

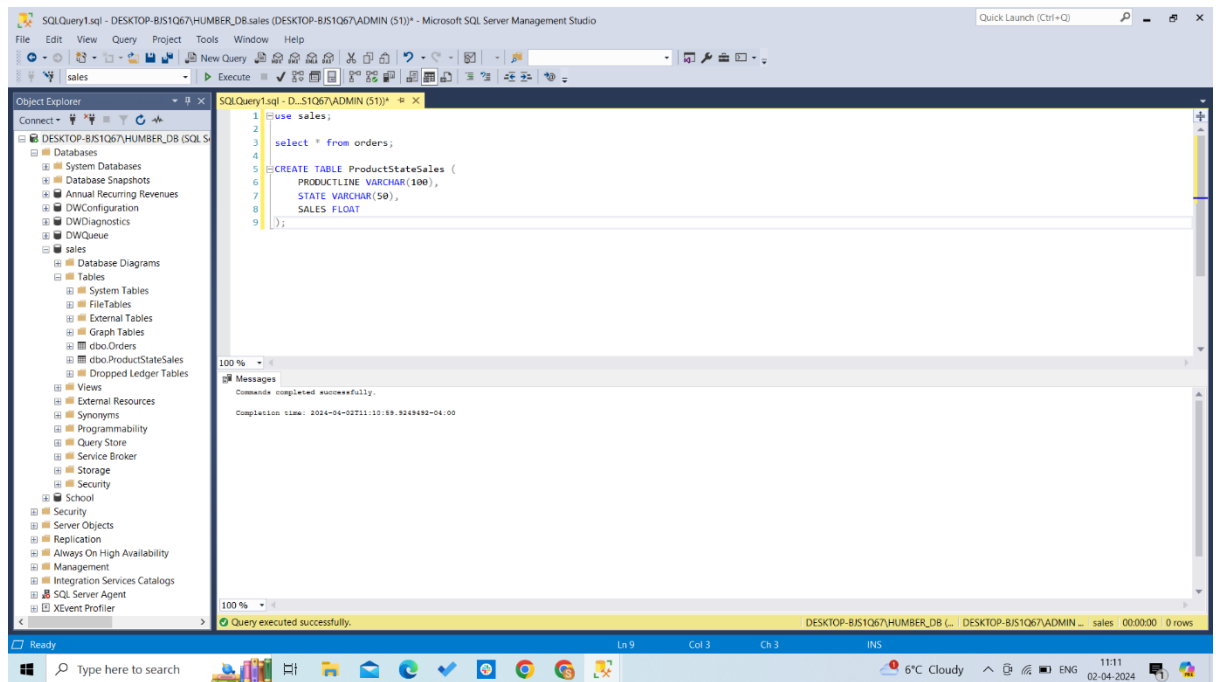
SQL Practical Assignment

Task 1: Table Creation:

Query:

```
CREATE TABLE ProductStateSales (  
    PRODUCTLINE VARCHAR(100),  
    STATE VARCHAR(50),  
    SALES FLOAT  
);
```

Output Screenshot:

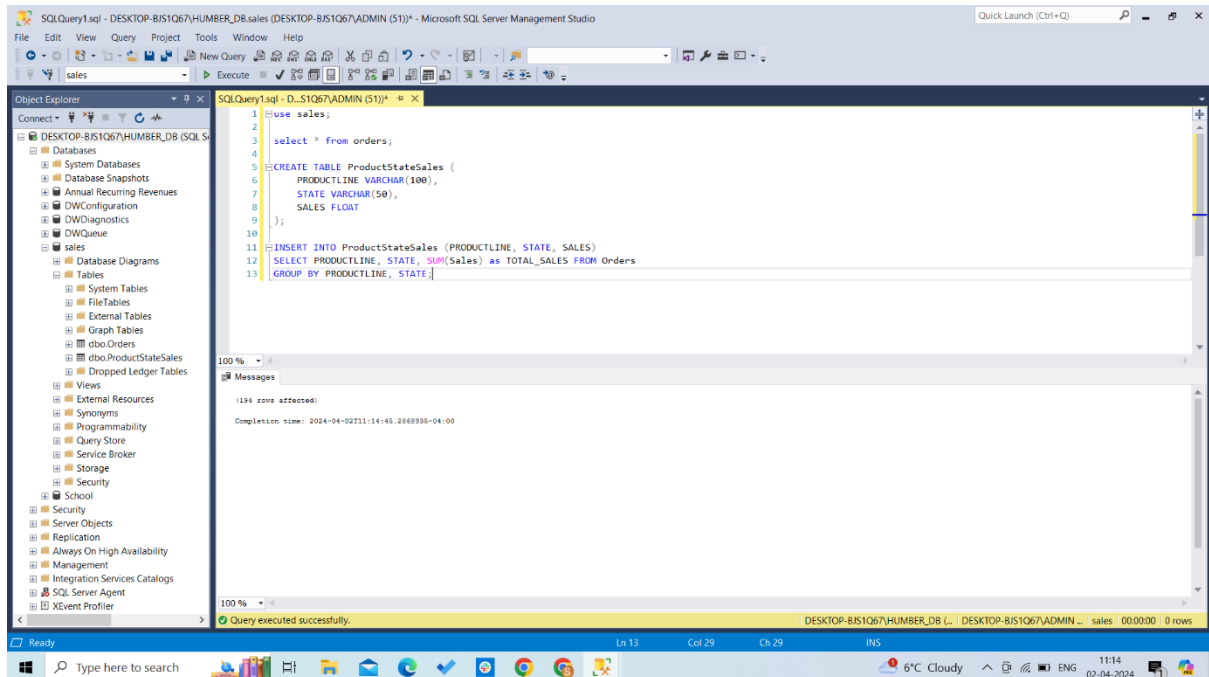


Task 2: Data Aggregation and Insertion:

Query:

```
INSERT INTO ProductStateSales (PRODUCTLINE, STATE, SALES)  
SELECT PRODUCTLINE, STATE, SUM(Sales) as TOTAL_SALES FROM Orders  
GROUP BY PRODUCTLINE, STATE;
```

Output Screenshot:



Task 3: Record Deletion:

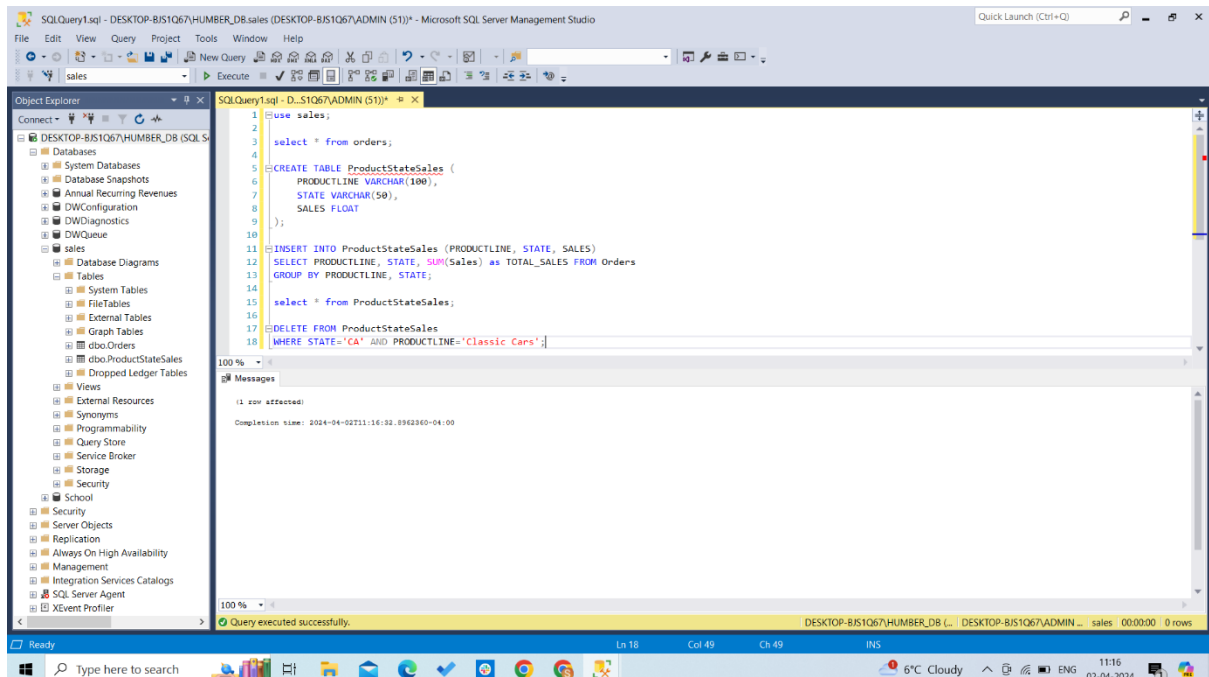
Query:

```

DELETE FROM ProductStateSales
WHERE STATE='CA' AND PRODUCTLINE='Classic Cars';

