

Простые запросы

1. Сортировка отправлений по убыванию веса, где вес превышает 1 кг

SELECT *

FROM postal_items

WHERE weight > 1

ORDER BY weight DESC;

id	track_num	type	weight	status	disp_date	arrival_date	sender_id	recipient_id	post_office_id
357	f7ecf7cb6f4552a90bf80993e3533	Box	19.966640434862832	Delivered	1970-01-01 02:59:59.967234+03	1970-01-01 02:59:59.82399+03	6121	1109	1137
172	d45a93cf352d4dbd29dc053f8ab54	Box	19.877277187469026	In Delivery	1970-01-01 02:59:59.601723+03		5280	8324	312
134	c1340fdd0c23d46e2a8c720d487376646	Package	19.738208223604218	Delivered	1970-01-01 03:00:01.733807+03	1970-01-01 03:00:01.282101+03	4661	7313	112
353	0363c0dbb694c2aa3a6961ba4efb45a	Box	19.69102309192143	Delivered	1970-01-01 02:59:58.828409+03	1970-01-01 03:00:00.656002+03	738	9172	214
81	b12b2a2ec0b4c1c7a69bf7ea40	Package	19.672490582371225	In Delivery	1970-01-01 02:59:59.35558+03		9095	3878	503
381	a21e2576c8f72fada818a501b6f16f	Package	19.666375247632622	In Delivery	1970-01-01 03:00:00.682066+03		3525	9438	752
104	6eff926ff8044b77baaaaaf9901aac57f	Package	19.65818295609121	Delivered	1970-01-01 02:59:59.737341+03	1970-01-01 02:59:59.700716+03	4355	3826	421
160	f7e12102hd304e9c3674ad8a8e1877	Package	19.5909722611205	In Delivery	1970-01-01 02:59:58.883037+03		1696	7810	46
275	63e3c2554ef6494eb656baec12c05e0c	Package	19.59055098649396	Delivered	1970-01-01 02:59:59.531576+03	1970-01-01 02:59:59.516237+03	8162	4828	71
392	a0e71c13dab5408ad7f03edc609c4a	Package	19.576035228262814	Delivered	1970-01-01 03:00:00.566771+03	1970-01-01 03:00:00.374442+03	7112	8732	45
188	43d57952f4dc4ee7b7f6b6cbe53b8b58	Package	19.477031988303587	In Delivery	1970-01-01 03:00:01.881288+03		2128	3387	354
42	a60be44807324bde502783ce89129ee	Package	19.465702084891532	In Delivery	1970-01-01 03:00:01.69572+03		3354	8971	113
254	9173d10ed6234ab09b9cd86872c7854	Package	19.46160040075018	In Delivery	1970-01-01 03:00:00.89254+03		8926	1098	350
295	687819ca12d424c0f889d2e05ae646	Box	19.43334115284455	In Delivery	1970-01-01 03:00:00.433172+03		3509	3465	283
252	e79798cff8124556b0seadd0f9df562	Box	19.2938177246086708	In Delivery	1970-01-01 02:59:59.148247+03		4503	2285	954
335	142aeaab866934d808a5d8c8979c0e6	Package	19.23246079534337	In Delivery	1970-01-01 03:00:01.568303+03		8433	4547	1439
8	f6fbff6021740fa7fd7e509894d	Package	19.2240945371742	In Delivery	1970-01-01 03:00:01.542285+03		9965	7035	317
132	7647f36c63a3249f1567d20351d0f6	Box	19.227415784244968	In Delivery	1970-01-01 03:00:01.003+03		3235	2625	20
28	c2bb898fbc844365eb5eab50b8d777d	Box	19.217628212956474	In Delivery	1970-01-01 03:00:00.268894+03		202	7390	126
77	5022f9e2b147c1478f89e75e00	Box	19.101627136705103	Delivered	1970-01-01 02:59:59.191839+03	1970-01-01 03:00:00.698774+03	4173	8130	125
299	f6fc873ed146aef8252f5335e19b12	Box	19.051227468462255	Delivered	1970-01-01 02:59:57.93983+03	1970-01-01 02:59:59.648136+03	1364	4219	488
257	6e8ccf1da55c4f278fe8c00d1ef	Box	19.943735411538488	In Delivery	1970-01-01 02:59:59.106644+03		5734	9140	300
48	626c31fd15c473aad7637e3bade2e	Box	19.934925791381687	Delivered	1970-01-01 02:59:58.59388+03	1970-01-01 03:00:01.235911+03	6965	1284	28
385	967d6b6c4860406c9434bd8c5bc29c4	Box	19.901366016056418	Delivered	1970-01-01 03:00:00.761182+03	1970-01-01 03:00:00.865639+03	3312	3936	268
204	e792f9a5fc340048167e8db040773a8	Package	18.85824626845684	In Delivery	1970-01-01 02:59:58.301603+03		8006	9851	419
33	cfc1415579561458cb14c246b6dca7c2	Box	18.816584387859686	In Delivery	1970-01-01 02:59:58.868368+03		1514	8936	84
89	ead1a187b58c14948691b6ca5b31e8	Package	18.750970457849967	In Delivery	1970-01-01 02:59:58.524573+03		1118	6173	68
319	f0468a3884a21da5a19f2ee14c7d5	Package	18.731748952263306	In Delivery	1970-01-01 02:59:59.054068+03		6692	7491	463
53	f36dd6d6ce4a4e0a8ac891f5f7e973b	Box	18.672675909705646	In Delivery	1970-01-01 03:00:00.517352+03		7634	29	100
170	ec69ff6c8d754851b46c018a7b9de5a6	Box	18.62441563533168	Delivered	1970-01-01 02:59:59.138022+03	1970-01-01 02:59:58.067334+03	644	1581	64
399	b261b7e390d4581878694d1e3e0c	Package	18.60937821101837	Delivered	1970-01-01 03:00:01.842103+03	1970-01-01 03:00:00.744820+03	4173	7670	125
183	b986764c3304e9ba003c30b2d19e57f	Package	18.56389533343492	In Delivery	1970-01-01 02:59:59.525120+03		7077	2778	55
167	e31b5ced0d43d48589118d0717e373d	Box	18.464895026955308	In Delivery	1970-01-01 02:59:58.596385+03		1565	5119	11
174	93420a88bf7f4395ac4bc4eb9523edb	Package	18.33010250111383	In Delivery	1970-01-01 03:00:00.279765+03		9356	7821	306
350	0181ba9ed4044ef89e23eac621837f	Box	18.30933829184705	In Delivery	1970-01-01 02:59:58.129497+03		5283	2578	507
193	ffb78c6a2374519836ec6e05a1694	Package	18.259835193601383	In Delivery	1970-01-01 02:59:58.519698+03		1364	7082	488
282	c0ef8d468a404ce8a9d649f4fa220	Box	18.250265705248409	In Delivery	1970-01-01 02:59:59.4521+03		5954	9673	132
226	263a3c26d18e48d9a4f61949b2703e9	Box	18.247141516451677	In Delivery	1970-01-01 03:00:00.668336+03		8959	7860	485
325	a10ed5ed734a6d5908e93079eaa4	Package	18.12191590158036	Delivered	1970-01-01 02:59:58.59203+03	1970-01-01 02:59:59.243182+03	151	9424	254
66	84bdfa72e14b06a6c5f1d8f61b441a	Box	18.07047714169036	Delivered	1970-01-01 03:00:02.018701+03	1970-01-01 03:00:01.589351+03	3340	9134	190
146	febd67c12eb9452388152b86502834	Package	18.06216422636732	Delivered	1970-01-01 02:59:58.70105+03	1970-01-01 02:59:59.3691+03	4273	8459	1120
80	913d83b615264a90c70e9b5d2e93d2c	Package	18.012447678471452	Delivered	1970-01-01 02:59:59.184891+03	1970-01-01 02:59:58.441898+03	6500	2876	2
144	c84f8b5499f340a5ab5df2d57a01e119	Package	17.92384321650214	Delivered	1970-01-01 03:00:01.239417+03	1970-01-01 03:00:00.981011+03	9094	1301	747
312	36d6952e81419d959123e3c24b3c35	Package	17.799032982161446	Delivered	1970-01-01 03:00:01.838792+03	1970-01-01 03:00:01.317778+03	5610	5886	138
40	798c1ed33d4b41caed65a3e485699	Box	17.706765168626074	In Delivery	1970-01-01 03:00:00.988193+03		4503	8081	954
233	b26436f28d7e47c128f01889e84591745	Package	17.65806811667292	In Delivery	1970-01-01 03:00:00.835046+03	1970-01-01 02:59:59.754514+03	9584	5159	73
279	14f181b9a3264e09560d0780f545	Box	17.625896396863872	In Delivery	1970-01-01 02:59:58.238385+03		146	4404	224
227	255bcb35f70341d8927304f3aebc0	Package	17.57768705105323	In Delivery	1970-01-01 02:59:58.0578+03		4801	7215	4
311	7d411e4a13204c8a5a5d225367b2e05	Package	17.514254805520384	In Delivery	1970-01-01 03:00:01.802829+03		8744	5794	295
21	8d984f8c000384806a50f80284d195	Box	17.49227052893405308	Delivered	1970-01-01 03:00:01.762642+03	1970-01-01 03:00:01.307699+03	5734	9850	300
317	aceff2600862d22089e0f5a158a017d	Box	17.4347161559373	In Delivery	1970-01-01 02:59:58.968519+03		3367	3518	242
343	5e1c8f86d0646131b7b1514a4d055	Box	17.4151530223806	In Delivery	1970-01-01 02:59:59.124654+03		7933	7939	408
118	9d637e2b4a9f8966be830750e1a	Box	17.41025898588116	In Delivery	1970-01-01 03:00:00.68822+03		4747	7197	612
103	49dd1fd6ea8d4dfdb86f72771a10146	Box	17.3354593355111	Delivered	1970-01-01 02:59:59.2334+03	1970-01-01 02:59:58.753357+03	7897	8697	111
223	3c2552edf84dabab5e5c1b6ab5d0	Package	17.2809542781614772	In Delivery	1970-01-01 02:59:59.783062+03		8291	7106	510
135	87f7dfc944fd845a5d869d0533e4f478d	Box	17.2648516054554	In Delivery	1970-01-01 03:00:01.696039+03		8193	1366	369
365	f7fc597159874f7efc13e105802469c02	Box	17.190270421512093	In Delivery	1970-01-01 02:59:58.558044+03		5242	5443	388
288	fb0ddbd035c348a080d70067c6e79fe	Box	17.153012427729084	Delivered	1970-01-01 02:59:58.864006+03	1970-01-01 03:00:01.246718+03	4355	5831	421
286	d7abe1f3069545a5fa8dca96b4ba2d5f2	Box	17.1070370240626926	In Delivery	1970-01-01 03:00:01.083618+03		8389	7433	982
195	68f0586a87baud7adae4967b503	Package	17.073532805561	In Delivery	1970-01-01 02:59:58.702347+03		3589	8680	902
71	96b0d85a5ca8d4ff939ae2325957d9	Package	17.06648561608221621	In Delivery	1970-01-01 02:59:59.696453+03		9549	7240	760
393	c6b1629c87a431eb123859717e5189	Box	17.05188112851207	In Delivery	1970-01-01 03:00:00.901507+03		728	5053	200
16	ec6758c1ed434ac4db5d8077fe9c25	Package	17.04239354847235	In Delivery	1970-01-01 02:59:59.326221+03		7798	5476	810
222	8768f70576244f8a79523168147ef60e1	Box	16.910355724661347	In Delivery	1970-01-01 02:59:59.840145+03		2562	3173	840
346	f25ea0784b164dd2a7768db0a15d192a	Package	16.9017101934958	Delivered	1970-01-01 03:00:01.131223+03	1970-01-01 03:00:00.734566+03	6639	5463	40
186	6b5783f8a94cf5fb512d7892ab7e5f	Box	16.813729783202486	Delivered	1970-01-01 03:00:01.616722+03		6503	7992	1994
278	1aebd304300e402cb1053b3bbfc79bda	Box	16.767217697359058	In Delivery	1970-01-01 03:00:01.822407+03		6692	8215	463
139	df161c902e409fad4212c0c072d9b	Box	16.731937562223187	In Delivery	1970-01-01 02:59:59.08494+03		3120	6314	458
293	f0f14ba82c2fa7599178db8d84abdbf	Box	16.65982193037981	In Delivery	1970-01-01 02:59:59.710807+03		9965	9624	317
310	23229c6891e240bc869d4365ea62f6e	Box	16.59030944870285	Delivered	1970-01-01 03:00:01.190812+03	1970-01-01 03:00:00.145982+03	9314	6759	698
229	bac72c90892ceda881e5ed01916515a	Package	16.530956186767614	In Delivery					

```

SELECT *
FROM postal_items
WHERE post_office_id = <id>
ORDER BY disp_date DESC;

