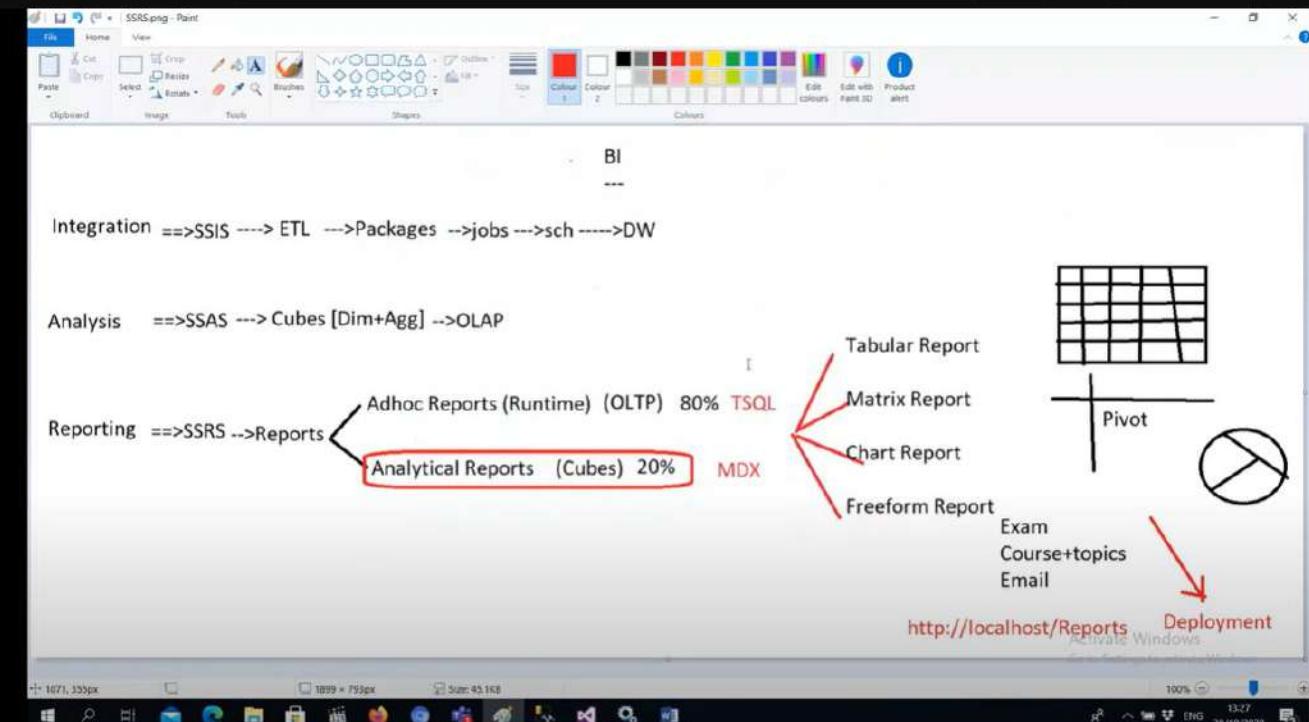
2:13:10 / 3:05:20

A HM HM M A A A S G A D R II

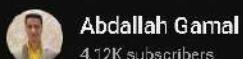
Subscribed 18 Share Download ...

ClickUp
The everything app for work.

34°C 12:03 AM 7/25/2025



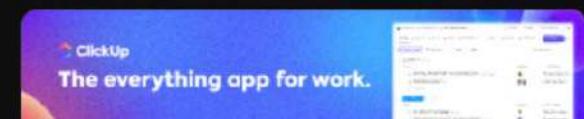
3-SQL Server Reporting Service-SSRS.



Abdallah Gamal
4.12K subscribers

Subscribed

18 | 18 Share Download ...



34°C مشتمل ENG 12:05 AM 7/25/2025

Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | DeepLearn | ملخص رام | ملخص كارل | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

MansourReports - Microsoft Visual Studio (Administrator)

New Project

Report Data

Report Server Project Wizard

Report Server Project

Type: Business Intelligence

Create a new Report Server project using Report Wizard.

Name: Report Project14

Location: c:\users\ram\documents\visual studio 2019\Projects

Solution: Create new solution

Solution name: Report Project14

OK Cancel

Report Data

Built-in Fields

Parameters

001 Year

Images

Data Sources

DataSets

DataSet1

Product_Name

Calendar_Year

Qty

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Report Data

Report Server Project Wizard

Report Server Project

Business Intelligence

Analysis Services

Integration Services

Reporting Services

Visual C#

Visual Basic

Visual F#

Visual C++

SQL Server

Python

JavaScript

TypeScript

Game

Build Accelerator

Other Project Types

Modeling Projects

Samples

Recent

Installed

Templates

Online

NET Framework 4

Sort by: Default

Search installed Templates (Ctrl+E)

Project Explorer (Ctrl+J)

MansourReports (1 project)

