**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ**

1. Федеральное государственное бюджетное образовательное учреждение
2. высшего образования
3. **«Сибирский государственный университет науки и технологий**

**имени академика М.Ф. Решетнева»**

Институт информатики и телекоммуникаций

Информационные системы и технологии в управлении, 09.03.02

Лабораторная работа №4

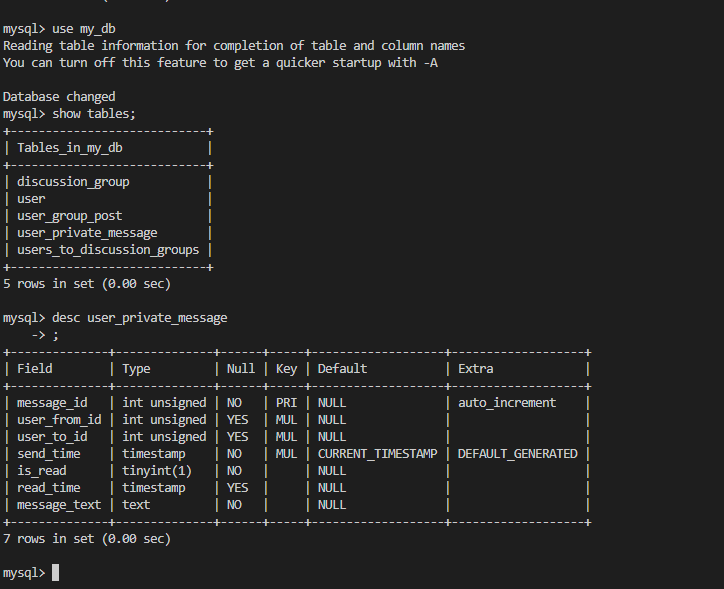
по дисциплине: Инструментальные средства информационных систем

Студент: М.О. Миронов

Группа: БИСЗ 20-01

Красноярск 2023

**Задание 1**

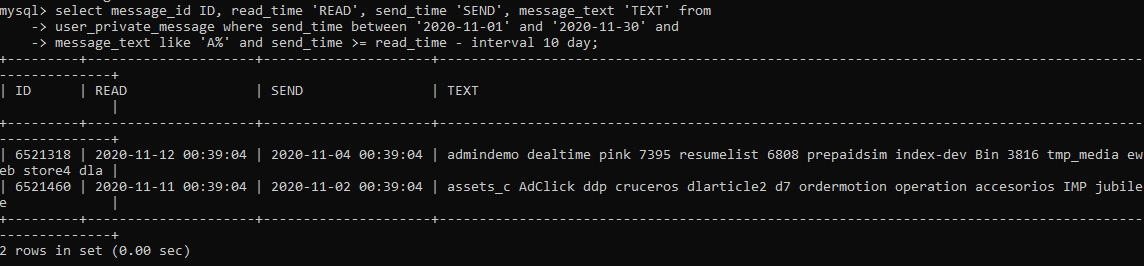


**Задание 2**



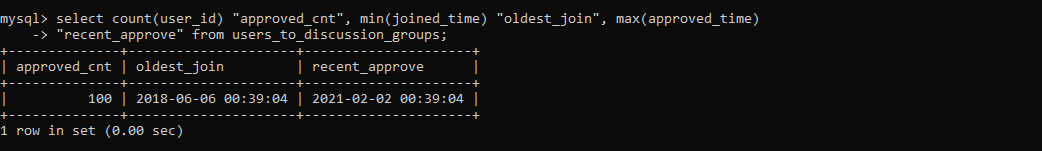
select Name, approve\_required from discussion\_group where approve\_required = true;