```

id	track_num	type	weight	status	disp_date	arrival_date	sender_id	recipient_id	post_office_id
245	aeeeaf082887417dbc900af847a30ad3	Box	11.850091982482423	In Delivery	1970-01-01 02:59:59.740499+03		6500	1988	2
80	9138d3b615264a90ac70e9b5d2e93dc2	Package	18.01244768471452	Delivered	1970-01-01 02:59:59.184891+03	1970-01-01 02:59:58.441898+03	6500	2876	2

(2 rows)

3. Получение всех клиентов из конкретной страны

```

SELECT customers.*
FROM customers
JOIN addresses ON addresses.customer_id = customers.id
WHERE addresses.country = '<Country>';

```

id	name	contact_info	reg_date
4488	Lord Tommie Dooley	wiltonmaggio@schmidt.net	1970-01-01 03:00:01.273323+03
9257	Mr. Kadin Carroll	leonaufderhar@maggio.io	1970-01-01 02:59:59.082062+03
2926	Prof. Melany Jacobi	edwardbarrows@pollich.name	1970-01-01 02:59:59.249867+03
5488	Dr. Moses Bernier	alexaterry@rohan.com	1970-01-01 02:59:58.355051+03
812	Mr. Jesse Powlowski	bernadettebrakus@wisoky.net	1970-01-01 03:00:00.681509+03
8417	King Jean Nitzsche	enochspinka@roberts.name	1970-01-01 02:59:58.061073+03
6462	Prince Nicklaus Prohaska	darylbernier@hauck.io	1970-01-01 02:59:59.691353+03
2953	Dr. Gage Buckridge	kaleyraynor@wuckert.org	1970-01-01 02:59:59.326322+03
7885	Mr. Green Hettinger	olgawolf@feil.net	1970-01-01 03:00:01.568145+03
6256	Dr. Harry Bechtelar	wyattjacobi@walsh.info	1970-01-01 02:59:59.398792+03
7740	Prof. Loy Collier	odaschmeler@christiansen.com	1970-01-01 03:00:01.418996+03
3647	Mr. Lew Rowe	samantakoelpin@trantow.com	1970-01-01 03:00:00.148491+03
2988	Dr. Garrett Dooley	josuecormier@romaguera.com	1970-01-01 02:59:59.322155+03
6224	Prince Andrew Stamm	jalyncartwright@harvey.biz	1970-01-01 02:59:59.265652+03
3525	Lord Abdiel Strosin	svenhaley@ziemann.net	1970-01-01 02:59:59.988306+03
7115	Mr. Benton Rutherford	abbiewunsch@paucek.com	1970-01-01 03:00:00.480584+03
8162	King Forest Murphy	myrtisgoyette@koepp.io	1970-01-01 03:00:01.954868+03
2827	Prince Ellis Abshire	tedheidenreich@johns.com	1970-01-01 02:59:59.082807+03
9016	Prof. Elvis Wisozk	gerardthiel@anderson.info	1970-01-01 02:59:58.783018+03
9559	King Dillon Fahey	jacquelynleannon@bernier.net	1970-01-01 02:59:59.484118+03
200	Mr. Charles Orn	enriquekuhlman@fay.io	1970-01-01 02:59:59.874123+03
3061	Prince Cletus Gleichner	toreyberge@nitzsche.name	1970-01-01 02:59:59.398081+03

(22 rows)

4. Подсчёт числа клиентов в каждом городе

```

SELECT addresses.city, COUNT(*) AS client_count
FROM addresses
GROUP BY addresses.city;

```

Punkalaidun	1
Selzach	1
Vitry-sur-Seine	1
Santa Clarita	1
Erongaicuaro	2
Megchelen	1
Romanel-sur-Morges	1
Cavan	1
Čoka	1
Rothrist	1
Hosur	1
Taboão da Serra	1
Fortaleza	1
Darbhanga	1
Steinhausen	1
Valladolid	1
Zapote de Adjuntas	1
Siikalatva	1
Elazığ	1
Mersin	1
St Albans	1
Stoevring	1
Vinnicya	1
Juupajoki	1
Kovačica	2
Trey	1
Málaga	1
Nederweert-Eind	1

