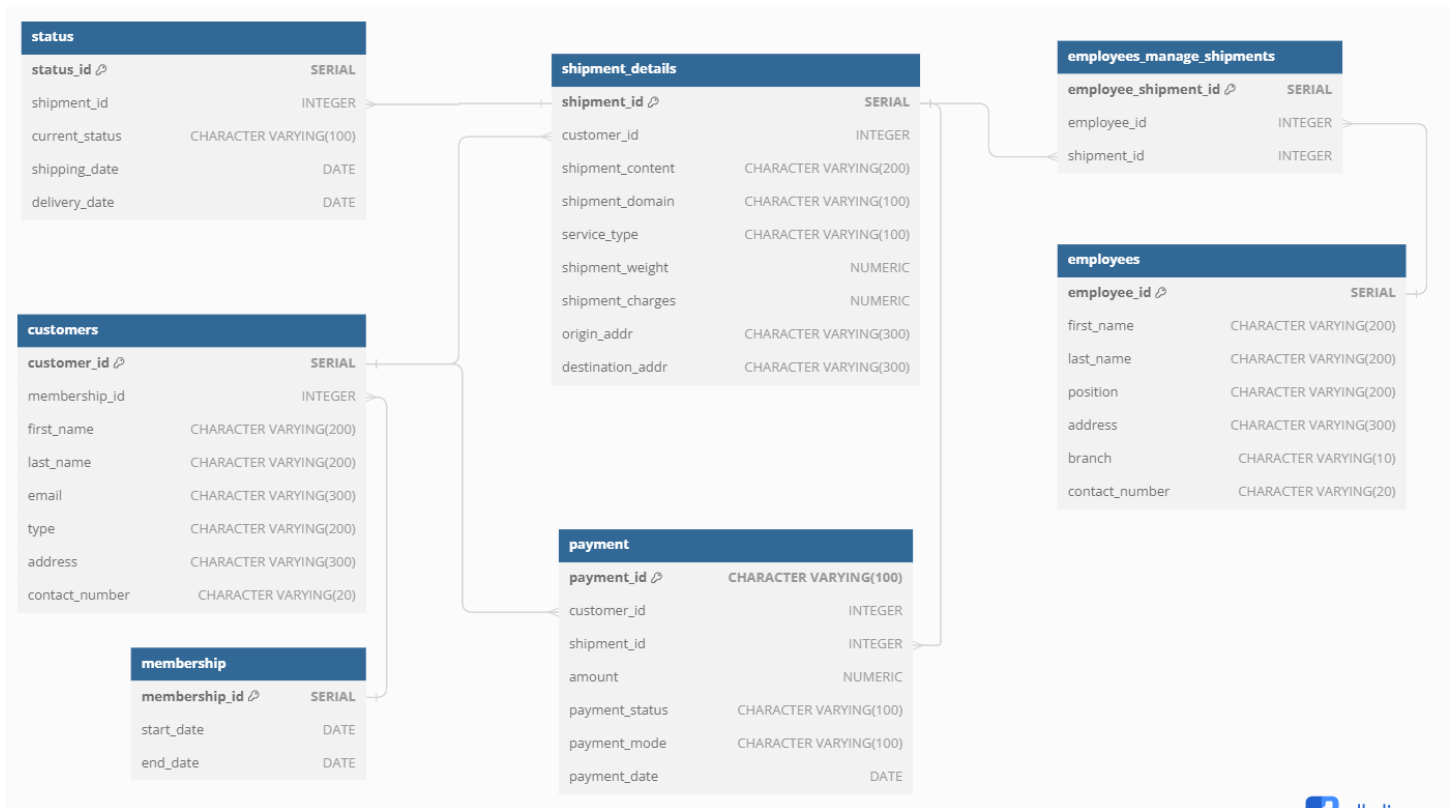


This is the ERD diagram in which I developed the project:

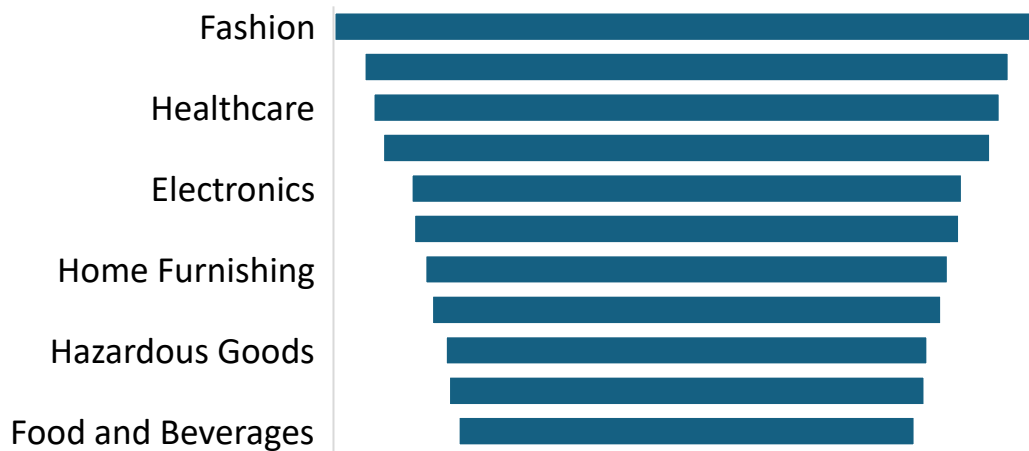


1. Analysis, insights and visualization

Query 1: What is the total of shipments and average weight that the company has delivered by type of shipment content?

Data Output				Messages	Notifications
	shipment_content character varying (200)	total_shipments bigint	avg_weight_per_shipment numeric		
1	Fashion	13	661.62		
2	Luggage	21	605.43		
3	Healthcare	16	588.38		
4	Construction	21	570.62		
5	Electronics	18	517.39		
6	Industrial Equipments	19	512.26		
7	Home Furnishing	22	491.41		
8	Arts and crafts	22	478.64		
9	Hazardous Goods	17	452.76		
10	Automotive	17	447.24		
11	Food and Beverages	14	428.86		
Total rows: 11 of 11		Query complete 00:00:00.381			

Shipment distribution content and average weight



Insights: Fashion and luggage are the most shipped items, with 13 and 21 shipments, averaging over 600 kgs per shipment. Healthcare, construction, electronics, and industrial equipment average 18.5 shipments with weights between 500-600 kgs. Less shipped items include home furnishings, arts and crafts, hazardous goods, automotive, and food/beverages, averaging 18.4 shipments and weights between 429-491 kgs.

Query 2: What is the trend of the number of memberships ending for the following years (from 2024)?

Data Output				Messages	Notifications
	membership_ending_count bigint	membership_end_year numeric	membership_end_month numeric		
1	1	2024	9		
2	1	2024	11		
3	1	2025	1		
4	1	2025	8		
5	1	2025	12		
6	1	2026	3		
7	2	2026	11		
8	1	2026	12		
9	1	2027	1		
10	1	2027	8		
11	2	2027	11		
12	1	2029	6		
13	1	2029	10		
14	1	2029	11		
15	1	2031	6		
16	1	2032	7		
17	1	2033	11		
18	2	2033	12		
19	1	2034	4		
20	1	2035	12		
21	1	2038	12		
Total rows: 21 of 21				Query complete 00:00:00.080	

Insights: The active members are gradually ending by December 2038. Overall, the ending of memberships looks smooth; there is no specific month showing a large spike in the number of members leaving. However, there will be a total of 16 memberships ending by the end of year 2029 over the next five years. Therefore, the company should focus on the following five years to monitor the trends of membership ending and develop strategic plans for renewals or actively seeking new memberships.

Query 3: What amount of money does an active member bring by the expiration year of their membership?