**Задание 3**



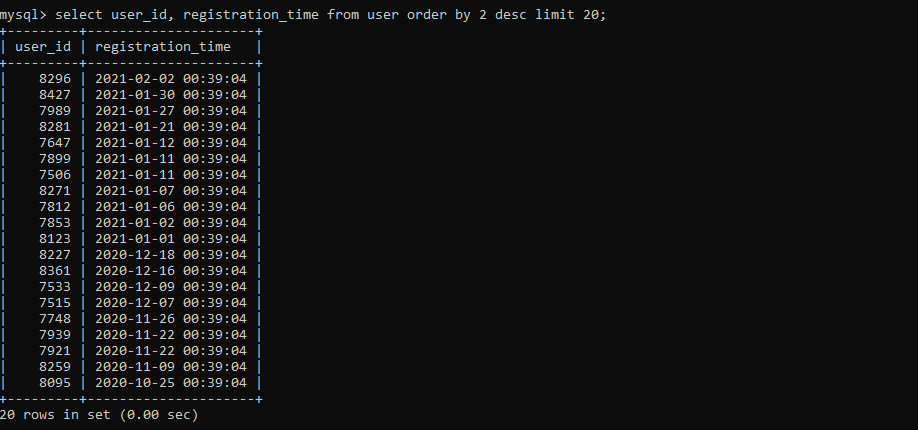
select message\_id ID, read\_time 'READ', send\_time 'SEND', message\_text 'TEXT' from user\_private\_message where send\_time between '2020-11-01' and '2020-11-30' and message\_text like 'A%' and send\_time >= read\_time - interval 10 day;

**Задание 4**



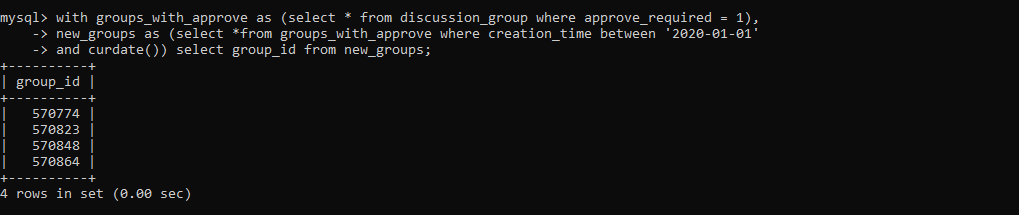
select count(user\_id) "approved\_cnt", min(joined\_time) "oldest\_join", max(approved\_time) "recent\_approve" from users\_to\_discussion\_groups;

**Задание 5**



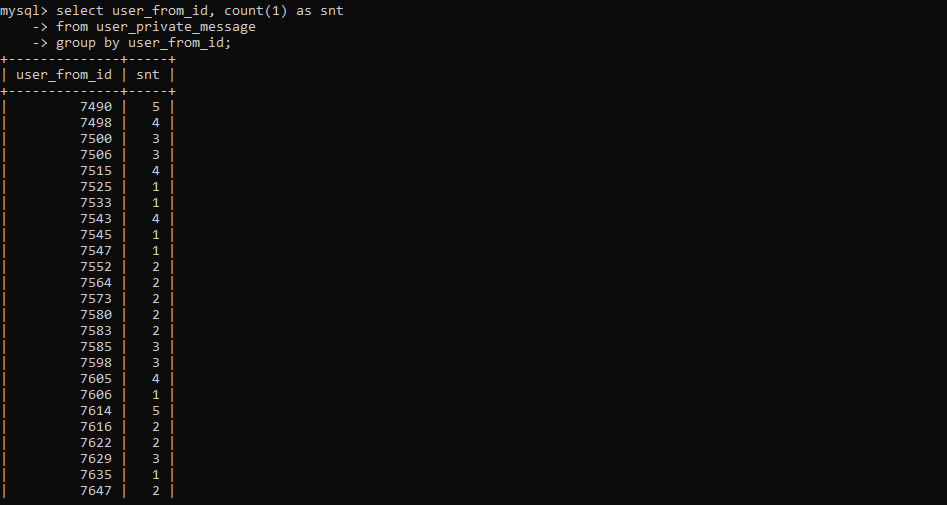
select user\_id, registration\_time from user order by 2 desc limit 20;

**Задание 6**



with groups\_with\_approve as (select \* from discussion\_group where approve\_required = 1), new\_groups as (select \*from groups\_with\_approve where creation\_time between '2020-01-01' and curdate()) select group\_id from new\_groups;