Средние запросы

1. Получить список всех подчиненных, офис, и их начальника.

```
SELECT e.Name AS employee_name,
       po.Name AS post_office_name,
       m.Name AS manager_name
  FROM employees e
 JOIN post_offices po ON po.id = e.post_office_id
 LEFT JOIN employees m ON m.position = 'Director' AND m.post_office_id = e.post_office_id
 WHERE m.Name IS NULL OR m.Name != e.Name
 ORDER BY po.name, e.name;
```

employee_name	post_office_name	manager_name
Mr. Gerhard Skiles	3 Round Stones, Inc. concerning	Prof. Alex Breitenberg
Prince Jerrell Wolf	3 Round Stones, Inc. concerning	Prof. Alex Breitenberg
Dr. Kellen McGlynn	3 Round Stones, Inc. here	Mr. Quentin O'Keefe
Prof. Linwood Padberg	3 Round Stones, Inc. here	Mr. Quentin O'Keefe
Dr. Jerald Sporer	3 Round Stones, Inc. how	King Hazel Nitzsche
Dr. Johan Osinski	3 Round Stones, Inc. how	King Hazel Nitzsche
King Billy Johnson	3 Round Stones, Inc. how	King Hazel Nitzsche
Lord Otho Hayes	3 Round Stones, Inc. how	King Hazel Nitzsche
Dr. Vaughn Bergstrom	3 Round Stones, Inc. over there	Lord Torey Kub
Prince Rupert Terry	3 Round Stones, Inc. over there	Lord Torey Kub
King Lourdes Klein	3 Round Stones, Inc. plenty of	Prince Jerome Walker
Prince Jordyn Schamberger	3 Round Stones, Inc. plenty of	Prince Jerome Walker
Dr. Abner Berge	3 Round Stones, Inc. this	Mr. Alexis Rogahn
Dr. Jordon Brown	3 Round Stones, Inc. this	Mr. Alexis Rogahn
Dr. Stan Gottlieb	3 Round Stones, Inc. this	Mr. Alexis Rogahn
Lord Devon Funk	3 Round Stones, Inc. this	Mr. Alexis Rogahn
Mr. Zakary Balistreri	3 Round Stones, Inc. why	Dr. Austen Cummings
Prof. Deshawn Boehm	3 Round Stones, Inc. why	Dr. Austen Cummings
Prof. Jamel Dach	3 Round Stones, Inc. why	Dr. Austen Cummings
Prof. Jesse Runolfsson	3 Round Stones, Inc. why	Dr. Austen Cummings
Dr. Watson Aufderhar	48 Factoring Inc. every	Mr. Brennan Beahan
King Giovani Braun	48 Factoring Inc. every	Mr. Brennan Beahan
Lord Jaylin Thompson	48 Factoring Inc. every	Mr. Brennan Beahan
Mr. Elias Luettgen	48 Factoring Inc. every	Mr. Brennan Beahan
Prince Gino Braun	48 Factoring Inc. every	Mr. Brennan Beahan
Prof. Lorenzo Nolan	48 Factoring Inc. every	Mr. Brennan Beahan
Mr. Allan Pfannerstill	48 Factoring Inc. his	Prof. Christophe Quitzon
Mr. Columbus Littel	48 Factoring Inc. his	Prof. Christophe Quitzon
Mr. Giovanni Wyman	48 Factoring Inc. his	Prof. Christophe Quitzon
Prof. Gregg Doyle	48 Factoring Inc. his	Prof. Christophe Quitzon
Dr. Murphy Corwin	48 Factoring Inc. how	Lord Talon Yundt
King Brooks Torphy	48 Factoring Inc. how	Lord Talon Yundt
King Carey Altenwerth	48 Factoring Inc. how	Lord Talon Yundt
Lord Lambert Becker	48 Factoring Inc. how	Lord Talon Yundt
Mr. Oran Bosco	48 Factoring Inc. how	Lord Talon Yundt
Prince Ted Swift	48 Factoring Inc. how	Lord Talon Yundt
King Deric Willms	48 Factoring Inc. it	Prof. Jaquan Macejkovic
King Selmer Rempel	48 Factoring Inc. it	Prof. Jaquan Macejkovic
Lord Jesse Kling	48 Factoring Inc. it	Prof. Jaquan Macejkovic
Mr. Judd Torp	48 Factoring Inc. it	Prof. Jaquan Macejkovic
Mr. Lonny Stehr	48 Factoring Inc. it	Prof. Jaquan Macejkovic
Prof. Berry Collier	48 Factoring Inc. it	Prof. Jaquan Macejkovic
Mr. Khalil Morar	48 Factoring Inc. my	Lord Willard Feil

2. Перечень отделений и сотрудников, работающих в них, с подсчётом количества сотрудников

```
SELECT post_offices.name AS post_office_name, COUNT(employees.id) AS employee_count
FROM employees
JOIN post_offices ON post_offices.id = employees.post_office_id
GROUP BY post_offices.id;
```

post_office_name	employee_count
Kimono Labs why	3
Inrix Traffic significant	7
AtSite there	3
Fuzion Apps, Inc. her	3
Business and Legal Resources her	3
BetterLesson over there	3
GetRaised what	5
IFI CLAIMS Patent Services her	3
Factual Portuguese	3
Workhands delightful	5
LegiStorm Dutch	3
Boston Consulting Group how	3
Innography some	3
PIXIA Corp those	3
Business and Legal Resources Colombian	3
Zillow a little bit	5
indoo.rs which	5
Xciential a little bit	5
MuckRock.com my	3
Tagnifi drab	3
Food+Tech Connect somebody	3
Splunk Roman	15
Environmental Data Resources how	3
OnStar much	3
Government Transaction Services anyone	3
The Schork Report shiny	3
Yahoo enough	3
The Advisory Board Company how	5
SolarList some	3
Credit Sesame Marxist	5
Glassy Media each	3
Estateley those	3
Science Exchange those	3
eScholar LLC. anyone	7
Socrata any	3
Remi how	7
Expert Health Data Programming, Inc. these	3
Aunt Bertha, Inc. it	5
PEV4me.com why	5
Careset.com cooperative	3
McGraw Hill Financial his	5
Junyo South American	5
The DocGraph Journal single	5

3. Рассчёт среднего веса отправлений в каждом отделении

```
SELECT post_offices.name AS post_office_name, AVG(postal_items.weight) AS avg_weight
FROM postal_items
JOIN post_offices ON post_offices.id = postal_items.post_office_id
GROUP BY post_offices.id;
```

post_office_name	avg_weight
Poncho App single	14.9312698335984715
Code-N which	17.5768705105363200
USAA Group those	11.7878012709178525
Lenddo modern	11.4437259771257925
Practice Fusion her	10.4598046069848740
MarketSense these	10.1100548514606579
Arpin Van Lines what	12.5618839532995505
Ranku all	7.8701515848381580
Impact Forecasting (Aon) your	14.3909899223501530
FindTheBest.com nobody	9.0936683387383380
Credit Sesame everybody	3.5005701605947760
CareSet Systems Taiwanese	11.4915124349872914
MedWatcher lively	15.5738518186933900
Recargo nobody	5.1593123451613390
Walk Score frantic	6.7141180627244610
Wolters Kluwer its	10.5014418799426485
Xatori nutty	18.9349257913816870
Amida Technology Solutions Intelligent	6.4856639421968390
HealthPocket, Inc. her	1.34661882598775500000
DataMade hundred	3.2691473537618925
Socrata too	8.2263771401120754
Nautilytics her	9.0197157700659770
PlanetEcosystems abundant	12.7510210226516950
Civic Impulse LLC Laoitian	11.8990197563881050
North American Van Lines Asian	9.8807331465994730
Junar, Inc. prickling	9.4619849263539460
iRecycle expensive	16.6247396197426755
Urban Airship Somali	19.5990722611205000
SmartAsset where	14.5202525793086540
Factset everybody	8.6033735275731330
Earth Networks enough of	10.6637499764603333
Avalara what	9.5145529983971960
PeerJ plenty of	9.9344163774847699
VitalChek Malagasy	14.7711318932357890
BuildZoom several	13.2762363339493300
DataMarket anyone	13.7839190627936360
VisualDoD, LLC hilarious	2.4684300894106882
OptumInsight his	7.6732840529954631
Civinomics significant	3.9687202651589765
LegiStorm many	11.0862485490306960
YourMapper whose	18.6244156533316800
gRadiant Research LLC quizzical	18.7509704578499670
Xatori Atlantic	19.5905509864939600

4. Статистика по странам с числом отправителей и средним весом их отправлений

SELECT

```
a.country,
COUNT(DISTINCT c.id) AS client_count,
AVG(pi.weight) AS avg_weight
FROM customers c
JOIN addresses a ON a.customer_id = c.id
JOIN postal_items pi ON pi.sender_id = c.id
GROUP BY a.country
ORDER BY client_count DESC;
```

country	client_count	avg_weight
Iran	19	11.2938663195780428
New Zealand	18	9.3522406416734554
India	18	11.2229546227181719
Australia	16	9.3645993469942652
Netherlands	14	9.4919111204293595
Germany	13	7.6572082842511473
United Kingdom	13	12.4675737412071555
Ukraine	13	10.0833021552378122
Finland	13	10.2877405239205438
Canada	13	10.2322536719567446
Ireland	12	10.8463242069963868
Spain	11	11.2224771689133865
Serbia	11	10.4250629528479112
Switzerland	10	10.9880565043072871
Brazil	10	10.0500251946198604
France	9	8.7638806429095346
Turkey	9	10.0129787956309893
Mexico	8	10.6244765052910314
Denmark	8	10.8152099687369019
Norway	8	11.0670998659847290
United States	7	12.7547941076857428
(21 rows)		

5. Поиск всех сотрудников, которые не обрабатывали отправления в течение последних 30 дней

```

SELECT
    e.name AS employee_name,
    po.name AS post_office_name
FROM employees e
JOIN post_offices po ON po.id = e.post_office_id
LEFT JOIN status_transactions st ON st.employee_id = e.id
WHERE st.status_date IS NULL OR st.status_date < NOW() - INTERVAL '30 DAY'
ORDER BY e.name;