Data Output

Messages

Notifications

	irship_id	amount	payment_status	total_amount_by_year	ratio_amount_by_year	total_amount_by_status	ratio_amount_by_status	membership_end_year
	numeric	numeric	character varying (100)	numeric	numeric	numeric	numeric	numeric
1	820	21021	NOT PAID	55818	0.38	482029	0.04	2024
2	867	34797	PAID	55818	0.62	640036	0.05	2024
3	416	66397	NOT PAID	199242	0.33	482029	0.14	2025
4	426	41003	NOT PAID	199242	0.21	482029	0.09	2025
5	762	91842	PAID	199242	0.46	640036	0.14	2025
6	683	39488	NOT PAID	158678	0.25	482029	0.08	2026
7	973	23055	PAID	158678	0.15	640036	0.04	2026
8	830	22261	PAID	158678	0.14	640036	0.03	2026
9	351	73874	PAID	158678	0.47	640036	0.12	2026
10	327	50374	NOT PAID	132449	0.38	482029	0.10	2027
11	531	10366	PAID	132449	0.08	640036	0.02	2027
12	754	47260	PAID	132449	0.36	640036	0.07	2027
13	640	24449	PAID	132449	0.18	640036	0.04	2027
14	30	89846	NOT PAID	192154	0.47	482029	0.19	2029
15	704	35185	NOT PAID	192154	0.18	482029	0.07	2029
16	271	67123	PAID	192154	0.35	640036	0.10	2029
17	596	48315	NOT PAID	48315	1.00	482029	0.10	2031
18	410	80179	PAID	80179	1.00	640036	0.13	2032
19	456	50958	NOT PAID	86675	0.59	482029	0.11	2033
20	808	2282	NOT PAID	86675	0.03	482029	0.00	2033
21	461	33435	NOT PAID	86675	0.39	482029	0.07	2033
22	495	78698	PAID	78698	1.00	640036	0.12	2034

Total rows: 24 of 24

Query complete 00:00:00.160

Ln 144, Col 1

Data Output

Messages

Notifications

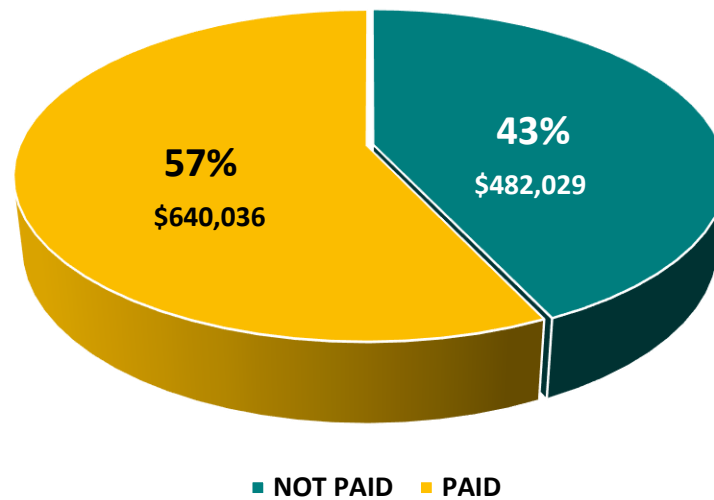
	irship_id	amount	payment_status	total_amount_by_year	ratio_amount_by_year	total_amount_by_status	ratio_amount_by_status	membership_end_year
	numeric	numeric	character varying (100)	numeric	numeric	numeric	numeric	numeric
23	301	3725	NOT PAID	3725	1.00	482029	0.01	2035
24	544	86132	PAID	86132	1.00	640036	0.13	2038

