ASSIGNMENT 3 Screenshots

- **Database view**

```
select * from dbo.Sales
```

	ProductID	SaleDate	Quantity	TotalAmount	CustomerID	StoreID	SalespersonID	PaymentMethod
1	1	2023-08-01	10	200.00	101	1	201	Credit Card
2	2	2023-08-01	5	150.00	102	1	202	Cash
3	1	2023-08-02	8	160.00	103	2	203	Credit Card
4	2	2023-08-02	7	210.00	104	2	204	Cash
5	1	2023-08-03	6	120.00	105	1	201	NULL
6	3	2023-08-04	12	300.00	106	3	205	Credit Card
7	1	2023-08-04	5	100.00	107	3	206	Debit Card
8	2	2023-08-05	9	270.00	108	1	202	NULL
9	3	2023-08-05	15	375.00	109	3	207	Cash
10	1	2023-08-06	7	140.00	110	2	203	Credit Card

- **Select & Where:**

```
select * from dbo.Sales where PaymentMethod = 'Cash'
```

	ProductID	SaleDate	Quantity	TotalAmount	CustomerID	StoreID	SalespersonID	PaymentMethod
1	2	2023-08-01	5	150.00	102	1	202	Cash
2	2	2023-08-02	7	210.00	104	2	204	Cash
3	3	2023-08-05	15	375.00	109	3	207	Cash

- **Aggregate Functions: AVG, SUM**

```
select ProductId,
sum(TotalAmount) [Sum of Sales],
sum(Quantity) [Total Quantity],
avg(TotalAmount) [Avg Amount],
avg(Quantity) [Avg Quantity]
from dbo.Sales
group by
ProductID
```

	ProductId	Sum of Sales	Total Quantity	Avg Amount	Avg Quantity
1	1	720.00	36	144.000000	7
2	2	630.00	21	210.000000	7
3	3	675.00	27	337.500000	13

- **Group by**

```
SELECT PAYMENTMETHOD, SUM(TOTALAMOUNT) [TOTAL AMOUNT] FROM DBO.Sales GROUP BY PaymentMethod
```

	PAYMENTMETHOD	TOTAL AMOUNT
1	NULL	390.00
2	Cash	735.00
3	Credit Card	800.00
4	Debit Card	100.00

- **Order by**

```
SELECT PRODUCTID, PaymentMethod, SUM(TOTALAMOUNT) [SUM OF SALES] FROM DBO.Sales GROUP BY PRODUCTID, PAYMENTMETHOD ORDER BY PRODUCTID
```

	PRODUCTID	PaymentMethod	SUM OF SALES
1	1	NULL	120.00
2	1	Credit Card	500.00
3	1	Debit Card	100.00
4	2	NULL	270.00
5	2	Cash	360.00
6	3	Cash	375.00
7	3	Credit Card	300.00

- **JOINS:**

Creating new table to show joins:

```
--Creating Table1 & insertinting records in Table1
create table table1 (C1 int, C2 nvarchar(max))
insert into table1 values (1,'A'),
(1,'B'),
(2,'C'),
(NULL,'D'),
(3,'E'),
(7,'DA')

--Creating Table2 & insertinting records in Table2
create table table2 (C1 int, C3 nvarchar(max))
insert into table2 values (1,'XA'),
(2,'MB'),
(2,'NX'),
(NULL,'MO'),
(4,'XY'),
(5,'TF')
```

Inner Join:

```
select * from table1
inner join table2 on table1.C1 = table2.C1
```

	C1	C2	C1	C3
1	1	A	1	XA
2	1	B	1	XA
3	2	C	2	MB
4	2	C	2	NX

Left Join:

```
select * from table1 left join table2
on table1.C1 = table2.C1
```

C1	C2	C1	C3
1	A	1	XA
1	B	1	XA
2	C	2	MB
2	C	2	NX
NULL	D	NULL	NULL
3	E	NULL	NULL
7	DA	NULL	NULL

Right Join:

```
select * from table1 right join
table2 on table1.C1 = table2.C1
```

C1	C2	C1	C3
1	A	1	XA
1	B	1	XA
2	C	2	MB
2	C	2	NX
NULL	NULL	NULL	MO
NULL	NULL	4	XY
NULL	NULL	5	TF

- **SubQueries:**

```
select ProductID, TotalAmount
from dbo.Sales
where TotalAmount = (select max(TotalAmount) from dbo.Sales)
```

	ProductID	TotalAmount
1	3	375.00

- **Views:**

```sql
create view view1 as
select ProductID, Quantity, TotalAmount
from dbo.Sales
where PaymentMethod = 'Credit Card'

select * from view1
```

	ProductID	Quantity	TotalAmount
1	1	10	200.00
2	1	8	160.00
3	3	12	300.00
4	1	7	140.00