```

Output Screenshot:



Task 4: Cartesian Product:

Query:

```
SELECT * FROM Orders, ProductStateSales;
```

Output Screenshot:

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	SALES	REVENUE	ORDERDATE	STATUS	QTR_ID	MONTH_ID	YEAR_ID	PRODUCTLINE	MSRP	PRODUCTCODE	CUSTOMERNAME	PHONE	ADDRESS
1	30	95.7	2	2871	2871000	2003-02-24 00:00:00.000	Shipped	1	2	2003	Motorcycles	95	S10_1678	Land of Toys Inc.	2125557818	897
2	34	81.35	5	2785.9	2785900	2003-05-07 00:00:00.000	Shipped	2	5	2003	Motorcycles	95	S10_1678	Reims Collectables	28.47.1555	56
3	41	94.74	2	3884.34	3884340	2003-07-01 00:00:00.000	Shipped	3	7	2003	Motorcycles	95	S10_1678	Lyon Souvenirs	+33 1 46 62 7555	2
4	45	83.28	6	3746.7	3746700	2003-08-25 00:00:00.000	Shipped	3	8	2003	Motorcycles	95	S10_1678	Toys4Grown/ups.com	6265557265	71
5	49	100	14	5205.27	5205270	2003-10-10 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Corporate Gift Ideas Co.	6505551386	7
6	36	96.66	1	3479.76	3479760	2003-10-28 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Technica Stores Inc.	6505556609	9
7	29	86.13	9	2497.77	2497770	2003-11-11 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Deadalus Design Imports	20.16.1555	1
8	48	100	1	5512.32	5512320	2003-11-18 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Henku Gifts	+47 2267 3215	1
9	22	98.57	2	2168.54	2168540	2003-12-01 00:00:00.000	Shipped	4	12	2003	Motorcycles	95	S10_1678	Mini Wheels Co.	6505555787	5
10	41	100	14	4708.44	4708440	2004-01-15 00:00:00.000	Shipped	1	1	2004	Motorcycles	95	S10_1678	Auto Canal Petit	(1) 47 55 6555	2
11	37	100	1	3965.66	3965660	2004-02-20 00:00:00.000	Shipped	1	2	2004	Motorcycles	95	S10_1678	Australian Collectors Co.	6505551500	0
12	23	100	7	2333.12	2333120	2004-04-05 00:00:00.000	Shipped	2	4	2004	Motorcycles	95	S10_1678	Vladrome Inc.	2125551500	21
13	28	100	2	3188.64	3188640	2004-05-18 00:00:00.000	Shipped	2	5	2004	Motorcycles	95	S10_1678	Tekni Collectables Inc.	2015559300	7
14	34	100	2	3676.76	3676760	2004-06-28 00:00:00.000	Shipped	2	6	2004	Motorcycles	95	S10_1678	Gift Depot Inc.	2035552570	21
15	45	92.83	1	4177.35	4177350	2004-07-23 00:00:00.000	Shipped	3	7	2004	Motorcycles	95	S10_1678	La Rochelle Gifts	40.67.8555	6
16	35	100	6	4598.68	4598680	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Mark's Replicas Co.	6175558585	393
17	46	100	6	4598.68	4598680	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Mark's Replicas Co.	6175558585	393
18	46	84.74	1	4304.16	4304160	2004-11-02 00:00:00.000	Shipped	4	11	2004	Motorcycles	95	S10_1678	Disney Classics Inc.	2160041500	796

Task 5: Equality Join Using WHERE Clause:

Query:

```
SELECT * FROM Orders as o, ProductStateSales as p
WHERE o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
```

Output Screenshot:

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	SALES	REVENUE	ORDERDATE	STATUS	QTR_ID	MONTH_ID	YEAR_ID	PRODUCTLINE	MSRP	PRODUCTCODE	CUSTOMERNAME	PHONE	ADDRESS
1	30	95.7	2	2871	2871000	2003-02-24 00:00:00.000	Shipped	1	2	2003	Motorcycles	95	S10_1678	Land of Toys Inc.	2125557818	897
2	34	81.35	5	2785.9	2785900	2003-05-07 00:00:00.000	Shipped	2	5	2003	Motorcycles	95	S10_1678	Reims Collectables	28.47.1555	56
3	41	94.74	2	3884.34	3884340	2003-07-01 00:00:00.000	Shipped	3	7	2003	Motorcycles	95	S10_1678	Lyon Souvenirs	+33 1 46 62 7555	2
4	45	83.28	6	3746.7	3746700	2003-08-25 00:00:00.000	Shipped	3	8	2003	Motorcycles	95	S10_1678	Toys4Grown/ups.com	6265557265	71
5	49	100	14	5205.27	5205270	2003-10-10 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Corporate Gift Ideas Co.	6505551386	7
6	36	96.66	1	3479.76	3479760	2003-10-28 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Technica Stores Inc.	6505556609	9
7	29	86.13	9	2497.77	2497770	2003-11-11 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Deadalus Design Imports	20.16.1555	1
8	48	100	1	5512.32	5512320	2003-11-18 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Henku Gifts	+47 2267 3215	1
9	22	98.57	2	2168.54	2168540	2003-12-01 00:00:00.000	Shipped	4	12	2003	Motorcycles	95	S10_1678	Mini Wheels Co.	6505555787	5
10	41	100	14	4708.44	4708440	2004-01-15 00:00:00.000	Shipped	1	1	2004	Motorcycles	95	S10_1678	Auto Canal Petit	(1) 47 55 6555	2
11	37	100	1	3965.66	3965660	2004-02-20 00:00:00.000	Shipped	1	2	2004	Motorcycles	95	S10_1678	Australian Collectors Co.	6505551500	0
12	23	100	7	2333.12	2333120	2004-04-05 00:00:00.000	Shipped	2	4	2004	Motorcycles	95	S10_1678	Vladrome Inc.	2125551500	21
13	28	100	2	3188.64	3188640	2004-05-18 00:00:00.000	Shipped	2	5	2004	Motorcycles	95	S10_1678	Tekni Collectables Inc.	2015559300	7
14	34	100	2	3676.76	3676760	2004-06-28 00:00:00.000	Shipped	2	6	2004	Motorcycles	95	S10_1678	Gift Depot Inc.	2035552570	21
15	45	92.83	1	4177.35	4177350	2004-07-23 00:00:00.000	Shipped	3	7	2004	Motorcycles	95	S10_1678	La Rochelle Gifts	40.67.8555	6
16	35	100	6	4598.68	4598680	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Mark's Replicas Co.	6175558585	393
17	46	100	6	4598.68	4598680	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Mark's Replicas Co.	6175558585	393
18	46	84.74	1	4304.16	4304160	2004-11-02 00:00:00.000	Shipped	4	11	2004	Motorcycles	95	S10_1678	Disney Classics Inc.	2160041500	796

Task 6: Equality Join Using JOIN Keyword:

Query:

```
SELECT * FROM Orders as o JOIN ProductStateSales as p
ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
```

Output Screenshot:

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The left pane shows the 'Object Explorer' with the 'DESKTOP-BIS1Q67\HUMBER' database selected. The right pane shows the 'SQLQuery1.sql' file with the following query:

```
16 select * from ProductStateSales;
17
18 -- Task 3: Record Deletion
19 DELETE FROM ProductStateSales
20 WHERE STATE='CA' AND PRODUCTLINE='Classic Cars';
21
22 -- Task 4: Cartesian Product
23 SELECT * FROM Orders, ProductStateSales;
24
25 -- Task 5: Equality Join Using WHERE Clause
26 SELECT * FROM Orders as o, ProductStateSales as p
27 WHERE o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
28
29 -- Task 6: Equality Join Using JOIN Keyword
30 SELECT * FROM Orders as o JOIN ProductStateSales as p
31 ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
32
```

The bottom pane shows the 'Results' tab with the following data:

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	SALES	REVENUE	ORDERDATE	STATUS	QTR_ID	MONTH_ID	YEAR_ID	PRODUCTLINE	MSRP	PRODUCTCODE	CUSTOMERNAME	PHONE	ADD
1	30	95.7	2	2871	287100	2003-02-24 00:00:00.000	Shipped	1	2	2003	Motorcycles	95	S10_1678	Land of Toys Inc.	2125557818	897
2	45	83.26	6	3746.7	374670	2003-08-25 00:00:00.000	Shipped	3	8	2003	Motorcycles	95	S10_1678	Topo4Grown/ps.com	6285557265	789
3	49	100	14	5205.27	5205270	2003-10-10 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Corporate Gift Ideas Co.	6505551386	773
4	36	96.66	1	3479.76	3479760	2003-10-28 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Technica Stores Inc.	6505556809	940
5	29	96.13	9	2407.77	2407770	2003-11-11 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Davidson Design Imports	20161555	154
6	48	100	1	5512.32	5512320	2003-11-18 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Hankku Gifts	+4722673215	154
7	22	96.57	2	2168.54	2168540	2003-12-01 00:00:00.000	Shipped	4	12	2003	Motorcycles	95	S10_1678	Mini Wheels Co.	6505555787	555
8	41	100	14	4708.44	4708440	2004-01-15 00:00:00.000	Shipped	1	1	2004	Motorcycles	95	S10_1678	Auto Canal Petit	(1) 47556555	25
9	37	100	1	3965.66	3965660	2004-02-20 00:00:00.000	Shipped	1	2	2004	Motorcycles	95	S10_1678	'Australian Collectors Co.'	03 9	03 9
10	23	100	7	2333.12	2333120	2004-04-05 00:00:00.000	Shipped	2	4	2004	Motorcycles	95	S10_1678	Vladivostok Inc.	2125551500	267
11	28	100	2	3188.64	3188640	2004-05-18 00:00:00.000	Shipped	2	5	2004	Motorcycles	95	S10_1678	Tekni Collectables Inc.	2015559350	747
12	34	100	2	3676.76	3676760	2004-06-28 00:00:00.000	Shipped	2	6	2004	Motorcycles	95	S10_1678	Gift Depot Inc.	2035552570	259
13	45	62.83	1	4177.35	4177350	2004-07-23 00:00:00.000	Shipped	3	7	2004	Motorcycles	95	S10_1678	La Rochelle Gifts	40.67.8555	167
14	36	100	6	4099.68	4099680	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Maria's Replicas Co.	6175558555	383
15	23	100	9	2567.38	2567380	2004-09-30 00:00:00.000	Shipped	3	9	2004	Motorcycles	95	S10_1678	'Toys of Finland Co.'	90-2	90-2
16	45	84.74	1	4190.04	4190040	2004-11-02 00:00:00.000	Shipped	4	11	2004	Motorcycles	95	S10_1678	Flower Classics Inc.	2155551555	758

The bottom status bar indicates 'Query executed successfully.' and 'DESKTOP-BIS1Q67\HUMBER_DB ... sales 00:00:00 2,047 rows'.

Task 7: Outer Join:

Query:

```
SELECT * FROM Orders as o LEFT JOIN ProductStateSales as p
ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
```

Output Screenshots:

SQLQuery1.sql - DESKTOP-BIS1Q67\HUMBER_DB\Sales (DESKTOP-BIS1Q67\ADMIN (S1)) - Microsoft SQL Server Management Studio

Object Explorer: Connect to DESKTOP-BIS1Q67\HUMBER_DB, Databases, System Databases, Database Snapshots, Annual Recurring Revenue, DWDiagnostics, DWDQueue, Sales, Database Diagrams, Tables, System Tables, FileTables, External Tables, Graph Tables, dbo.Orders, dbo.ProductStateSales, Dropped Ledger, Views, External Resources, Synonyms, Programmability, Query Store, Service Broker, Storage, Security, School, Server Objects, Replication, Always On High Availability, Management, Integration Services Catalog, SQL Server Agent, XEvent Profiler.