```

employee_name	post_office_name
Dr. Aaron Bayer	ProgrammableWeb Uzbek
Dr. Aaron Bogisich	BaleFire Global curios
Dr. Aaron Gorczany	Graematter, Inc. where
Dr. Aaron Kozey	Amida Technology Solutions nice
Dr. Aaron Strosin	Urban Airship either
Dr. Aaron Trantow	Alltuition none
Dr. Aaron Tromp	WebFilings any
Dr. Abdiel Vandervort	Progressive Insurance Group every
Dr. Abdul Halvorson	Knowledge Agency Norwegian
Dr. Abdullah Auer	Zebu Compliance Solutions these
Dr. Abdullah Moore	Amida Technology Solutions Atlantean
Dr. Abdul McCullough	Urban Airship great
Dr. Abdul Streich	Datamyne that
Dr. Abe Abbott	Credit Karma what
Dr. Abe Franecki	YourMapper your
Dr. Abelardo Bernhard	Innovest Systems it
Dr. Abelardo Johnston	Honest Buildings these
Dr. Abel Ryan	Xignite Thai
Dr. Abel Turcotte	SpotHero.com Caesarian
Dr. Abner Berge	3 Round Stones, Inc. this
Dr. Abner Botsford	ZocDoc there
Dr. Abner Bradtke	HERE anyone
Dr. Abner Harber	Berkshire Hathaway neither
Dr. Abner Nienow	AutoGrid Systems everybody
Dr. Abraham Douglas	Simple Energy anyone
Dr. Abraham Kub	EarthObserver App Marxist
Dr. Adalberto Harber	Environmental Data Resources enough
Dr. Adalberto Senger	Govzilla, Inc. these
Dr. Adan Auer	Amazon Web Services Pacific
Dr. Adan Crist	Reed Elsevier several
Dr. Adan Greenfelder	Rivet Software Finnish
Dr. Adan Hauck	Dow Jones & Co. their
Dr. Adelbert Hayes	Mapbox Iranian
Dr. Adelbert Jacobi	CostQuest her
Dr. Adelbert Kemmer	PlanetEcosystems over there
Dr. Adelbert Kuvalis	Construction Monitor LLC how
Dr. Adolfo Frami	Lending Club single
Dr. Adolfo Lockman	Outline all
Dr. Adolph Thiel	Energy Points, Inc. several
Dr. Adolphus Brown	Forrester Research numerous
Dr. Adolphus Feil	MapQuest enough
Dr. Adolphus Tromp	Reevaluate cautious

6. Запрос для получения статистики по состояниям товаров с информацией о клиентах и почтовых отделениях

```
SELECT
    pi.id AS postal_item_id,
    pi.track_num AS track_number,
    pi.type AS item_type,
    pi.weight AS item_weight,
    ps.status_name AS current_status,
    MAX(st.status_date) AS last_status_date,
    COUNT(st.id) AS total_status_changes,
    c_sender.name AS sender_name,
    c_recipient.name AS recipient_name,
    po.name AS post_office_name,
    addr.city AS post_office_city,
    addr.country AS post_office_country
FROM
    postal_items pi
JOIN
    status_transactions st ON st.postal_item_id = pi.id
JOIN
    postal_statuses ps ON ps.id = st.status_id
JOIN
    customers c_sender ON c_sender.id = pi.sender_id
JOIN
    customers c_recipient ON c_recipient.id = pi.recipient_id
JOIN
    post_offices po ON po.id = pi.post_office_id
JOIN
    addresses addr ON addr.id = po.address_id
GROUP BY
    pi.id, c_sender.name, c_recipient.name, po.id, addr.city, addr.country, ps.status_name
ORDER BY
    last_status_date DESC;
```