Total rows: 24 of 24

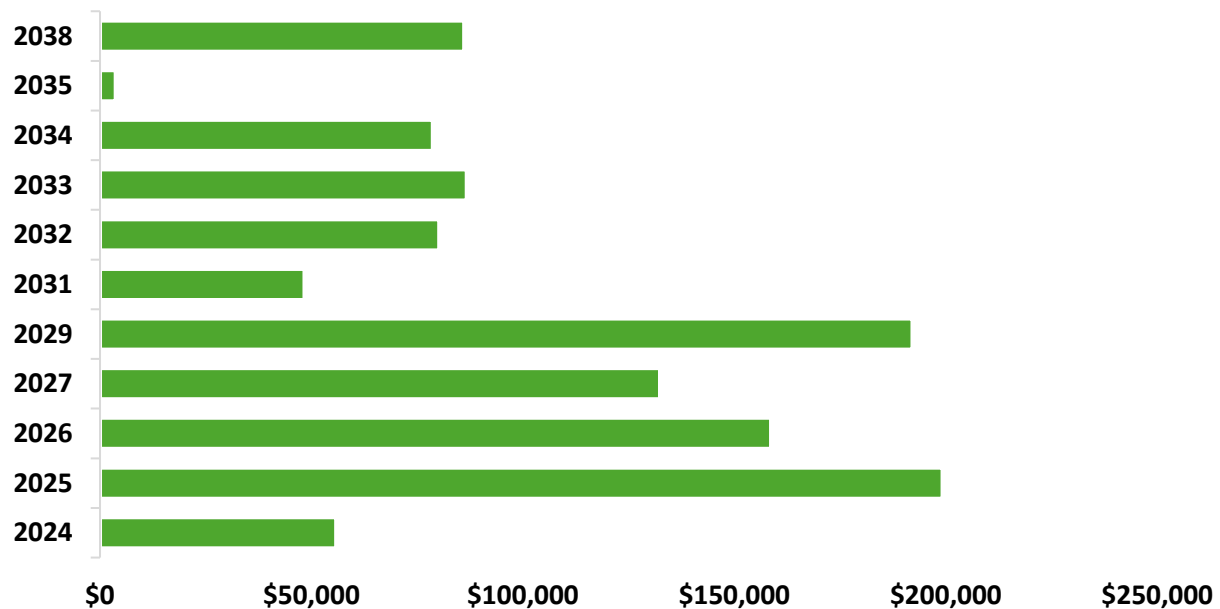
Query complete 00:00:00.160

Ln 144, Col 1

Total amount % by payment status



Total money brought by member's expiration year



Insights: This analysis helps the company examine how is the amount of payment by membership end year and payment status for each active member. We can identify key members who haven't paid yet and require close monitoring based on their payment status. Specifically, membership IDs 30 and 416. The unpaid amount makes up 19% and 14% of the total unpaid, respectively.

Query 4: How do the shipment_charges differ from shipment_content, shipment_domain, and service_type?

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
2	Luggage	Domestic	Regular	5281
3	Fashion	Domestic	Regular	5601
4	Construction	Domestic	Regular	4949
5	Construction	International	Regular	4884
6	Fashion	Domestic	Express	354
7	Electronics	International	Express	4983
8	Construction	Domestic	Express	6370
9	Industrial Equipments	Domestic	Express	4329
10	Food and Beverages	Domestic	Express	2245
11	Electronics	International	Regular	896
12	Automotive	International	Express	4307
13	Fashion	International	Express	3946
14	Construction	International	Express	3776
15	Arts and crafts	Domestic	Regular	6521
16	Home Furnishing	International	Regular	1777
17	Food and Beverages	International	Regular	4173
18	Home Furnishing	Domestic	Express	7093
19	Fashion	International	Regular	4914
20	Electronics	Domestic	Express	5750
21	Healthcare	Domestic	Regular	1950
22	Healthcare	International	Express	6685
23	Arts and crafts	Domestic	Express	4257
24	Luggage	Domestic	Express	5100
Total rows: 108 of 108 Query complete 00:00:00.206				

(By Shipment Content x Shipment Domain x Service Type, only showing part of the rows)