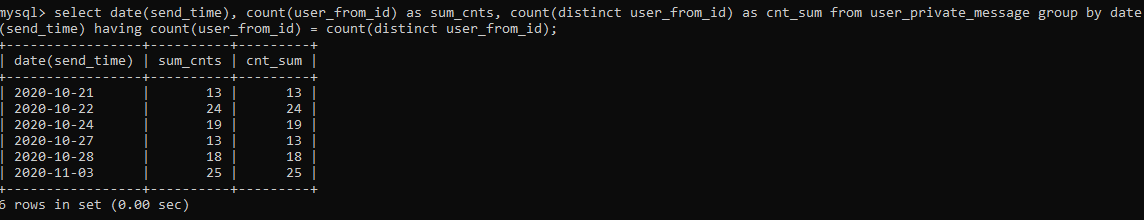
**Задание 7**





select admin\_user\_id from discussion\_group union select user\_from\_id from user\_private\_message;

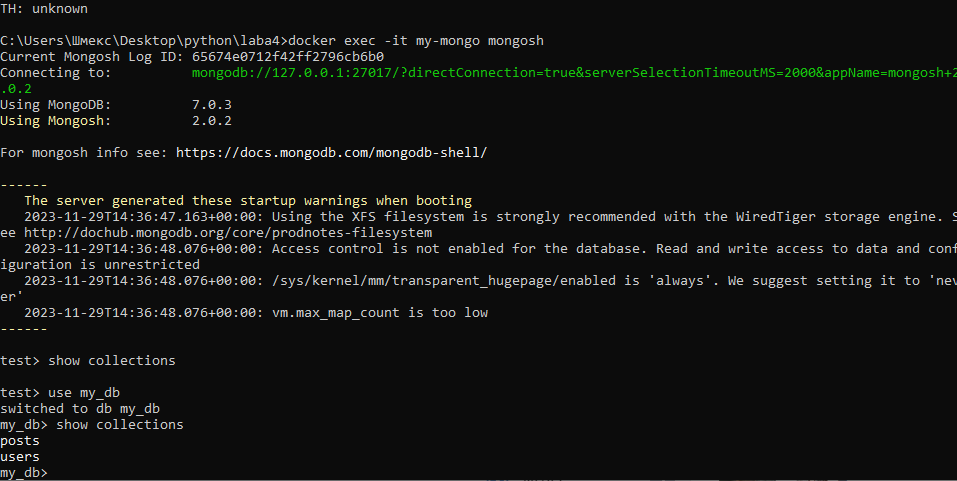
**Задание 8**



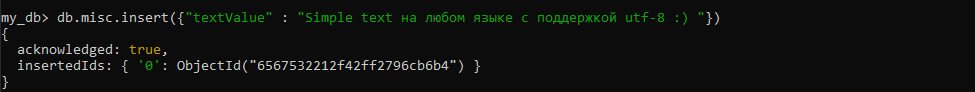
select distinct date(send\_time) from user\_private\_message group by date(send\_time), user\_from\_id having count(user\_from\_id) = 1;

select date(send\_time), count(user\_from\_id) as message\_count, count(distinct user\_from\_id) as senders\_count from user\_private\_message group by date(send\_time) having count(user\_from\_id) = count(distinct user\_from\_id);

**Задание 9**



**Задание 10**





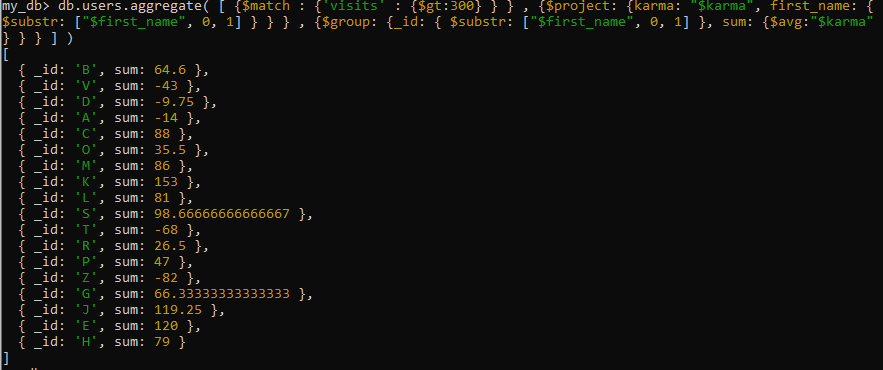
db.posts.find({"author":/.\*example.ru.\*/, "score": {$gt: 100}, "topics": "as"})