postal_item_id	track_number	item_type	item_weight	current_status	last_status_date	total_status_changes	sender_name	recipient_name	post_office_name	post_office_city	post_office_country
117	82b370715c32bd10798bca99077164643	Package	1.9394168623066603	Shipping	1970-01-01 03:00:02.05560203	1	King Helleine Name	Mr. Orval Bahninger	Golden Helix whre	Vervarin	Serbia
211	08184e613e58ba22a6d7d1914cd8	Package	3.75560908522961174	Shipping	1970-01-01 03:00:02.05562003	3	Prof. Ike McCullough	CarSet Services Taiwanese	Tours	France	
247	59d3d4952ebef6f1a0d69008035714	Box	5.360351793915722	Delivered	1970-01-01 03:00:02.00034603	1	Prince Rowland Conn	Dr. Edmund Hart	Lutinoidly significant	Kastamonu	Turkey
49	149383523533333333333333333333333	Box	1.1200000000000001	Shipping	1970-01-01 03:00:02.05563003	3	Lord G. C. Starnes	Lord G. C. Starnes	Witten	Netherlands	
258	9091827147e745d9855528327	Package	12.573816272165225	Shipped	1970-01-01 03:00:02.05564003	1	Prof. Casey Aufderhar	Mr. Loy Sheilds	Ouler what	Baturin	Germany
45	91b789b0de8fb4b7e74ac7362229	Package	5.13816272165225	Shipping	1970-01-01 03:00:02.05564503	1	Dr. Dino Aufderhar	King Guy Stark	Socrata Slovaks	Borjnik	Serbia
370	149383523533333333333333333333333	Box	1.1200000000000001	Delivered	1970-01-01 03:00:02.05565003	1	King Aeneas Kolasz	King Aeneas Kolasz	Overlooked praglogies your	Almada de Victoria	Mexico
33	cfc415579561458c1a2c424b6dcddc72	Box	1.8151843817885969	Delivered	1970-01-01 03:00:02.05565503	1	Lord Dmitri Walsh	Lord Matthias Rice	Capital Cube numerous	Oleksandrivsk	Ukraine
314	b0667433fa29357069197751502	Box	0.52624644702041	Shipping	1970-01-01 03:00:02.05566003	2	Prof. Kusur Boris	Socrata toto	FIXIA everything	Odaci	Serbia
287	28c12464644702041c99077164643	Box	7.05199536845584193	Delayed	1970-01-01 03:00:02.05566503	1	Prof. Jeffrey Runtne	Prince Water Wren	Fixia everything	Pepper	Denmark
17	134959094544000000000000000000000	Box	1.439379802514	Delivered	1970-01-01 03:00:02.05567003	1	Dr. R. E. Sartori	Le Rameau Weier	Everyday health those	Punkkalaidun	Finland
361	5226798ce3994a08596989ca449	Box	12.76340036270831	Delivered	1970-01-01 03:00:02.05567503	1	Mr. Ryan Bogisch	Lord Aurelio Watsica	PeerJ their	Eiseleben	Germany
99	61688475b3c0d7e959789f89abfead08c	Box	3.4368128210309	Shipping	1970-01-01 03:00:02.05568003	1	King Liam Weber	Lord Axelius	Orange	Varvarin	Australia
354	134959094544000000000000000000000	Box	1.439379802514	Delayed	1970-01-01 03:00:02.05568503	2	Dr. J. L. Schaeffer	Lord C. G. Schaeffer	Unconscious nobdy	Oranica	Finland
209	5a8745262bfaedfaade72e73abd7056	Box	8.91951656556006	Shipping	1970-01-01 03:00:02.05569003	1	Dr. Zackary Kiebel	Lord Everett Heidereich	OSISoft my	Sulzburg	Germany
64	69080b910a85a32a2a25e150b3e108	Box	9.16380692929354	Package	1970-01-01 03:00:02.05569503	1	Prof. Trever Schulst	Mr. Keyshawn Schaefer	Weather Decision Technologies there	Baturin	Ukraine
296	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05570003	1	Prof. J. M. T. Wilson	Prof. J. M. T. Wilson	Programmatic payback	Finland	New Zealand
176	df6152a53d5a1a2e148b1a807a07805849	Box	8.5152089506261	Delivered	1970-01-01 03:00:02.05570503	1	Mr. Buttrick Chaplin	Mr. Bertrand Grady	Department Better Technology much	Auckland	New Zealand
190	94c4965261a1a2e148c3606027f0120d	Box	6.99104064649255	Shipping	1970-01-01 03:00:02.05571003	3	King Larue Rodriguez	Prince Torrey Champin	Doch Journal here	Peltt-Val	Switzerland
379	1a6908079e9c92048c699c7e7077033	Box	1.76577363419042	Delayed	1970-01-01 03:00:02.05571503	1	Prof. J. M. T. Wilson	Prof. Xander Camerata	Daho health somebody	St. George	Ireland
37	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05572003	1	Mr. J. M. T. Wilson	Prof. Xander Camerata	Cambridge somebody	Tipperary	Irland
17	80160974817409a8aa57e6a2a78a78a	Box	15.319953683755134	Delayed	1970-01-01 03:00:02.05572503	1	Prince Kelvin Kutch	King Koshimy	Stompsule friendly	Fitzroy	Ireland
109	707436a5404a31b3027827096	Box	1.76577363419042	Delayed	1970-01-01 03:00:02.05573003	1	Lord Perry Connely	Lord Deveron McRattan	IBW over there	Wellington	Canada
202	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05573503	1	Prof. J. M. T. Wilson	Prof. Floyd Anlund	IBW over there	Wellington	Canada
364	235d5a28877f7439ac43b979203984	Box	6.72981805519084	Delayed	1970-01-01 03:00:02.05574003	1	Dr. Marcus Breitzen	Maponics Barcelonian	IBW over there	Pau	France
174	934288877f7439ac43b979203984	Box	3.301308202511338	Delivered	1970-01-01 03:00:02.05574503	2	King Cletus O'Reilly	Zurich Insurance (Risk Room) single	Santa Barbara D'Este	Brazil	
118	8213495261a1a2e148c3606027f0120d	Box	3.35560908522961174	Shipping	1970-01-01 03:00:02.05575003	1	Mr. Green Rintinger	Prince Chris Wardriff	IBW over there	Pozuelo de Alarcón	Spain
354	8213495261a1a2e148c3606027f0120d	Box	6.14839809379108	Delayed	1970-01-01 03:00:02.05575503	1	Prof. J. M. T. Wilson	Lord Tyronne Wardriff	IBW over there	Pozuelo de Alarcón	Spain
249	688aa25215a6be0a145107e474d7c	Box	8.688aa25215a6be0a145107e474d7c	Delayed	1970-01-01 03:00:02.05576003	1	Mr. Kadal Carrin	Lord Wilmer Sanford	SmartAsset somebody	St. George	Denmark
42	a60be4807323d0be50278346849591	Box	1.617391726409152	Canceled	1970-01-01 03:00:02.05576503	1	Prof. Robbie Nolan	Lord Dredge Crook	Simple Energy my	Elazig	Denmark
119	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05577003	1	Prof. J. M. T. Wilson	Prof. Robbie Nolan	Simple Energy my	Elazig	Denmark
120	cfc609684bf25d9e8270479051	Box	3.3471921610659846	Shipping	1970-01-01 03:00:02.05577503	2	Mr. Hubert Strosin	King Craig McKenzie	SpeSu Health any	Fitzroy	Netherlands
175	6d66ca159274fae49c854642c8	Box	0.617391726409152	Delayed	1970-01-01 03:00:02.05578003	1	Prince Jonaal Reichel	King Haleigh Wittine	Fujitsu my	De Lier	Denmark
217	40908319167e47a9c0d7c859751502	Box	11.08063630835071	Delayed	1970-01-01 03:00:02.05578503	2	Lord Perry Connely	Prof. Robbie Nolan	Hoppech those	Kongsviser	Denmark
95	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05579003	1	King Reginald Cummings	Prince Leanne Cummings	LegisForm anything	Odessa	Canada
212	4da40b74617c1743d1c7019e7c080776997d2	Box	15.13846467520936	Delayed	1970-01-01 03:00:02.05579503	3	King Jett Leader	Prince Zhermack	Zoner how	Illinci	Ukraine
188	4363795261a1a2e148c3606027f0120d	Box	19.4770319883039	Shipping	1970-01-01 03:00:02.05580003	1	Prof. Kenneth Anderson	King Francisco Cassin	BuildZoon how	Gizmo	Iran
193	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05580503	1	Prof. Kenneth Anderson	Abi Associates gifted	IBW over there	Saint-Etienne	France
310	322946917e420bc8c5d9435e56a276	Box	16.590309348770283	Delayed	1970-01-01 03:00:02.05581003	2	Mr. Silas Rutherford	Abi Associates gifted	IBW over there	Saint-Etienne	France
133	a47f61627216522a25e150b3e108	Box	1.50624746170399	Delayed	1970-01-01 03:00:02.05581503	1	Lord Otto Feeney	Dr. Ronan Spore	IBW over there	Saint-Etienne	France
270	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05582003	1	Prof. Robbie Nolan	Dr. Ronan Spore	IBW over there	Saint-Etienne	France
322	255f09765484c1b08a270479051	Box	14.39952503897304	Shipping	1970-01-01 03:00:02.05582503	1	Prof. Robbie Nolan	Dr. Ronan Spore	IBW over there	St. George	Canada
175	6d66ca159274fae49c854642c8	Box	1.91127938270402	Delayed	1970-01-01 03:00:02.05583003	2	Lord Perry Connely	King Nathaniel Perry	IBW over there	Wellington	Canada
217	40908319167e47a9c0d7c859751502	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05583503	1	Prof. Robbie Nolan	King Nathaniel Perry	IBW over there	Wellington	Canada
301	d84ec68a504457a0270487a745172	Box	9.6462356467520936	Delayed	1970-01-01 03:00:02.05584003	3	Mr. Jesse Dowhan	Lord Dredge	Science Exchange worthless	Junar	United Kingdom
304	d84ec68a504457a0270487a745172	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05584503	1	Prof. Robbie Nolan	Lord Dredge	Science Exchange worthless	Edinburgh	United Kingdom
298	fdecbae76a4408a608a6a0c48c6d	Box	11.08264854903066	Shipping	1970-01-01 03:00:02.05585003	3	Prof. Correll Saway	Prince Ely Ashbric	Weather Decision Technologies	Gizmo	Spain
299	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05585503	1	Mr. Efrain Schamberger	Mr. Efrain Schamberger	Weather Decision Technologies	Alanya	United Kingdom
269	5416066760e0f489c854649248d	Box	1.76071404958001	Shipping	1970-01-01 03:00:02.05586003	1	Mr. Efrain Schamberger	Mr. Efrain Schamberger	Weather Decision Technologies	New Glasgow	Canada
397	3127958470e745d9855283	Box	1.7639190629736	Delayed	1970-01-01 03:00:02.05586503	1	Prof. Daniel Conroy	Mr. Silas Rutherford	DataMarket anyone	Aulnay-sous-Bûs	France
66	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05587003	1	Prof. Daniel Conroy	Mr. Silas Rutherford	DataMarket anyone	Aulnay-sous-Bûs	France
9	98w622833895615987458a27845	Box	10.3271011017038028	Delayed	1970-01-01 03:00:02.05587503	2	Mr. Doug Kris	Prof. Loris Larkin	IBW over there	Wülflingen	Switzerland
322	3fd1a5105a080447a31626a270479052	Box	7.713617428537955	Canceled	1970-01-01 03:00:02.05588003	1	Prof. Prince Trenem	Mr. Evans Schoon	Bing a little	Kiliya	Ukraine
275	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05588503	1	Prof. Deslin Johnston	Mr. Alexei Waelchi	Cambridge Information Group those	Edinburgh	United Kingdom
243	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05589003	1	Prof. Deslin Johnston	Mr. Alexei Waelchi	Cambridge Information Group those	Edinburgh	United Kingdom
237	b7e6c88723a25d9e827048708c4247200	Box	8.3784565561851	Shipping	1970-01-01 03:00:02.05589503	1	King Edward McKenzie	Mr. Ernesto Schaden	Nautilytics somebody	Kivijärvi	Finland
72	2618ff79a092348a40816205a1562	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05590003	1	King Edward McKenzie	Mr. Patrick Kuhn	LoftiCloud hundred	Australian Capital Territory	Australia
201	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05590503	1	Prof. Robbie Nolan	Mr. Robbie Nolan	HopStop awful	Edinburgh	United Kingdom
399	b28179c9d458178f8760178a449	Box	1.6970912101837	Delayed	1970-01-01 03:00:02.05591003	1	Lord Raymond Beahan	Prince FidjiHab	exbanant	Bishanapagar	India
287	28c1246459597a22a608a6a0c48c6d	Box	7.053994195581336	Shipping	1970-01-01 03:00:02.05591503	1	King Geoffrey Runte	Prince Mateo Wraz	PIXIA Corp everything	Hurup Thys	Denmark
192	14772207424d478a494c854642a820d	Box	4.29651006193023	Shipping	1970-01-01 03:00:02.05592003	1	King Edmund Heatcote	Prof. Qiao Han	Qiao Han, Inc. over there	Caucel	Mexico
203	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05592503	1	Prof. Kory Hartmann	Prof. Kory Hartmann	Qiao Han, Inc. over there	Aracatuba	Brazil
205	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05593003	1	Prof. Kory Hartmann	Prof. Kory Hartmann	Qiao Han, Inc. over there	Aracatuba	Brazil
260	2df2e61464478a494c854642a820d	Box	4.1867508209398	Delayed	1970-01-01 03:00:02.05593503	1	Prince Ulices Mayers	Prof. Peter Auer	Transparado why	Niederkassel	Germany
83	7418832b09454488681df8a10f10	Box	5.44893873667612	Canceled	1970-01-01 03:00:02.05594003	1	Mr. Hubert Strosin	Prof. Peter Auer	Transparado why	Vellere	India
203	149383523533333333333333333333333	Box	1.1200000000000001	Delayed	1970-01-01 03:00:02.05594503	2	Prof. J. M. T. Wilson	Prof. J. M. T. Wilson	IBW over there	Elazig	Turkey
70	a64c22c6875a4408a608a6a0c48c6d	Box	8.60375302573133	Delayed	1970-01-01 03:00:02.05595003	1	Dr. Barry Harvey	Prof. Edward McCridge	Factsset everybody	Buzbach	Germany

```
SELECT
    post_offices.name AS post_office_name,
    customers.name AS customer_name,
    SUM(postal_items.weight * 200) AS total_weight
FROM customers
JOIN postal_items
    ON postal_items.sender_id = customers.id
LEFT JOIN payments
    ON payments.postal_item_id = postal_items.id
JOIN post_offices
    ON post_offices.id = postal_items.post_office_id
WHERE payments.id IS NULL
GROUP BY post_offices.id, post_offices.name, customers.id, customers.name;
```