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
46	Food and Beverages	Domestic	[null]	5829
47	Fashion	Domestic	[null]	5955
48	Electronics	International	[null]	5879
49	Healthcare	Domestic	[null]	7907
50	Construction	International	[null]	8660
51	Hazardous Goods	International	[null]	7908
52	Construction	Domestic	[null]	11319
53	Home Furnishing	Domestic	[null]	11481
54	Arts and crafts	International	[null]	8903
55	Industrial Equipments	Domestic	[null]	12115
56	Fashion	International	[null]	8860
57	Arts and crafts	Domestic	[null]	10778
58	Home Furnishing	International	[null]	8144
59	Electronics	Domestic	[null]	11236
60	Healthcare	International	[null]	7386
61	Luggage	International	[null]	10631
62	Luggage	Domestic	[null]	10381
63	Industrial Equipments	International	[null]	5627
64	Automotive	Domestic	[null]	6892
65	Hazardous Goods	Domestic	[null]	8144
66	Food and Beverages	International	[null]	5554
67	Automotive	International	[null]	8005
Total rows: 108 of 108 Query complete 00:00:00.206				

(By Shipment Content x Shipment Domain)

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
68	Arts and crafts	[null]	[null]	19681
69	Electronics	[null]	[null]	17115
70	Hazardous Goods	[null]	[null]	16052
71	Fashion	[null]	[null]	14815
72	Healthcare	[null]	[null]	15293
73	Construction	[null]	[null]	19979
74	Luggage	[null]	[null]	21012
75	Automotive	[null]	[null]	14897
76	Food and Beverages	[null]	[null]	11383
77	Industrial Equipments	[null]	[null]	17742
78	Home Furnishing	[null]	[null]	19625
Total rows: 108 of 108		Query complete 00:00:00.206		

(By Shipment Content)

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
79	[null]	Domestic	Express	49344
80	[null]	International	Express	52680
81	[null]	International	Regular	32877
82	[null]	Domestic	Regular	52693
83	[null]	Domestic	[null]	102037
84	[null]	International	[null]	85557
Total rows: 108 of 108		Query complete 00:00:00.206		

(By Shipment Domain x Service Type (row79~82); By Shipment Domain (row83~84))

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
85	Luggage	[null]	Regular	10680
86	Healthcare	[null]	Regular	2651
87	Home Furnishing	[null]	Express	13460
88	Automotive	[null]	Express	6542
89	Electronics	[null]	Regular	6382
90	Healthcare	[null]	Express	12642
91	Arts and crafts	[null]	Regular	8645
92	Industrial Equipments	[null]	Regular	9330
93	Luggage	[null]	Express	10332
94	Construction	[null]	Regular	9833
95	Construction	[null]	Express	10146
96	Electronics	[null]	Express	10733
97	Industrial Equipments	[null]	Express	8412
98	Arts and crafts	[null]	Express	11036
99	Fashion	[null]	Regular	10515
100	Hazardous Goods	[null]	Regular	5257
101	Food and Beverages	[null]	Regular	7757
102	Fashion	[null]	Express	4300
103	Automotive	[null]	Regular	8355
104	Food and Beverages	[null]	Express	3626
105	Home Furnishing	[null]	Regular	6165
106	Hazardous Goods	[null]	Express	10795
Total rows: 108 of 108 Query complete 00:00:00.206				

(By Shipment Content x Service Type)

Data Output Messages Notifications				
	shipment_content character varying (200)	shipment_domain character varying (100)	service_type character varying (100)	charges numeric
107	[null]	[null]	Express	102024
108	[null]	[null]	Regular	85570
Total rows: 108 of 108 Query complete 00:00:00.206				

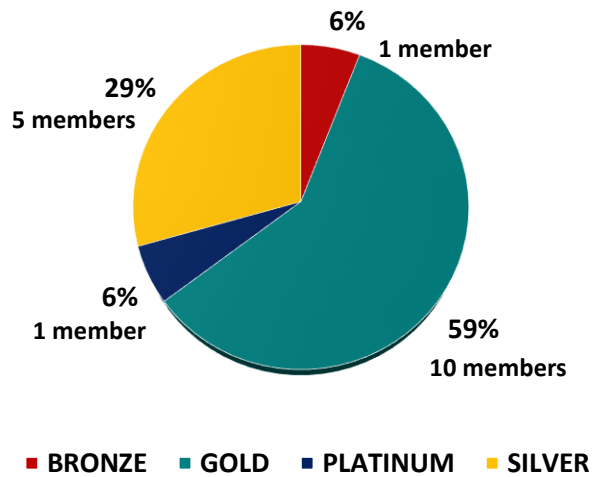
(By Service Type)

