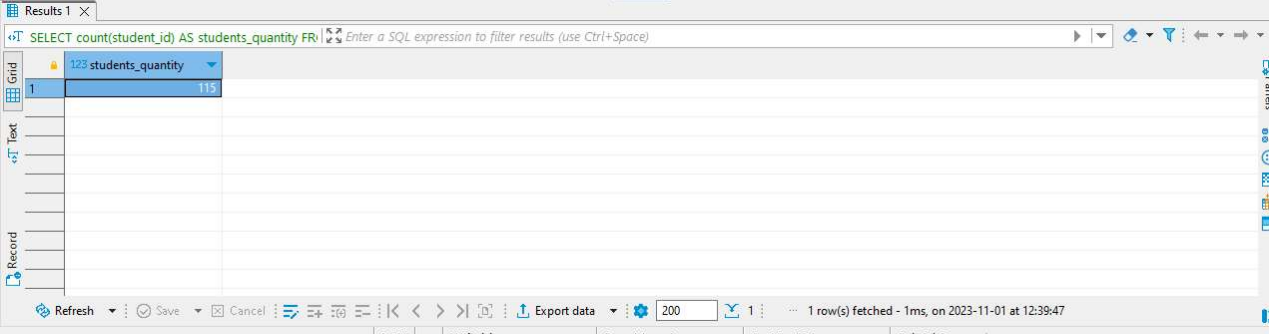


## Приложение.

Результаты выполнения SQL-запросов.

Код хранится в файле EPM\_SQL\_queries.txt, - на случай, если вам легче читать запросы без установки DBeaver.

1) Общее количество студентов — 115.

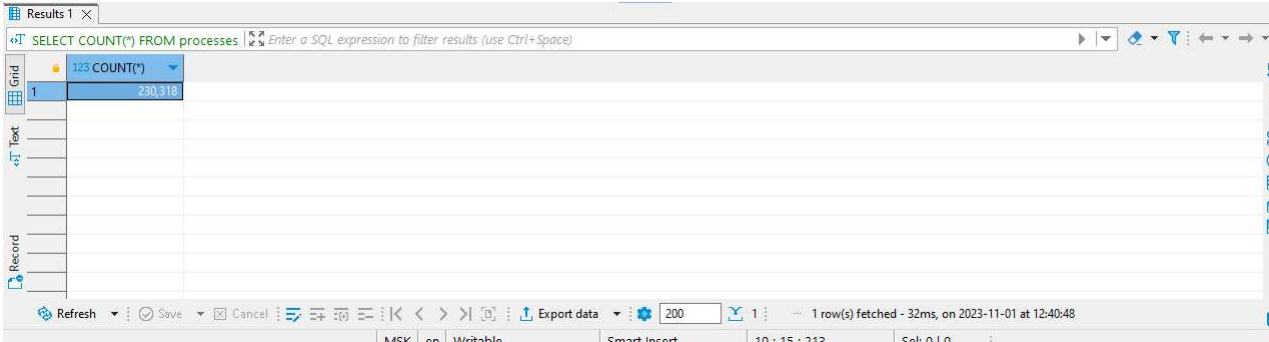


The screenshot shows the DBeaver Results window with the following details:

- SQL Query: `SELECT count(student_id) AS students_quantity FROM students`
- Grid View: A table with one row and two columns.
- Columns: `students_quantity` (123) and `count(student_id)` (115).
- Status Bar: 1 row(s) fetched - 1ms, on 2023-11-01 at 12:39:47.

students_quantity	count(student_id)
123	115

Количество записей в основной таблице — 230 318.



The screenshot shows the DBeaver Results window with the following details:

- SQL Query: `SELECT COUNT(*) FROM processes`
- Grid View: A table with one row and two columns.
- Columns: `COUNT(*)` (123) and `count(*)` (230,318).
- Status Bar: 1 row(s) fetched - 32ms, on 2023-11-01 at 12:40:48.

COUNT(*)	count(*)
123	230,318

2) Период обучения в датасете  
**2014-10-02 — 2014-12-11.**

processes 1 X

WITH session\_time\_CTE AS ( SELECT p."session", p.  
 Enter a SQL expression to filter results (use Ctrl+Space)

	123 session	ABC start_time	ABC dt	ABC min_max_time
1	1	2014-10-02 11:25:33	2014-10-02	2014-10-02
2	6	2014-12-11 11:14:22	2014-12-11	2014-12-11

Refresh Save Cancel Export data 200 2 2 row(s) fetched - 252ms, on 2023-11-01 at 12:50:29

3) Топ 10 студентов по успеваемости

final\_grades\_second 1 X

SELECT \* FROM ( SELECT student\_id, "total\_(100\_p)  
 Enter a SQL expression to filter results (use Ctrl+Space)

	123 student_id	123 total_(100_points)	123 rating
1	41	98	1
2	20	97.5	2
3	44	97.5	3
4	17	97	4
5	29	97	5
6	88	96	6
7	72	95	7
8	1	94.5	8
9	86	94	9
10	76	93.5	10