Выведет ноль, так как в функции добавления платежей, у меня все отправления оплачиваются

```
postgres@[local]:pochta_russia=# SELECT COUNT(*) FROM postal_items;
count
-----
 399
(1 row)
```

```
postgres@[local]:pochta_russia=# SELECT COUNT(*)
FROM postal_items pi
JOIN payments p ON p.postal_item_id = pi.id
WHERE p.id IS NOT NULL;
count
-----
 399
(1 row)
```

2. Запрос выведет таблицу с информацией о всех отправлениях, которые были отправлены не более 1000 дней назад, и их атрибутами

```

WITH StatusDetails AS (
    SELECT
        pi.id AS postal_item_id,
        ps.status_name,
        st.status_date,
        ROW_NUMBER() OVER (PARTITION BY pi.id ORDER BY st.status_date DESC) AS rn
    FROM postal_items pi
    JOIN status_transactions st ON st.postal_item_id = pi.id
    JOIN postal_statuses ps ON ps.id = st.status_id
),
PaymentStatus AS (
    SELECT
        pi.id AS postal_item_id,
        CASE
            WHEN p.id IS NOT NULL THEN 'Paid'
            ELSE 'Unpaid'
        END AS payment_status
    FROM postal_items pi
    LEFT JOIN payments p ON p.postal_item_id = pi.id
),
PostOfficeWeight AS (
    SELECT
        pi.post_office_id,
        SUM(pi.weight) AS total_weight
    FROM postal_items pi
    GROUP BY pi.post_office_id
),
FilteredStatus AS (
    SELECT postal_item_id, status_name, status_date
    FROM StatusDetails
    WHERE rn = 1
)
SELECT DISTINCT
    pi.track_num,
    po.name AS post_office_name,
    pi.weight,
    RANK() OVER (PARTITION BY pi.post_office_id ORDER BY pi.weight DESC) AS position,
    fs.status_name AS last_status,
    fs.status_date AS last_status_date,
    ps.payment_status,
    po_weight.total_weight,
    (pi.weight / po_weight.total_weight) * 100 AS weight_percentage
FROM postal_items pi

```

```

JOIN post_offices po ON po.id = pi.post_office_id
JOIN FilteredStatus fs ON fs.postal_item_id = pi.id
JOIN PaymentStatus ps ON ps.postal_item_id = pi.id
JOIN PostOfficeWeight po_weight ON po_weight.post_office_id = pi.post_office_id
WHERE pi.disp_date >= NOW() - INTERVAL '1000000 days'
ORDER BY
    pi.track_num,
    po.name,
    pi.weight,
    position;