MansourReports

Shared Data Sources

ITL_DSI.rdl

Shared Datasets

Reports

StuckReports.rdl

Report1.rdl

Report2.rdl

Grades.rdl

Graph.rdl

Report3.rdl

Reports.rdl

Report5.rdl

Report6.rdl

Report7.rdl

Report8.rdl

Report9.rdl

Properties

Toolbox

Server Explorer

Task List

SSIS

SQL

Output

Error List

Data Tools

Operations

Windows Taskbar

2:19:20 / 3:05:20

A HM M A A S G A D OB R

Abdallah Gamal

Subscribed

18

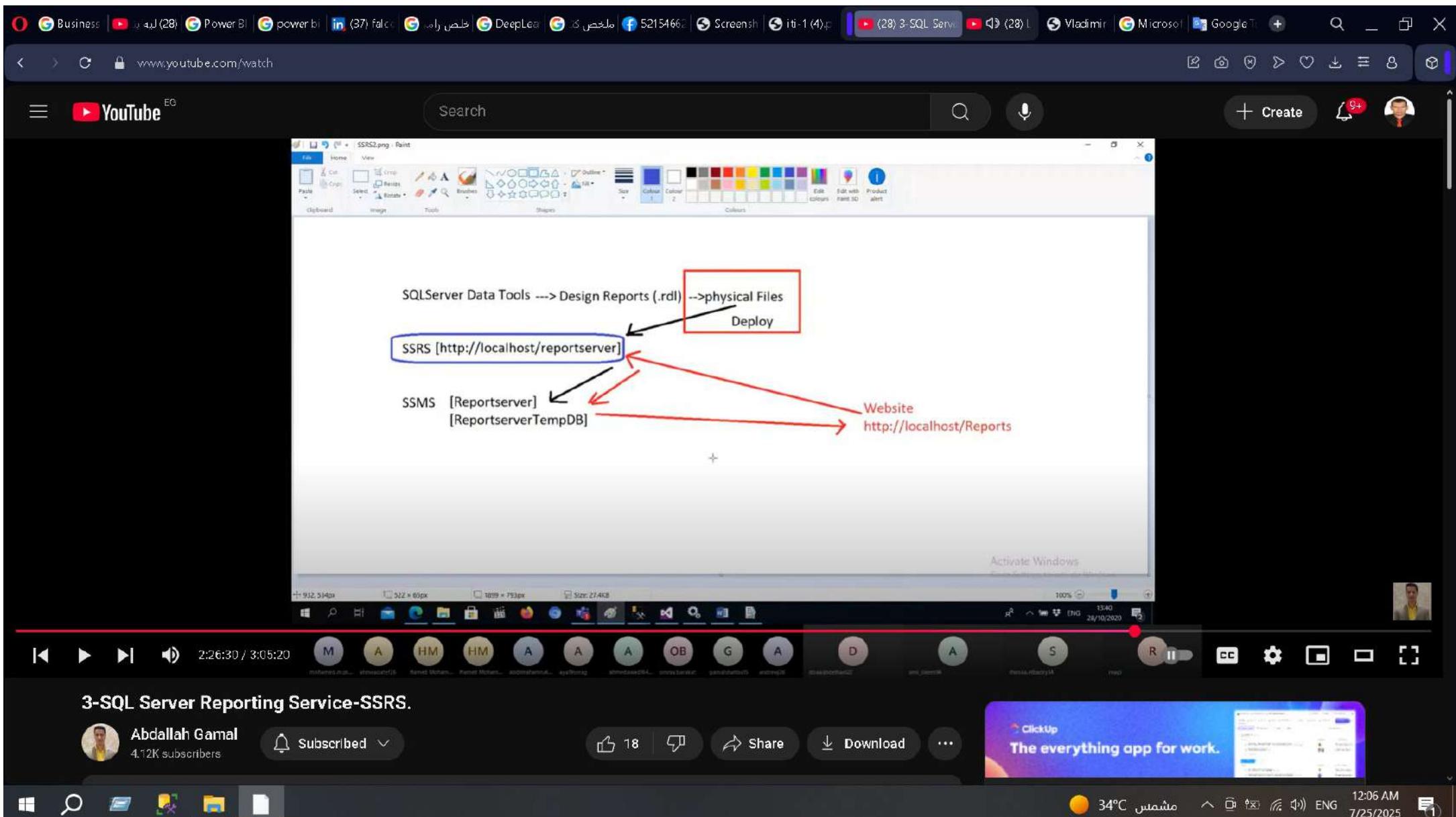
Share

Download

ClickUp

The everything app for work.

34°C 7/25/2025 12:05 AM



Business | YouTube (28) | Power BI | power bi | LinkedIn (37) | falco | DeepLearn | ملخص رام | ملخص كاري | 5215466 | Screenshot | iti-1 (4) | (28) 3-SQL Server | Vladimir | Microsoft | Google Translate | + | Search | _ | X

www.youtube.com/watch

YouTube EG

Search

WindowsFormsApplication5 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Toolbox

form1.cs [Form1.cs] WindowsFormsApplication5 WindowsFormsApplication5.Form1

```
18     namespace WindowsFormsApplication5
19
20     {
21         // 3 references
22         public partial class Form1 : Form
23         {
24             // 1 reference
25             public Form1()
26             {
27                 InitializeComponent();
28             }
29
30             // 1 reference
31             private void Form1_Load(object sender, EventArgs e)
32             {
33
34                 this.reportViewer1.RefreshReport();
35             }
36
37             // -- references
38             private void button1_Click(object sender, EventArgs e)
39             {
40
41             }
42
43         }
44     }
```

Solution Explorer

WindowsFormsApplication5

- Properties
- References
 - Analyzers
 - Microsoft.CSharp
 - Microsoft.ReportViewer.Common
 - Microsoft.ReportViewer.WinForms
 - System
 - System.Collections
 - System.Data
 - System.Data.DataSetExtensions
 - System.Deployment
 - System.Drawing
 - System.Web.Services
 - System.Windows.Forms
 - System.Xml
 - System.Xml.Linq
- Form1.cs
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Form1
- Program.cs

Output: Data Tools Operations

Ready

2:31:30 / 3:05:20

M A HM HM A A D OB G A S R

Subscribed 18 Share Download ...

ClickUp
The everything app for work.

34°C 12:06 AM 7/25/2025