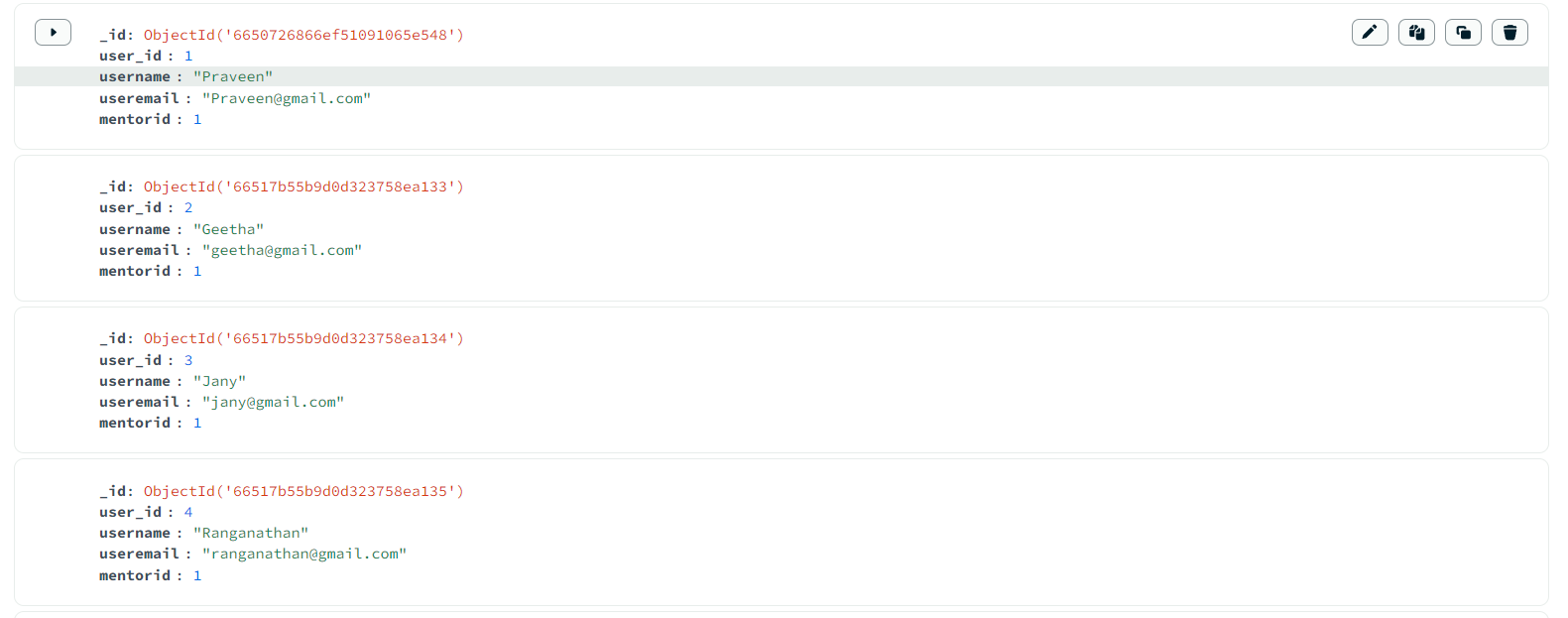
**Design Database for Zen Class Programme**

**Create database**

use task

1 ) Creating users Collection:



2 ) Creating code kata Collection:



3 ) Creating attendance Collection:



4 ) Creating topics Collection:



5 ) Creating tasks Collection:



6 ) Creating company drives Collection:



7 ) Creating mentors Collection:



**Tasks :**

**1.** **Find all the topics and tasks which are thought in the month of October :**

**Solution :**

**db.topic.aggregate([**

**{**

**$lookup:{**

**from:'task',**

**localField:'topic\_id',**

**foreignField:'topic\_id',**

**as:'task\_info'**

**}**

**},**

**{**

**$match:{**

**topic\_date:{$regex:'2023-10'}**

**}**

**},**

**{**

**$unwind:'$task\_info'**

**},**

**{**

**$project:{**

**\_id:0,**

**topic\_name:1,**

**topic\_date:1,**

**User\_ID:"$task\_info.user\_id",**

**Task\_Name:"$task\_info.task\_name",**

**Submission\_Date:"$task\_info.submisson\_date",**

**Submission\_Time:"$task\_info.submission\_time",**

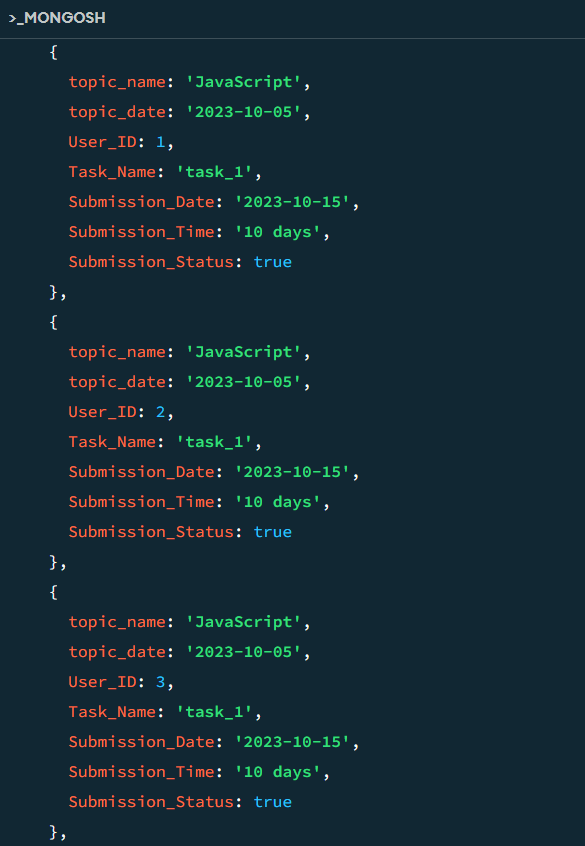
**Submission\_Status:"$task\_info.submission\_status",**