SQLQuery1.sql - D..S1Q67\ADMIN (S1)*

```
-- Task 3: Record Deletion
20 DELETE FROM ProductStateSales
21 WHERE STATE='CA' AND PRODUCTLINE='Classic Cars';
22
-- Task 4: Cartesian Product
23 SELECT * FROM Orders, ProductStateSales;
24
-- Task 5: Equality Join Using WHERE Clause
25 SELECT * FROM Orders as o, ProductStateSales as p
26 WHERE o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
27
-- Task 6: Equality Join Using JOIN Keyword
28 SELECT * FROM Orders as o JOIN ProductStateSales as p
29 ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
30
-- Task 7: Outer Join
31 SELECT * FROM Orders as o LEFT JOIN ProductStateSales as p
32 ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
```

100 %

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	SALES	REVENUE	ORDERDATE	STATUS	QTR_ID	MONTH_ID	YEAR_ID	PRODUCTLINE	MSRP	PRODUCTCODE	CUSTOMERNAME	PHONE	AL
10107	30	95.7	2	2871	2871000	2003-02-24 00:00:00.000	Shipped	1	2	2003	Motorcycles	95	S10_1678	Land of Toys Inc.	2125557818	8
10121	34	81.35	5	2780.9	2780900	2003-05-07 00:00:00.000	Shipped	2	5	2003	Motorcycles	95	S10_1678	Reims Collectables	26.47.1555	5
10134	41	94.74	2	3884.34	3884340	2003-07-01 00:00:00.000	Shipped	3	7	2003	Motorcycles	95	S10_1678	Lynn Souvenirs	+33 1 46 62 7555	2
10145	45	83.26	6	3746.7	3746700	2003-08-25 00:00:00.000	Shipped	3	8	2003	Motorcycles	95	S10_1678	Toys4DownInc.com	6265557265	7
10159	49	100	14	5205.27	5205270	2003-10-10 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Corporate Gift Ideas Co.	6505551386	7
10168	36	96.66	1	3479.76	3479760	2003-10-20 00:00:00.000	Shipped	4	10	2003	Motorcycles	95	S10_1678	Technics Stores Inc.	6505556809	9
10180	29	85.13	9	2487.77	2487770	2003-11-11 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Daedalus Designs Imports	26.16.1555	1
10188	48	100	1	5512.32	5512320	2003-11-18 00:00:00.000	Shipped	4	11	2003	Motorcycles	95	S10_1678	Henku Gifts	+47 2287 3215	1
10201	22	98.57	2	2188.54	2188540	2003-12-01 00:00:00.000	Shipped	4	12	2003	Motorcycles	95	S10_1678	Mini Wheels Co.	6505555787	5
10211	41	100	14	4708.44	4708440	2004-01-15 00:00:00.000	Shipped	1	1	2004	Motorcycles	95	S10_1678	Auto Canal Patti	(1) 47 55 6555	2
10223	37	100	1	3965.66	3965660	2004-02-20 00:00:00.000	Shipped	1	2	2004	Motorcycles	95	S10_1678	Australian Collectors Co.		0
10237	23	100	7	2332.12	2332120	2004-04-05 00:00:00.000	Shipped	2	4	2004	Motorcycles	95	S10_1678	Vlachrome Inc.	2125551500	2
10251	28	100	2	3188.84	3188840	2004-05-18 00:00:00.000	Shipped	2	5	2004	Motorcycles	95	S10_1678	Tekni Collectables Inc.	2015559350	7
10263	34	100	2	3676.76	3676760	2004-06-28 00:00:00.000	Shipped	2	6	2004	Motorcycles	95	S10_1678	Gift Depot Inc.	2035552570	2
10275	45	82.83	1	4177.35	4177350	2004-07-23 00:00:00.000	Shipped	3	7	2004	Motorcycles	95	S10_1678	La Rochelle Gifts	40.67.8555	6
10285	35	100	6	4789.65	4789650	2004-08-27 00:00:00.000	Shipped	3	8	2004	Motorcycles	95	S10_1678	Martin's Resistor Inc.	6175556555	4

Query executed successfully.

DESKTOP-BIS1Q67\HUMBER_DB [L] DESKTOP-BIS1Q67\ADMIN [L] sales 00:00:00 2,823 rows

SQLQuery1.sql - DESKTOP-BIS1Q67\HUMBER_DB\Sales (DESKTOP-BIS1Q67\ADMIN (S1)) - Microsoft SQL Server Management Studio

Object Explorer: Connect to DESKTOP-BIS1Q67\HUMBER_DB, Databases, System Databases, Database Snapshots, Annual Recurring Revenue, DWDiagnostics, DWDQueue, Sales, Database Diagrams, Tables, System Tables, FileTables, External Tables, Graph Tables, dbo.Orders, dbo.ProductStateSales, Dropped Ledger, Views, External Resources, Synonyms, Programmability, Query Store, Service Broker, Storage, Security, School, Server Objects, Replication, Always On High Availability, Management, Integration Services Catalog, SQL Server Agent, XEvent Profiler.