Insights: Total shipment charges amount to \$187,594, with Domestic shipments at \$102,037 and International at \$85,557. By service type, Express services account for \$102,024 and Regular for \$85,570. The company should assess if this cost structure supports its strategy and perform further analysis as needed. For example, "Luggage" incurs the highest charges (\$21,012), while "Food and Beverages" has the lowest (\$11,383), providing opportunities for cost optimization.

Query 5: Group the current customers based on their time with the company.

	customer text	membership_duration_years numeric	category text
1	Misael Hughes	15.99	PLATINUM
2	Maurice Kelly	14.71	GOLD
3	Rayshawn Green	14.24	GOLD
4	Roxanne Alexander	14.13	GOLD
5	Danielle Kennedy	14.13	GOLD
6	Eileen Dunn	13.98	GOLD
7	Frank Rose	12.90	GOLD
8	Belle Gonzalez	12.28	GOLD
9	Enrique Vargas	10.75	GOLD
10	Tammi Alvarez	10.71	GOLD
11	Franklin Ryan	10.32	GOLD
12	Tiffany Moore	8.61	SILVER
13	Nigel Snyder	7.83	SILVER
14	Todd Carter	7.08	SILVER
15	Rory Martinez	6.38	SILVER
16	Eddie Jenkins	5.85	SILVER
17	Peyton Wagner	4.88	BRONZE

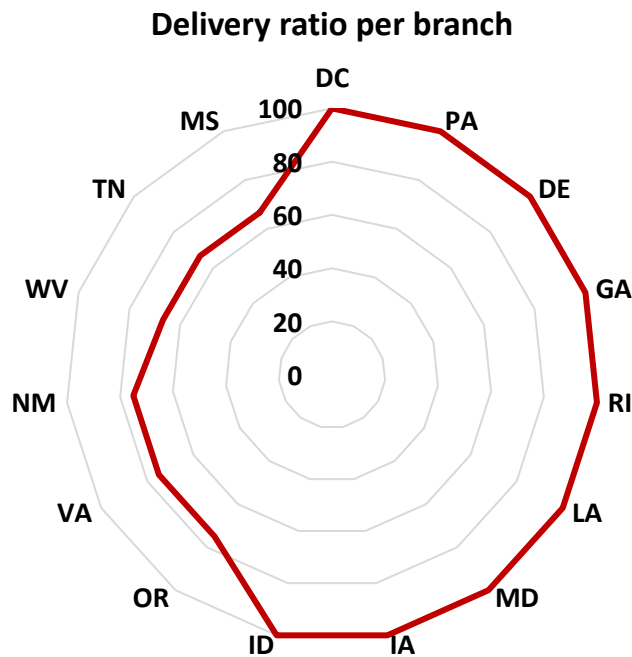
Distribution of customer categories based on their years with the company



Insights: The company fosters long-term customer relationships. Active members were categorized (Silver, Gold, Platinum) to enhance loyalty strategies. Urgent focus is needed on renewing the sole Platinum member's (Misael Hughes) expiring membership.

Query 6: Top 15 branches based on their delivery ratio.

	branch character varying (10)	delivery_ratio_perc numeric
1	DC	100.00
2	PA	100.00
3	DE	100.00
4	GA	100.00
5	RI	100.00
6	LA	100.00
7	MD	100.00
8	IA	100.00
9	ID	100.00
10	OR	75.00
11	VA	75.00
12	NM	75.00
13	WV	66.67
14	TN	66.67
15	MS	66.67



Insights: Nine states achieved a 100% delivery ratio, three states 75%, and another three 66.67%. High-performing branches, like those in Maryland, should be rewarded, and their success factors replicated. Underperforming branches should be evaluated to address issues like canceled shipments or lost packages.