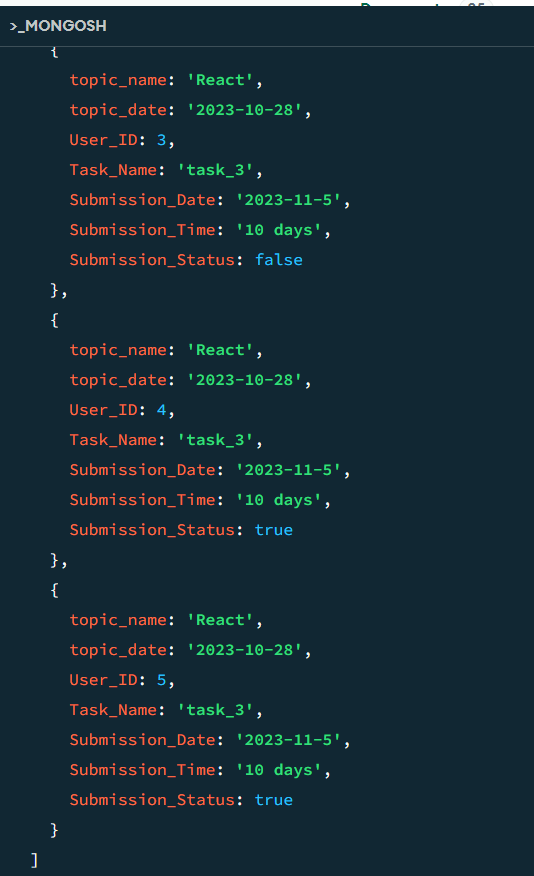
**}**

**}**

**]**

**).toArray();**





**2.** **Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020 :**

**Solution :**

**db.company.find({**

**drive\_date: {**

**$gte: '15-10-2024',**

**$lte: '31-10-2024'**

**}**

**});**

****

**3.** **Find all the company drives and students who are appeared for the placement :**

**Solution :**

**db.company.aggregate([**

**{**

**$lookup:{**

**from:'users',**

**localField:'user\_id',**

**foreignField:'user\_id',**

**as:'User\_Companydrives'**

**}**

**},**

**{**

**$unwind:'$User\_Companydrives'**

**},**

**{**

**$project:{**

**\_id:0,**

**company\_id:1,**

**company\_name:1,**

**drive\_date:1,**

**User\_ID:'$User\_Companydrives.user\_id',**

**User\_Name:'$User\_Companydrives.username',**

**User\_Email:'$User\_Companydrives.useremail'**

**}**

**}**

**]).toArray();**

****

**4.** **Find the number of problems solved by the user in codekata :**

**Solution :**

**db.codekata.aggregate([**

**{**

**$lookup:{**

**from:'users',**

**localField:'user\_id',**

**foreignField:'user\_id',**

**as:'User\_ProblemsSolved'**

**}**

**},**

**{**

**$unwind:'$User\_ProblemsSolved'**

**},**

**{**

**$project:**

**{**

**\_id:0,**

**code\_id:1,**

**User\_Name:'$User\_ProblemsSolved.username',**

**User\_Email:'$User\_ProblemsSolved.useremail',**

**User\_ID:'$User\_ProblemsSolved.user\_id',**

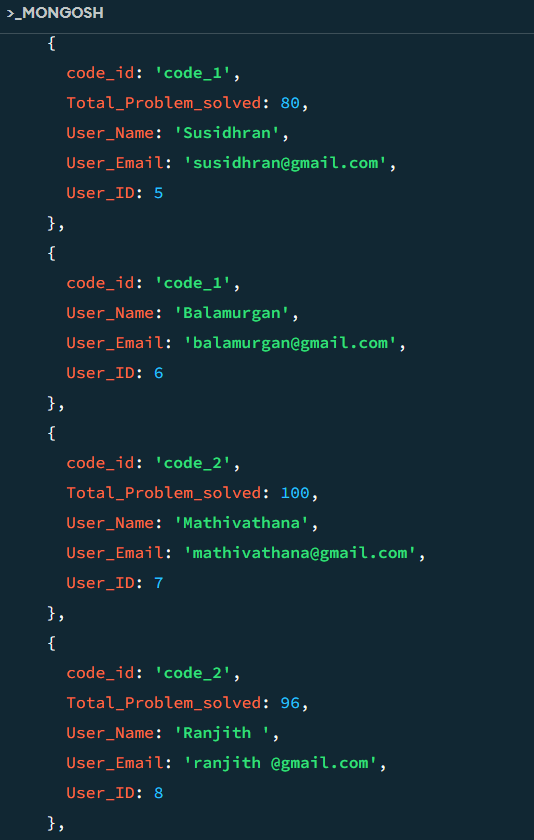
**Total\_Problem\_solved:1**

**}**

**}**

**]).toArray();**





**5. Find all the mentors with who has the mentee's count more than 15 :**

**Solution :**

**db.mentors.aggregate([**

**{**

**$lookup:{**

**from:'users',**

**localField:'mentor\_id',**

**foreignField:'mentorid',**

**as:'Mentee\_Count'**

**}**

**},**

**{**

**$project:{count:{$size:'$Mentee\_Count'},**

**\_id:0,**

**mentor\_name:1,**

**mentor\_id:1**

**}**

**},**

**{**

**$match:{count:{$gt:15}}**

**}**

**]**

**);**



**6.** **Find the number of users who are absent and task is not submitted between 15 oct-2020 and 31-oct-2020 :**

**Solution :**

**db.attendence.aggregate([**

**{**

**$lookup:{**

**from:'topic',**

**localField:'topic\_id',**

**foreignField:'topic\_id',**

**as:'topics'**

**}**

**},**

**{**

**$lookup: {**

**from: 'task',**

**localField: 'user\_id',**

**foreignField: 'user\_id',**

**as: 'task-info'**

**}**

**},**

**{**

**$unwind:'$topics'**

**},**

**{**

**$unwind:'$task-info'**

**},**

**{**

**$match: {**

**attendence\_status: 'false',**

**'topics.topic\_date': {**

**$gte: '2023-10-15',**

**$lte: '2023-10-31'**

**}**

**}**

**},**

**{**

**$match: {**

**'task-info.submisson\_date': {**

**$gte: '2023-10-15',**

**$lte: '2023-10-31'**

**},**

**'task-info.submission\_status': 'false'**

**}**

**},**

**{**

**$project:{**

**\_id:0,**

**user\_id:1,**

**attendence\_status:1,**

**Topic\_id:"$topics.topic\_id",**

**Topic\_Name:"$topics.topic\_name",**

**Topic\_date:"$topics.topic\_date",**

**Task\_id:"$task-info.task\_id",**

**Task\_name:"$task-info.task\_name",**

**Task\_submission\_status:"$task-info.submission\_status"**

**}**

**}**

**]).toArray();**