Refresh Save Cancel Export data 200 10 10 row(s) fetched - 2ms (1ms fetch), on 2023-11-01 at 12:52:42

#### 4) Статистика по успеваемости:

Максимум, минимум, среднее, мода, медиана, дисперсия.

final\_grades\_second 1

WITH fga AS ( SELECT student\_id, max("total\_100\_100") AS total\_max, min("total\_100\_100") AS total\_min, avg("total\_100\_100") AS total\_avg, mode("total\_100\_100") AS total\_moda, median("total\_100\_100") AS total\_mean, dispersion("total\_100\_100") AS dispersion FROM final\_grades )

	123 student_id	123 student_total	123 total_rating	123 total_max	123 total_min	123 total_avg	123 total_moda	123 total_mean	123 dispersion
1	41	98	1	98	8.5	58.69	66.5	55	46.98
2	44	97.5	2	98	8.5	58.69	66.5	55	46.98
3	20	97.5	3	98	8.5	58.69	66.5	55	46.98
4	29	97	4	98	8.5	58.69	66.5	55	46.98
5	17	97	5	98	8.5	58.69	66.5	55	46.98
6	88	96	6	98	8.5	58.69	66.5	55	46.98
7	72	95	7	98	8.5	58.69	66.5	55	46.98
8	1	94.5	8	98	8.5	58.69	66.5	55	46.98
9	86	94	9	98	8.5	58.69	66.5	55	46.98
10	76	93.5	10	98	8.5	58.69	66.5	55	46.98
11	94	92.5	11	98	8.5	58.69	66.5	55	46.98

Refresh Save Cancel Export data 200 93 93 row(s) fetched - 2ms, on 2023-11-01 at 13:22:01

#### 5) Количество законченных сессий для каждого студента.

logs 1

SELECT lg.student\_id, (session\_1 + session\_2 + session\_3) AS sessions\_finished FROM logs lg

	123 student_id	123 sessions_finished
1	1	5
2	2	6
3	3	4
4	4	6
5	5	6
6	6	5
7	7	6
8	8	4
9	9	5
10	10	6
11	11	6

Refresh Save Cancel Export data 200 115 115 row(s) fetched - 1ms, on 2023-11-01 at 13:25:08

# 6) Время выполнения:

- Подзадний (activity),
- Заданий (exercise);

processes 1 X

SELECT sp."session", sp.student\_id, sp.exercise, sp. Enter a SQL expression to filter results (use Ctrl+Space)

	123 session	123 student_id	ABC exercise	ABC activity	ABC start_time	ABC end_time	ABC act_time	ABC ex_sum_time	
1	1	1	Es	Other	2014-10-02 11:25:33	2014-10-02 11:25:34	00:00:01	00:01:29	
2	1	1	Es	Aulaweb	2014-10-02 11:25:35	2014-10-02 11:25:42	00:00:07	00:01:29	
3	1	1	Es	Blank	2014-10-02 11:25:43	2014-10-02 11:25:43	00:00:00	00:01:29	
4	1	1	Es	Deeds	2014-10-02 11:25:44	2014-10-02 11:26:17	00:00:33	00:01:29	
5	1	1	Es	Other	2014-10-02 11:26:18	2014-10-02 11:26:18	00:00:00	00:01:29	
6	1	1	Es	Other	2014-10-02 11:26:19	2014-10-02 11:26:27	00:00:08	00:01:29	
7	1	1	Es	Blank	2014-10-02 11:26:28	2014-10-02 11:26:28	00:00:00	00:01:29	
8	1	1	Es	Deeds	2014-10-02 11:26:29	2014-10-02 11:26:29	00:00:00	00:01:29	
9	1	1	Es	Aulaweb	2014-10-02 11:26:30	2014-10-02 11:26:33	00:00:03	00:01:29	
10	1	1	Es	Deeds	2014-10-02 11:26:34	2014-10-02 11:26:41	00:00:07	00:01:29	
11	1	1	Es	Other	2014-10-02 11:26:42	2014-10-02 11:26:47	00:00:05	00:01:29	

Refresh Save Cancel Export data 200 200+ 200 row(s) fetched - 390ms (5ms fetch), on 2023-11-01 at 13:28:25

# 7) Минимальное и максимальное время выполнения подзаданий «activity»

processes 1 X

WITH session\_ex\_CTE AS ( SELECT sp."session", sp. Enter a SQL expression to filter results (use Ctrl+Space)

	123 session	123 student_id	ABC exercise	ABC activity	ABC start_time	ABC end_time	ABC act_time	ABC ex_sum_time	123 ex_sum_time2	ABC min_max_time
1	1	28	Es	Other	2014-10-02 13:32:44	2014-10-02 13:32:45	00:00:01	00:00:01	0.000011574	00:00:01
2	3	45	Es_3_1	Study_Es_3_1	2014-10-23 11:19:19	2014-10-23 11:20:04	00:00:45	02:46:33	0.1156597221	02:46:33

Refresh Save Cancel Export data 200 2 2 row(s) fetched - 2.886s (6ms fetch), on 2023-11-01 at 13:29:36