```

track_num	post_office_name	weight	position	last_status	last_status_date	payment_status	total_weight	weight_percentage
00000ff510a14e1bf772596f135252196	Abt Associates gifted	14.4133008611193243	2	Canceled	1970-01-01 03:00:01 3047513-03	Paid	46,0259352110243275	31.31604163860230236100
03629b3df2d2e434dc4102b02e19d0d	Cambridge Information Group those	6,425707434622495	1	Shipped	1970-01-01 03:00:01 447513-03	Paid	6,425707434622495	100,0000000000000000000000
065430bf2d2e434dc4102b02e19d0d	AutoGrid Systems whose	14,12185576007178	1	Shipping	1970-01-01 03:00:01 408252-03	Paid	15,4069507819961864	91,658991840589301600
06d6c3a1159274ca4e19c96e4de89d0d	IBM over there	15,91112793384027	2	Shipping	1970-01-01 03:00:01 537454-03	Paid	31,325124880510203	49,9954253484403451400
07e436a5340a43d6b1302787209b605e	IBM over there	15,913996946699633	1	Delivered	1970-01-01 03:00:01 731802-03	Paid	31,325124880510203	50,0450746515996548600
081184c6e134e588ab2da7a19d48c8	CarSet Systems Taiwanese	3,7556090857296147	2	Shipping	1970-01-01 03:00:02 015392-03	Paid	22,9830248699745827	16,34079546524794797000
088946fbca411ca32c5966f0498	Ernst & Young LLP how	4,836356555543345	2	Canceled	1970-01-01 03:00:00 912399-03	Paid	22,246614915401461	21,73974141205234421900
0c77226d2a2f4e83d89d49c1e8b2d2	Qaddo Energy, Inc. over there	4,296512606163623	2	Shipping	1970-01-01 03:00:01 382755-03	Paid	18,870467857140647	22,76844770723481835600
0df0427f0e4983b66d3ee72306526a	Stormpulse friendly	13,030704381744268	2	Canceled	1970-01-01 03:00:00 93816-03	Paid	41,8913771487118184	31,10593465074751039100
0d18a09ed044044e195e23e6a6621837f	Corelogic exciting	18,30938209184705	1	Shipped	1970-01-01 02:59:59 992468-03	Paid	18,30938209184705	100,0000000000000000000000
0dd2dadea848547f197a80c25170581d	YourMapper here	12,504437827396558	1	Canceled	1970-01-01 02:59:59 458651-03	Paid	12,504437827396558	100,0000000000000000000000
0e515c932d3429e9494dbe3f937710	Ladragow any	12,17311993612243	1	Shipping	1970-01-01 03:00:00 390789-03	Paid	21,86160241051295	25,6265175738174461000
0f141ba8c2fa7f4597197bd98c8d4bbdf	Connotate which	16,6598219307981	2	Canceled	1970-01-01 03:00:00 267826-03	Paid	47,1772071164186	35,3128356916860369900
1229b5065b1a205ca2629fe2a92b6	Dabu Health somebody	6,26066646070050996	1	Delivered	1970-01-01 03:00:00 452546-03	Paid	6,83740243436938	91,5658913881781015400
14253065656a134e588ab2da7a19d48c8	Hopstop nose	19,23246070934547	1	Shipped	1970-01-01 03:00:00 109591-03	Paid	40,074572631801012	48,8893970485780000000000
19104f09e81045802bd05091c93c85651	Kudu whale	2,493904827395862	4	Shipping	1970-01-01 03:00:01 635635-03	Paid	1,36757704289838000000	1,36757704289838000000
194ef5fdcc14a69bb14dd4f0d35156c	Avalara what	9,5145529983077196	1	Shipping	1970-01-01 03:00:02 002701-03	Paid	9,5145529983077196	100,0000000000000000000000
1283636d1e9496198d2b6eb196d439	Simple Energy my	3,1329180744781707	3	Shipping	1970-01-01 03:00:00 338275-03	Paid	38,8529384746311195	8,0635292286002664300
146f05d4cd5e05ea2b17b2a091022bc	Maponics Barcelonaian	7,749275721879028	1	Shipped	1970-01-01 03:00:00 558911-03	Paid	15,09806094802511	51,32629864546062058600
149h9879749c942048ce99cfe0f77033	Dabu Health somebody	0,5766737834216942	2	Delivered	1970-01-01 03:00:01 788203-03	Paid	6,337340243436938	8,43418276518218984600
1b5856a5c97242a0a66952aae5f3336e	Arpin Van Lines what	11,1611163666959291	2	Shipping	1970-01-01 03:00:00 710942-03	Paid	25,123767960599196	44,4247204805759204800
1ba99774046a4f88a800823ae9883584	Abt Associates gifted	11,911931953608541	3	Shipping	1970-01-01 03:00:00 883495-03	Paid	46,025952110243275	25,87994163876509437700
1bd2465d6f344e06a014d7e64955bdc5	PeerJ plenty of	11,63623234968885	2	Shipped	1970-01-01 03:00:00 940224-03	Paid	29,8032491324543098	39,0435987351904870400
1be55f05194b249f9671092e05289	Ez-XBRL a little bit	4,8059119302416065	2	Shipping	1970-01-01 03:00:00 086996-03	Paid	19,667815534590485	24,435206518324192300
1de0e22df0e540269f5d5e2d2fa25af3	Transparago why	8,708040284510991	3	Shipping	1970-01-01 03:00:00 933214-03	Paid	33,746806331639694	20,804402772305903500
1deafffe905542a2b7e7f7cc2cad6aae9	OnStar everyone	14,571306555709583	1	Delivered	1970-01-01 03:00:00 188112-03	Paid	32,597158969491459	44,70025302532871459300
1e3d6ddecfcd42fa27a080e5fb03fddc	Galorath Incorporated whose	18,6726759079075646	1	Delivered	1970-01-01 03:00:00 319337-03	Paid	18,6726759079075646	100,0000000000000000000000
1e47466eefcd42fa27a080e5fb03fddc	Golden Helix where	5,05903738765200	1	Canceled	1970-01-01 03:00:00 080135-03	Paid	25,8966386495881	19,6897963544934322400
21b926d50565b1a205ca2629fe2a92b6	ProgrammableWeb each	10,0001776856200	1	Shipped	1970-01-01 03:00:00 812053-03	Paid	1,03626069776866308	100,0000000000000000000000
21cb1129d1e8448d4bcb0840a0bae7	OpenTheBest.com modify	9,03636687383538	1	Shipped	1970-01-01 03:00:00 240310-03	Paid	1,03626069776866308	100,0000000000000000000000
232204c801240b83d4d3c5623	Autodesk systems gifted	16,500203943470385	2	Delivered	1970-01-01 03:00:00 015772-03	Paid	46,025952110243275	46,025952110243275
23565d92a2b43ab5f430c192b03968	Maponics Barcelonaian	6,72981160519084	2	Shipped	1970-01-01 03:00:00 175091-03	Paid	15,09806094802511	44,574056124772030200
239526f7f0f174a92bba3d8c8e81c233	Suddath your	15,2634585480494241	1	Delivered	1970-01-01 03:00:00 297768-03	Paid	15,2634584854049241	100,0000000000000000000000
252905e0b2a425c7878c7f287fecf958d2	Telenav awful	12,829140765932639	1	Delivered	1970-01-01 03:00:01 341601-03	Paid	12,829140765932639	100,0000000000000000000000
255bc5b35170341d89272304f3aebc05	Code-N which	17,57687051053632	1	Shipped	1970-01-01 03:00:00 305942-03	Paid	17,57687051053632	100,0000000000000000000000
255f65a5c97242a0448d4bcb0840a0bae7	Simple Energy my	14,399925038973054	2	Shipping	1970-01-01 03:00:01 545885-03	Paid	38,8529384746311195	37,06264083056531506000
2618ff0a923d4079980b7d7fc6dc931b	Nautlytics somebody	8,3784566564168165	2	Shipping	1970-01-01 03:00:01 390688-03	Paid	24,847243433125802	33,719851166594800
263a38a910f34ea6ac88a14cfa337f	FirstPoint, Inc. somebody	18,247141546156177	1	Delivered	1970-01-01 02:59:59 937178-03	Paid	30,4644668416060981	59,892815821505653700
28c253f4ee459897a26e06778e3a150e	PIXIA Corp everything	7,0593341955841336	1	Canceled	1970-01-01 03:00:01 842019-03	Paid	7,0593341955841336	100,0000000000000000000000
2a3a58b8e181419d195915c324b4c335	Chemical Abstracts Service a little bit	13,086889735486002	1	Delivered	1970-01-01 03:00:01 123033-03	Paid	13,086889735486002	100,0000000000000000000000
2c5943cfa58a4f1696a44e545378d7	PeerJ plenty of	2,757249822266298	3	Shipping	1970-01-01 03:00:00 356457-03	Paid	9,251507479981822700	8,251507479981822700
2d0740357834564960466234c036	People Power great	8,057317616422428	2	Shipping	1970-01-01 03:00:00 671807-03	Paid	29,612862357130782400	29,612862357130782400
2f4166e6434dc426462344c34	Science Exchange motionless	14,982456555709583	2	Shipping	1970-01-01 03:00:00 248034-03	Paid	10,165728560751053632	12,405728560751053632
314c127472b48313a5404390de068797	Hotels.com	6,26420655676979	3	Shipping	1970-01-01 03:00:00 47456-03	Paid	40,07457263180112	16,65102325665676955200
335b5e5a1d344079980b7d7fc6dc931b	Abt Associates gifted	3,1103657152081585	1	Shipping	1970-01-01 03:00:01 599779-03	Paid	45,0259352110243275	6,75794842305605371400
349642446c6402db6527d51f18d4b2	Greatschools these	13,9910366360872338	1	Shipped	1970-01-01 03:00:00 085436-03	Paid	13,9910366360872338	100,0000000000000000000000
358a28910f34ea6ac88a14cfa337f	Ex-XBRL a little bit	14,862069623217442	1	Canceled	1970-01-01 03:00:00 307044-03	Paid	19,667815534590498	75,19983875910786100
36d6957e6b181419d195915c324b4c335	Datafolix one	17,799302981261446	1	Shipping	1970-01-01 02:59:59 559492-03	Paid	21,98579119155384	80,95698184071619932900
3697630f0d784534b3d36562	Innovest Systems all	6,166422170773	1	Shipped	1970-01-01 02:59:59 59,296970-03	Paid	6,166422170773	100,0000000000000000000000
37f14130320840a4fb316d1e8448d4b	Brightstar full	7,73619428529755	1	Cancelled	1970-01-01 03:00:00 450731-03	Paid	33,746806331639694	8,584565423171972800
37f51d372284d1396c546989005643	LegisStorm anything	6,54878268056564	2	Shipping	1970-01-01 03:00:01 559,616953-03	Paid	17,556846311785635	37,3004500481931147900
4355d795274dc4264769c5353b8588	Boston Consulting Group this	19,477028843203587	2	Shipped	1970-01-01 03:00:01 10,09998-03	Paid	19,477028843203587	100,0000000000000000000000
46152098ec65435sc2f6586e6a9048	Weather Decision Technologies there	11,58917062905076	2	Canceled	1970-01-01 03:00:01 428033-03	Paid	49,33230816647693	23,49634047320117994200
485f1ec888474959b1e6ac446e837794	Retroficiency Hitlerian	4,483358940247706	1	Shipping	1970-01-01 03:00:01 410531-03	Paid	4,483358940247706	100,0000000000000000000000
49b09331914e74fa89ca7d78978c4f9	LegisTree anything	11,000863630835071	1	Shipped	1970-01-01 03:00:01 623954-03	Paid	17,556846311785635	62,6959499518068852100
4c0be32c0b74f543c9e7693a2bc4f9	Open Data Nation Brazilian	11,39404279819836	1	Shipping	1970-01-01 03:00:00 534158-03	Paid	11,39404279819836	100,0000000000000000000000
4c79d74332045e4887232f404e4690	Alarm.com this	6,190268439301402	1	Shipping	1970-01-01 03:00:00 526309-03	Paid	6,190268439301402	100,0000000000000000000000
4d4ab46f46f1743d4bfc08017699e97d2	Zoner how	13,14386467520936	1	Shipping	1970-01-01 03:00:00 612944-03	Paid	13,14386467520936	100,0000000000000000000000
4f18c53c59c2449e985873cf748f3474	Urban Airlship every	1,4595621701024135	1	Shipping	1970-01-01 03:00:00 843438-03	Paid	1,4595621701024135	100,0000000000000000000000
4f7317ab561843dab7e30e0b731bb04b	Civinomics significant	2,577088476402231	2	Delivered	1970-01-01 03:00:00 128745-03	Paid	7,937440530317979	32,46750305162915784400
5022fb2e7b6147c8e6154df8b9e500	Github exuberant	19,101627163705103	1	Shipping	1970-01-01 03:00:00 215427-03	Paid	37,711005374234737	50,652659545662285000
51690c19f1e94628847fa77015d0114	iRecycle Italian	1,3464964381594346	1	Shipped	1970-01-01 03:00:00 77287-03	Paid	2,0357458474549496	56,14010021377248297100
522098ec65435sc2f6586e6a9048	Weather Decision Technologies Honduran	12,20934058630835071	1	Delivered	1970-01-01 03:00:00 85257-03	Paid	25,3895230884747706	8,635265954231719728

```
SELECT
    c.name AS customer_name,
    pi.track_num,
    pi.weight * 200 AS price,
    COALESCE(SUM(p.amount), 0) AS paid_amount,
    (pi.weight * 200) - COALESCE(SUM(p.amount), 0) AS debt
FROM customers c
JOIN postal_items pi ON pi.sender_id = c.id
LEFT JOIN payments p ON p.postal_item_id = pi.id
WHERE p.id IS NULL
GROUP BY c.id, pi.id
HAVING (pi.weight * 200) > COALESCE(SUM(p.amount), 0)
ORDER BY debt DESC;
```

Опять же ничего не выведет, так как все отправления всегда оплачены (можно в цикле создавать меньше платежек, и убрать ограничение на проверку оплаты посылки)

4. Найти отправления с наибольшими задержками, сгруппированные по статусам, включая информацию о сотрудниках и почтовых отделениях

```

WITH DelayedItems AS (
    SELECT
        pi.id AS postal_item_id,
        pi.track_num,
        pi.disp_date,
        pi.arrival_date,
        EXTRACT(DAY FROM CURRENT_DATE - pi.arrival_date) AS delay_days,
        pi.status AS postal_item_status,
        pi.post_office_id
    FROM postal_items pi
    WHERE pi.arrival_date IS NOT NULL
    AND NOT EXISTS (
        SELECT 1
        FROM status_transactions st
        JOIN postal_statuses ps ON ps.id = st.status_id
        WHERE st.postal_item_id = pi.id AND ps.status_name = 'Delivered'
    )
)
SELECT
    di.track_num,
    di.delay_days,
    di.postal_item_status,
    po.name AS post_office_name,
    e.name AS employee_name,
    ps.status_name AS current_status
FROM DelayedItems di
JOIN post_offices po ON po.id = di.post_office_id
JOIN status_transactions st ON st.postal_item_id = di.postal_item_id
JOIN employees e ON e.id = st.employee_id
JOIN postal_statuses ps ON ps.id = st.status_id
WHERE st.status_date = (SELECT MAX(status_date) FROM status_transactions WHERE post
ORDER BY di.delay_days DESC;

