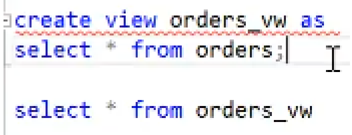
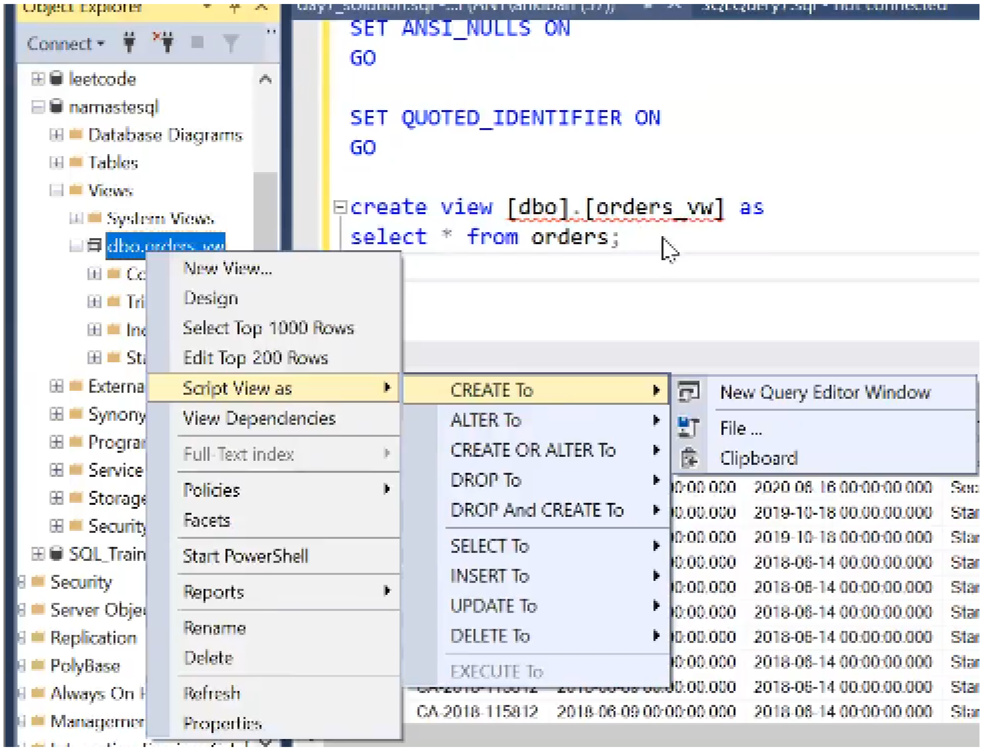
Views

1. We can create views for our SQL tables..see pic below



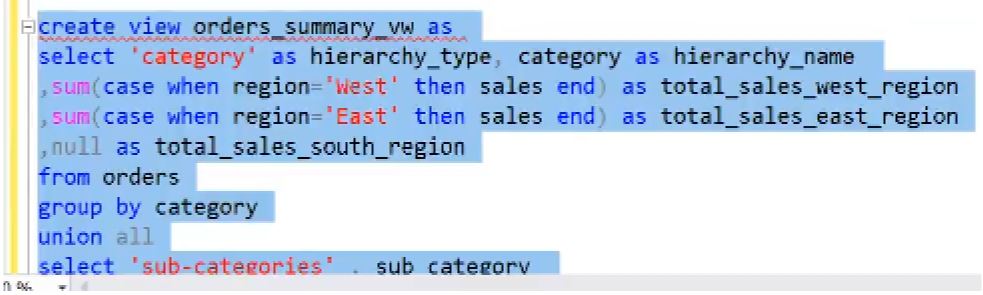
```
create view orders_vw as
select * from orders;

select * from orders_vw
```

2.
3. These order_vw just contains the result of “select * from orders” ..theres no data in this object…we can also see that in the system views..which is on our left side
4. We can also see what query is in our view..



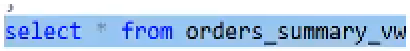
```
SET ANSI_NULLS ON
GO

SET QUOTED_IDENTIFIER ON
GO

create view [dbo].[orders_vw] as
select * from orders;
```

5. Basically views store the result of the query inside it…
6. Here we have created a view..with the query below…and now we can share this view ..to our co-employers ..to check the result



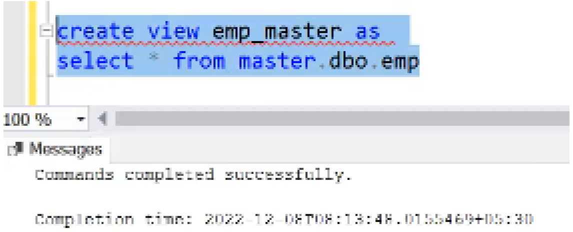
```
create view orders_summary_vw as
select 'category' as hierarchy_type, category as hierarchy_name
,sum(case when region='West' then sales end) as total_sales_west_region
,sum(case when region='East' then sales end) as total_sales_east_region
,null as total_sales_south_region
from orders
group by category
union all
select 'sub-categories' , sub_category
```

7. Now instead of running the big query..we can just use the view



```
select * from orders_summary_vw
```

8. Also if u don't want to share all the data to others..for example we have 4 regions in the orders table..instead providing the entire table..we can just write a view for a particular region orders and send it to the other person
9. So in this way..Views can also be used to data security
10. To create a view for the table..which is present in another database..use this