**Задание 11**



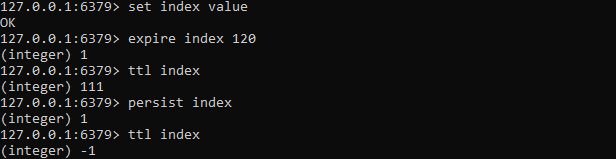
db.posts.insertMany([{"creation\_date": new Date(), "author":"skbx@example.com", "topics":["mongodb"]}, {"creation\_date":new ISODate('2021-12-31T00:00:00Z'), "author":"skbx@example.ru"}])

**Задание 12**



db.users.aggregate( [ {$match : {'visits' : {$gt:300} } } , {$project: {karma: "$karma", first\_name: { $substr: ["$first\_name", 0, 1] } } } , {$group: {\_id: { $substr: ["$first\_name", 0, 1] }, sum: {$avg:"$karma" } } } ] )

**Задание 13**



set index

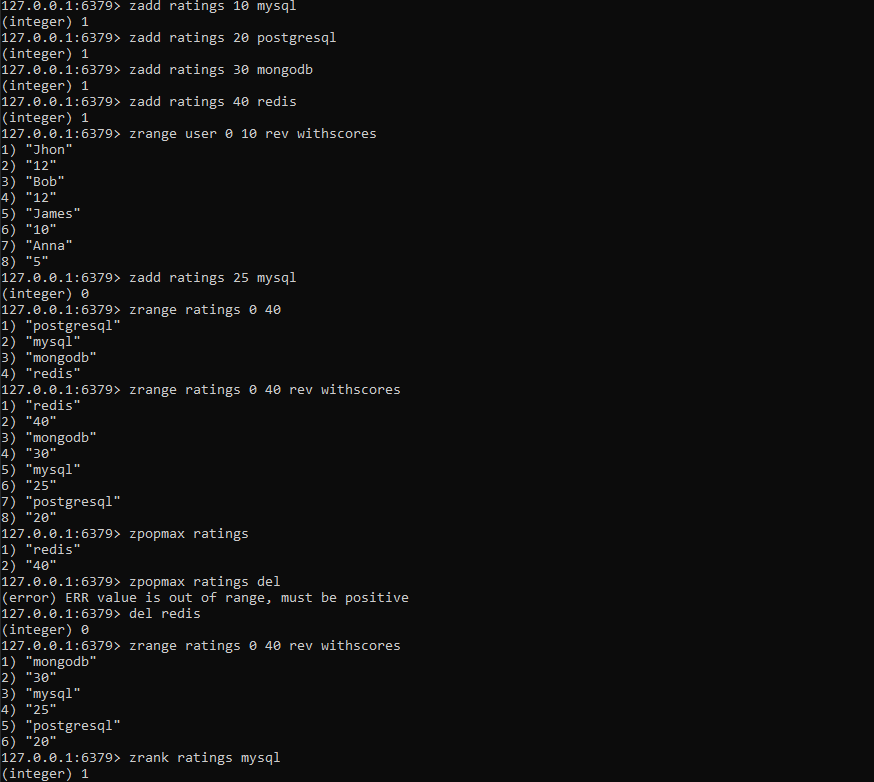
expire index 120

ttl index

persist index

ttl index

**Задание 14**



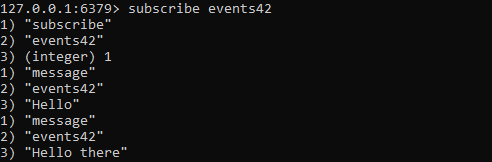
zadd rating 10 mysql 20 postgresql 30 mongodb 40 redis

zadd rating 15 mysql

zrem rating max

zrank rating mysql

**Задание 15**





subscribe events42

publish events42 Hello:there