SQLQuery1.sql - D..S1Q67\ADMIN (S1)*

```
-- Task 3: Record Deletion
20 DELETE FROM ProductStateSales
21 WHERE STATE='CA' AND PRODUCTLINE='Classic Cars';
22
-- Task 4: Cartesian Product
23 SELECT * FROM Orders, ProductStateSales;
24
-- Task 5: Equality Join Using WHERE Clause
25 SELECT * FROM Orders as o, ProductStateSales as p
26 WHERE o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
27
-- Task 6: Equality Join Using JOIN Keyword
28 SELECT * FROM Orders as o JOIN ProductStateSales as p
29 ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
30
-- Task 7: Outer Join
31 SELECT * FROM Orders as o LEFT JOIN ProductStateSales as p
32 ON o.PRODUCTLINE = p.PRODUCTLINE AND o.STATE = p.STATE;
```

100 %

PHONE	ADDRESSLINE1	ADDRESSLINE2	QTY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	CompanyID	PRODUCTLINE	STATE	SALES
2125557818	897 Long Airport Avenue	NULL	NYC	NY	10022	USA	NA	Yu	Small	7	Motorcycles	NY	113572.28	
26.47.1555	59 rue de l'Albion	NULL	Reims	NULL	51100	France	EMEA	Henriot	Paul	Small	14	NULL	NULL	NULL
+33 1 46 62 7555	27 rue du Colonel Pierre Aime	NULL	Paris	NULL	75508	France	EMEA	De Cunha	Daniel	Medium	4	NULL	NULL	NULL
6265557265	78934 Hillside Dr.	NULL	Pasadena	CA	90003	USA	NA	Young	Julie	Medium	1	Motorcycles	CA	183666.41
6505551386	7734 Strong St.	NULL	San Francisco	CA	94018	USA	NA	Brown	Julie	Medium	13	Motorcycles	CA	183666.41
6505556809	8408 Fourth Circle	NULL	Burlington	CA	94217	USA	NA	Hirano	Juri	Medium	14	Motorcycles	CA	183666.41
20.16.1555	154 chaussee de Tournai	NULL	Lille	France	59000	France	EMEA	Rance	Marline	Small.12	Motorcycles	Lille	61495.37	
+47 2287 3215	121 Drammen 121	PR 744 Sertum	Bergen	Norway	N 5804	Norway	EMEA	Oxten	Veslay	Medium.7	Motorcycles	Bergen	30524.29	
650555787	5557 North Pendle Street	NULL	San Francisco	CA	94018	USA	NA	Murphy	Julie	Small	12	Motorcycles	CA	183666.41
(1) 47 55 6555	25 rue Lauriston	NULL	Paris	France	75016	France	EMEA	Perrier	Dominique	Medium.3	Motorcycles	Paris	51397.57	
03 9520 4555	636 St Kilda Road	Level 3	Melbourne	Australia	3004	Australia	AFAC	Ferguson	Peter	Medium.7	Motorcycles	Melbourne	53818.66	
2125551500	2678 Kingston Rd.	Suite 101	NYC	NY	10022	USA	NA	Frick	Michael	Small	12	Motorcycles	NY	113572.28
2015559350	7476 Moss Rd.	NULL	Newark	NJ	94019	USA	NA	Brown	William	Medium	4	Motorcycles	NJ	32979.88
2035552570	25593 South Bay Ln.	NULL	Bridgewater	CT	97562	USA	NA	King	Julie	Medium	2	Motorcycles	CT	40902.75
40.67.8555	67 rue des Cinquante Otages	NULL	Nantes	France	44000	France	EMEA	Labruno	Janine	Medium.13	Motorcycles	Nantes	53633.27	
6175556555	38121 Rounaker Dr	NULL	Cambridge	MA	01247	USA	NA	Hernandez	Marta	Medium	8	Motorcycles	MA	65171.17

Query executed successfully.

DESKTOP-BIS1Q67\HUMBER_DB [L] DESKTOP-BIS1Q67\ADMIN [L] sales 00:00:00 2,823 rows