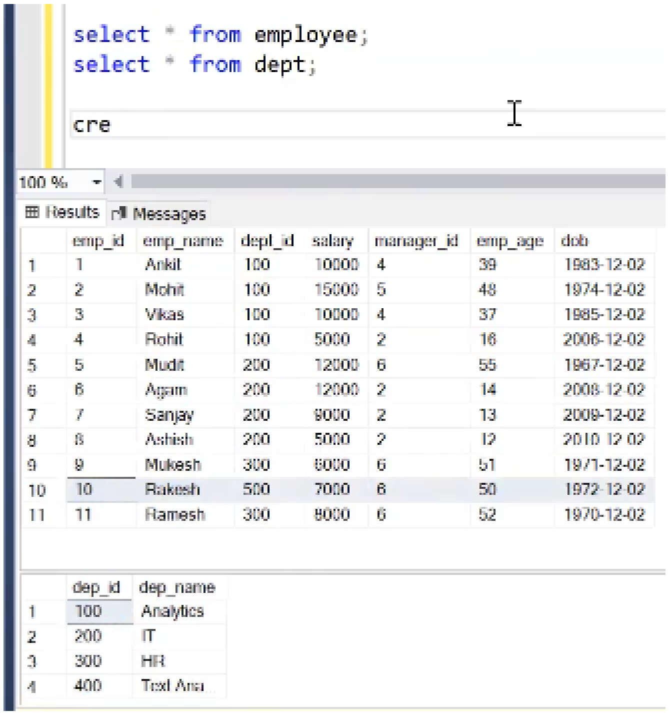


```
create view emp_master as
select * from master.dbo.emp
```

```
Commands completed successfully.

Completion time: 2022-12-08T08:13:48.0155469+05:30
```

This view will be created in the current DB which we running this query

11. Referential integrity constraint
12. Here we have 2 tables..employee and dept..

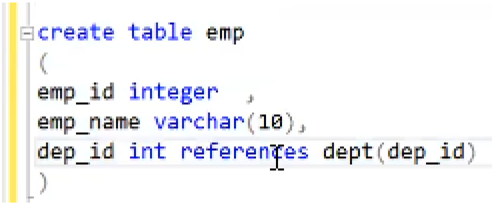


```
select * from employee;
select * from dept;

cre
```

	emp_id	emp_name	dept_id	salary	manager_id	emp_age	dob
1	1	Ankit	100	10000	4	39	1983-12-02
2	2	Mohit	100	15000	5	48	1974-12-02
3	3	Vikas	100	10000	4	37	1985-12-02
4	4	Rohit	100	5000	2	16	2006-12-02
5	5	Mudit	200	12000	6	55	1967-12-02
6	6	Agam	200	12000	2	14	2008-12-02
7	7	Sanjay	200	9000	2	13	2009-12-02
8	8	Ashish	200	5000	2	12	2010-12-02
9	9	Mukesh	300	6000	6	51	1971-12-02
10	10	Rakesh	500	7000	6	50	1972-12-02
11	11	Ramesh	300	8000	6	52	1970-12-02

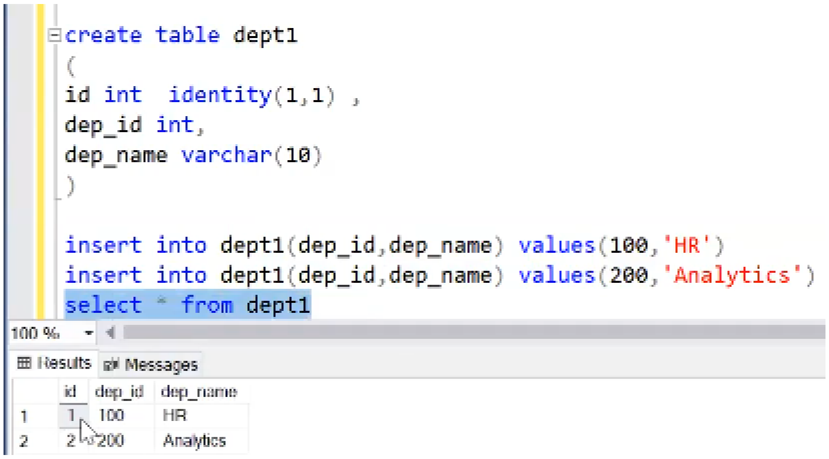
	dep_id	dep_name
1	100	Analytics
2	200	IT
3	300	HR
4	400	Text Ana...

13. In the employee table..we have dept_id of 500..which is not present in the dept table…ideally every employee must belong to the id’s present in the dept table..
14. So here dept_id 500 must be an error
15. Here comes referential integrity constraint …while creating a table we can give a constraint where the values of the dept_id in new table ..must be in the value of 2nd table which is our dept table…if there’s any new dept id in the new table ..which is not present in dept table..then it throws an error…we can set this constraint using RI



```
create table emp
(
emp_id integer  ,
emp_name varchar(10),
dep_id int references dept(dep_id)
)
```

16. Here we have created our new table with RI constraint ..it says that..any value going into dep_id of this new table…must be present in dep_id of the dept table…or else it throws an error
17. And in the dept table..the dep_id must be a primary key..in order to perform RI constraint
18. Now if we want to delete an dep_id from dept table…first we have make deletion in employee table..and then we can delete the dep_id from dept_table
19. Similarly for altering the values of dept_id in dept_table
20. Here we have identity…which auto increments the particular int column..here(1-starting,1-increment)



```
create table dept1
(
id int  identity(1,1) ,
dep_id int,
dep_name varchar(10)
)

insert into dept1(dep_id,dep_name) values(100,'HR')
insert into dept1(dep_id,dep_name) values(200,'Analytics')
select * from dept1
```

	id	dep_id	dep_name
1	1	100	HR
2	2	200	Analytics

21. Here we used identity for our id column…so when we insert values into this table..it auto increment the id column
22.