```

track_num	delay_days	postal_item_status	post_office_name	employee_name	current_status
b614cdab6ae44c8ca0836bda12881b6d	20057	Delivered	Inovalon it	Prince Napoleon Connelly	Shipped
a8ca4870663t49c3a16e8aa2df3e0af5	20057	Delivered	PeerJ over there	King Floy Shanahan	Shipped
b569da31428c4ea199fe1185bb07efcb	20057	Delivered	Urban Airship Elizabethan	Mr. Orland Carroll	Shipped
03c62ba35b5444dd85cad5cef1a1418	20057	Delivered	Cambridge Information Group those	King Jeffry Stoltenberg	Shipped
5c6efa4e7b6415a90ea6c1d22b658c2	20057	Delivered	Construction Monitor LLC where	Lord Nicklaus Rath	Shipped
21cb113c9e494077a5a49a03adbd301c	20057	Delivered	FindTheBest.com nobody	Dr. Lamar Herman	Shipped
a574f27ff70d34d12aaf29210d9f671df	20057	Delivered	GuideStar our	Dr. Jayson Tillman	Shipped
84bdaf72e14b40b6ac6f1d8f61b44a1a	20057	Delivered	TrustedID outrageous	Dr. London Ruecker	Shipped
2365da92aa3b43a8bf430cf92b03968	20057	Delivered	Maponics Barcelonian	Lord Dariion Ankunding	Shipped
bac72c90892c4eda881e5ed01916515a	20057	Delivered	Wheaton World Wide Moving her	Lord Chaz Collins	Shipped
d2add596d1f44680bb9d313aa344d958	20057	Delivered	Uber her	Prince Austyn Lang	Shipped
54d3a28afa434f8391dff1ebbd981df0	20057	Delivered	Rapid Cycle Solutions its	Mr. Gay Friesen	Shipped
3829d3a0f3c54c10acf06ba4d1609e51	20057	Delivered	Innovest Systems all	Prof. Frederik Cruickshank	Shipped
5baa3c8bb6534445bdf1d96ea2f22db2	20057	Delivered	Navico a little	Prof. Wyatt Runolfsson	Shipped
1a6f05dc4d5e450eae21b7a2091022bc	20057	Delivered	Maponics Barcelonian	Lord Dariion Ankunding	Shipped
0d0f42790e5f4983b66d3ee72306526a	20057	Delivered	Stormpulse friendly	King Jarrett Rippin	Canceled
58d54440ca5d420da8be35719fd4fde0	20057	Delivered	Overture Technologies your	Mr. Agustin Windler	Shipped
a134a3b5b29d4bfb7c82cde3a750dc8	20057	Delivered	Navico which	Mr. Obie Tremblay	Shipped
34964e44c6c5402d6b653fd541f8dc8fb	20057	Delivered	GreatSchools these	Dr. Wilber Nicolas	Shipped
396766c0fd78450eb3dc011ba63565e2	20057	Delivered	TransparaGov why	King Gillian Hudson	Canceled
1bd2465df7344e06a01d47e6495bdc5	20057	Delivered	PeerJ plenty of	King Gayle Baumbach	Shipped
69080b910ab84a32a24e15be3be08f08	20057	Delivered	Weather Decision Technologies there	Lord Raymundo Effertz	Shipped
c17fae8c894a8b8be5fe39d5c26424d	20057	Delivered	Lawdragon any	Prof. Coy Dare	Canceled
1b856ac597a242a0a66952a8ef333eb	20057	Delivered	Arpin Van Lines what	Prof. Stanley Borer	Shipping
5604fb0f2cdc43baa1fc1d3d52bb23a8f	20057	Delivered	Urban Airship Elizabethan	Mr. Orland Carroll	Shipped
f3151e178328476e9321c5ea0835bfdc	20057	Delivered	Harris Corporation this	Lord Burley Harris	Canceled
2de7c403578345649c940c6e23e4c036	20057	Delivered	People Power great	Prof. Jettie Kerluke	Shipped
74183832ba09454488e81dfc8fa881f0	20057	Delivered	SpeSo Health any	King Dane Reilly	Canceled
335bb5ea51d344079989b7d76cd931c	20057	Delivered	Abt Associates gifted	Prince Randi Yundt	Shipping
7fad9f6c7f084952b6ce209db7b2daaa	20057	Delivered	FarmLogs Putinist	King Herman Cartwright	Shipping
a64c2ca8db7544dbac20825542af0474	20057	Delivered	Factset everybody	Prof. Jameson Ondricka	Canceled
fdcebbaaca76e4a98bd6a0acf8cd3fe2	20057	Delivered	LegiStorm many	Lord Jerod Gleason	Shipping
6b5783f8ae9c4f5fb5124d7892ab7e5f	20057	Delivered	MarketSense great	King Vladimir McGlynn	Shipped
df59e1cd2c40087559999a4b4de3c	20057	Delivered	eInstitutional those	Lord Nasir Marvin	Canceled
d143ac00b41c4d8b9c8b448a4b74bc71	20057	Delivered	VisualDoD, LLC hilarious	Prince Dameon Koelpin	Shipping
194e6f8fdcc614e6bb81d4df0d3515c6c	20057	Delivered	Avalara what	Dr. Kurt Christiansen	Shipping
a0b2ea31b984416d941cd07cc3ceeff	20057	Delivered	realtor.com somebody	Dr. Harry Heathcote	Shipping
c9ec64f7303b84e4c921b7604979d580	20057	Delivered	Orlin Research lemony	Prince Ralph Spinka	Shipping
cb24dd3f0c9466f80fdf36854d866b5	20057	Delivered	OnStar everyone	Prof. Armando Morar	Shipping
ed6c26277cb146078d5cd9b2ec949cbf	20057	Delivered	Consumer Reports lots of	Prince Cruz Waelchi	Shipping
4b90831914e74fa89ca1cd78987c3fac	20057	Delivered	LegiStorm anything	Prof. Marques Dibbert	Shipping
eddf6a94cf7e4d6a9dd3adbdd59488b5	20057	Delivered	Inovalon it	Prince Napoleon Connelly	Shipping
59c67cd905e49f0b75aa87fe7d2dbc1	20057	Delivered	Nautilytics somebody	Mr. Darwin Kerluke	Shipping
c66d2c90d2974189b6f92927ae2462e	20057	Delivered	Marinexplore, Inc. those	Mr. Kayleigh Mraz	Shipping
314cc122472b4e33a5494e90dee92b	20057	Delivered	HopStop whose	Dr. Kenny Dickinson	Shipping
f3fb798740c04eeba7e8de94245d6835	20057	Delivered	DataMarket anyone	Lord Abraham Hermann	Shipped
66b9913931084c6b8a272fb3033a89a	20057	Delivered	HopStop whose	Dr. Kenny Dickinson	Shipping
639e4b81f23242ffacbb50bd551c2414	20057	Delivered	OTC Markets Asian	Dr. Norris Doyle	Canceled
8d4ecb8a35044517a025804a7cf4f527	20057	Delivered	Junar, Inc. prickling	Lord Darwin Gutkowski	Shipping
3b2b200586ad48649d39b637f35707d0	20057	Delivered	People Power great	Prof. Jettie Kerluke	Shipping

(50 rows)

5. Запрос извлекает информацию о статусах транзакций для определенного товара

```

SELECT
    pi.id AS postal_item_id,
    pi.track_num AS track_number,
    ps.status_name AS status_name,
    MAX(st.status_date) AS last_status_date,
    e.name AS employee_name,
    e.position AS employee_position,
    po.name AS post_office_name,
    COUNT(st.id) AS total_transactions
FROM
    status_transactions st
JOIN postal_items pi ON st.postal_item_id = pi.id
JOIN postal_statuses ps ON st.status_id = ps.id
JOIN employees e ON st.employee_id = e.id
JOIN post_offices po ON e.post_office_id = po.id
WHERE
    pi.id = 2
GROUP BY
    pi.id, pi.track_num, ps.status_name, e.name, e.position, po.name
ORDER BY
    last_status_date DESC;

```

postal_item_id	track_number	status_name	last_status_date	employee_name	employee_position	post_office_name	total_transactions
2	eaf141da84fd4c4ebfff79f0eff543d3	Delivered	1970-01-01 03:00:00.652216+03	Mr. Dalton Gleason	Director	SmartAsset somebody	1
2	eaf141da84fd4c4ebfff79f0eff543d3	Shipping	1970-01-01 02:59:59.734259+03	Mr. Dalton Gleason	Director	SmartAsset somebody	1
2	eaf141da84fd4c4ebfff79f0eff543d3	Shipped	1970-01-01 02:59:59.467087+03	Mr. Dalton Gleason	Director	SmartAsset somebody	1

(3 rows)