Query 7: What is the total pending debt by shipping domain, customer type and client?

	shipment_domain character varying (100)	customer_type character varying (200)	customer text	pending_debt numeric
1	[null]	[null]	[null]	4645041
2	Domestic	Retail	Velma Schmidt	16299
3	International	Internal Goods	Stacy Roberts	73589
4	International	Retail	Bayley Bryant	59376
5	Domestic	Retail	Andre Chen	51038
6	International	Retail	Naisha Reed	69479
7	Domestic	Internal Goods	Sophie Lee	48315
8	Domestic	Retail	Brenda Henry	20187
9	International	Wholesale	Marie Ford	5769
10	International	Retail	Gabrielle Howard	10001
11	Domestic	Internal Goods	Clay Allen	35634
12	International	Wholesale	Eileen Dunn	39488

Insights: The total client debt is higher for domestic shipments (\$2,608,596) than international (\$2,036,445). Retail clients hold the largest debt in both domains, with \$1,051,610 domestically and \$1,011,628 internationally.

Query 8: Shipments with the highest profit margin.

Data Output Messages Notifications										
	shipment_id [PK] integer	customer_id integer	shipment_content character varying (200)	service_type character varying (100)	shipment_charges numeric	estimated_cost numeric	profit numeric	profit_margin numeric	profit_category text	
1	998	896	Hazardous Goods	Express	961	218	743	77.32	High	
2	510	5781	Fashion	Regular	716	234	482	67.32	High	
3	714	5330	Electronics	Express	835	296	539	64.55	High	
4	155	1897	Hazardous Goods	Express	293	104	189	64.51	High	
5	284	249	Hazardous Goods	Express	814	290	524	64.37	High	
6	702	8927	Home Furnishing	Regular	617	222	395	64.02	High	
7	279	3172	Construction	Regular	464	168	296	63.79	High	
8	400	5402	Luggage	Express	403	156	247	61.29	High	
9	707	3221	Automotive	Regular	931	374	557	59.83	High	
10	542	4272	Food and Beverages	Regular	487	200	287	58.93	High	
11	822	114	Construction	Regular	426	176	250	58.69	High	
12	782	9486	Electronics	Regular	871	364	507	58.21	High	
13	346	8103	Industrial Equipments	Express	850	364	486	57.18	High	
14	787	2159	Arts and crafts	Express	864	374	490	56.71	High	
Total rows: 100 of 100 Query complete 00:00:00.171 Ln 196, C										

Insights:

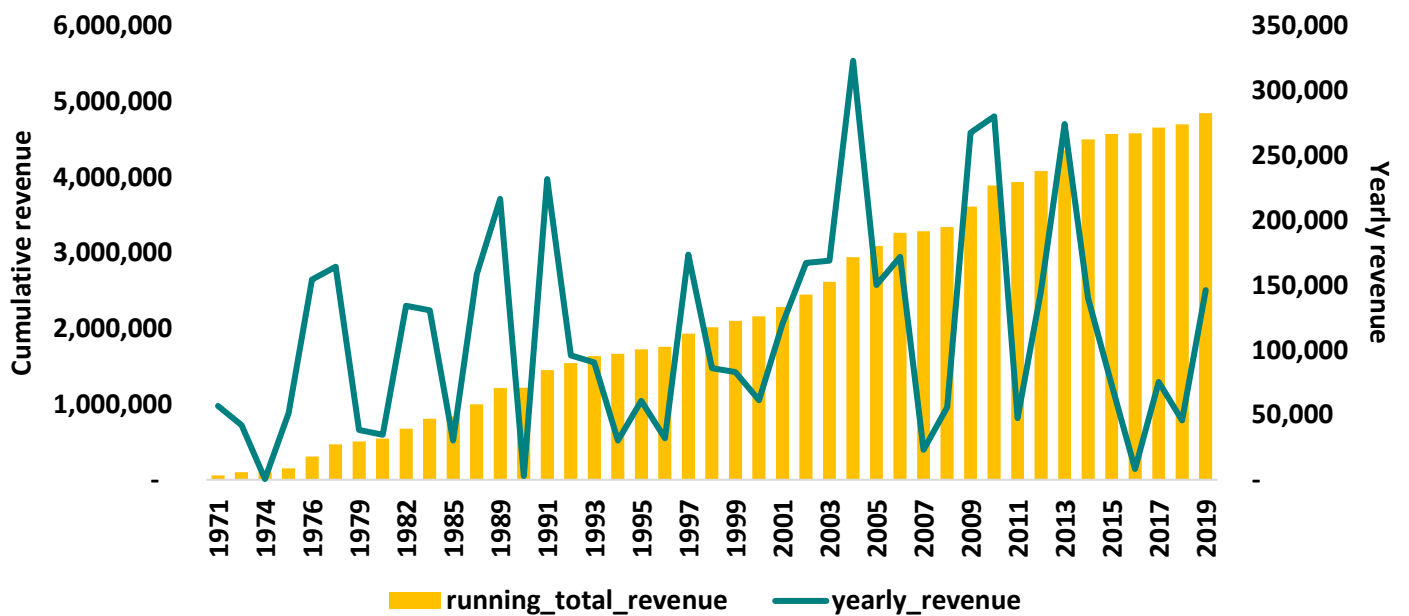
1. Hazardous goods, electronics, and fashion rank highest in profit margins.
2. High margins reflect effective cost management and pricing strategies.
3. Express services boost profits for hazardous goods and electronics.
4. Regular services for home furnishings and construction are also profitable.
5. Data highlights strong operational efficiency and strategic pricing across shipments.

Query 9: Yearly revenue trends with running total.

Data Output Messages Notifications			
	year numeric	yearly_revenue numeric	running_total_revenue numeric
1	1971	56881	56881
2	1972	42143	99024
3	1974	559	99583
4	1975	51472	151055
5	1976	154370	305425
6	1977	164207	469632
7	1979	38290	507922
8	1980	34797	542719
9	1982	134189	676908
10	1983	130517	807425
11	1985	30239	837664
12	1987	158492	996156
13	1989	216512	1212668
14	1990	2988	1215656
15	1991	231752	1447408

Total rows: 44 of 44 Query complete 00:00:00.136

Total yearly and cumulative revenue



Insights: From 1971 to 1991, total revenue was \$1,447,408. Peak years were 1976 (\$154,370) and 1977 (\$164,207), while 1974 and 1990 had lower revenues of \$559 and \$2,988. Despite fluctuations, the overall upward trend highlights long-term growth and financial stability.

Query 10: Ranking customers by total shipment charges.

Data Output Messages Notifications				
	customer_id [PK] integer	full_name text	total_charges numeric	charges_ranks bigint
1	8786	Marie Watson	1486	1
2	1748	Willie Barnes	1473	2
3	4711	Taryn Baker	1470	3
4	4233	Abby Anderson	1455	4
5	175	Rayshawn Wilson	1446	5
6	4732	Julie Olson	1433	6
7	2478	Adonis Edwards	1425	7
8	2601	Gwendolyn Aguilar	1425	7
9	1275	Marion Munoz	1422	9
10	8808	Connie Perry	1419	10
11	390	Destiny Robinson	1414	11
12	2154	Catherine Miller	1407	12
Total rows: 20 of 20		Query complete 00:00:00.130		

Insights: The research ranks clients by shipment charges, with Marie Watson leading (1,486), followed by Willie Barnes (1,473) and Taryn Baker (1,470). The top 20 clients, all exceeding 1,400 in charges, are key revenue contributors. This helps prioritize valuable customers and inform strategic decisions on client management and marketing.