

# MongoDB Task

## Design database for Zen class programme

users

codekata

attendance

topics

tasks

company\_drives

mentors

1. Find all the topics and tasks which are thought in the month of October
2. Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020
3. Find all the company drives and students who are appeared for the placement.
4. Find the number of problems solved by the user in codekata
5. Find all the mentors with who has the mentee's count more than 15
6. Find the number of users who are absent and task is not submitted between 15 oct-2020 and 31-oct-2020

## USER COLLECTION

```
[
{
  "name": "ARUN",
  "email": "arun@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
```

```
{ "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
{ "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "absent" }
],
"tasks": [
{
  "task_id": { "$oid": "64b8b2f0cfa9f00012c3d456" },
  "submitted": false,
  "date": { "$date": "2020-10-20T00:00:00Z" }
}
],
"codekata_problems_solved": 12
},
{
  "name": "AKHILA",
  "email": "akhila@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ],
  "tasks": [
    {
      "task_id": { "$oid": "64b8b2f0cfa9f00012c3d457" },
      "submitted": true,
      "date": { "$date": "2020-10-22T00:00:00Z" }
```

```
}
],
"codekata_problems_solved": 8
},
{
  "name": "முருகன்",
  "email": "murugan@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ],
  "tasks": [
    {
      "task_id": { "$oid": "64b8b2f0cfa9f00012c3d458" },
      "submitted": true,
      "date": { "$date": "2020-10-25T00:00:00Z" }
    }
  ],
  "codekata_problems_solved": 20
},
{
  "name": "SUNDAR",
  "email": "sundar@example.com",
  "role": "student",
```

```
"mentee_count": 0,
"attendance": [
  { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "absent" },
  { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "absent" },
  { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },
  { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "absent" },
  { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "absent" },
  { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
  { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
],
"tasks": [
  {
    "task_id": { "$oid": "64b8b2f0cfa9f00012c3d459" },
    "submitted": false,
    "date": { "$date": "2020-10-27T00:00:00Z" }
  }
],
"codekata_problems_solved": 5
},
{
  "name": "MOHAN",
  "email": "mohan@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
```

```
{ "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
],
"tasks": [
  {
    "task_id": { "$oid": "64b8b2f0cfa9f00012c3d460" },
    "submitted": true,
    "date": { "$date": "2020-10-30T00:00:00Z" }
  }
],
"codekata_problems_solved": 15
},
{
  "name": "KESAVAN",
  "email": "kesavan@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-15T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "absent" }
  ],
  "tasks": [
    {
      "task_id": { "$oid": "64b8b2f0cfa9f00012c3d461" },
      "submitted": true,
      "date": { "$date": "2020-10-15T00:00:00Z" }
    }
  ]
}
```

```
],
"codekata_problems_solved": 18
},
{
  "name": "AADARSH",
  "email": "aadarsh@example.com",
  "role": "student",
  "mentee_count": 0,
  "attendance": [
    { "date": { "$date": "2020-10-14T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-1T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "absent" }
  ],
  "tasks": [
    {
      "task_id": { "$oid": "64b8b2f0cfa9f00012c3d462" },
      "submitted": true,
      "date": { "$date": "2020-10-15T00:00:00Z" }
    }
  ],
  "codekata_problems_solved": 17
}
```

```
]
```

## Topics Collection

```
[
  {
    "topic_name": "JavaScript Basics",
    "date": { "$date": "2020-10-14T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "HTML",
    "date": { "$date": "2020-10-15T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "CSS",
    "date": { "$date": "2020-10-19T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "Tailwind CSS",
    "date": { "$date": "2020-10-16T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "Advanced JavaScript",
    "date": { "$date": "2020-10-17T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "React JS",
    "date": { "$date": "2020-10-18T00:00:00Z" },
    "mentor_name": "Sureshbabu Vikraman"
  },
  {
    "topic_name": "MySQL",
    "date": { "$date": "2020-10-30T00:00:00Z" },
    "mentor_name": "Sathish G"
  },
  {
    "topic_name": "MongoDB",
    "date": { "$date": "2020-10-31T00:00:00Z" },
    "mentor_name": "Sathish G"
  }
]
```

```
}  
]
```

## Tasks Collection

```
[  
  {  
    "task_name": "HTML/CSS Landing Page Task",  
    "date": { "$date": "2020-10-15T00:00:00Z" },  
    "tech_used": "HTML & CSS"  
  },  
  {  
    "task_name": "Create Landing Page",  
    "date": { "$date": "2020-10-17T00:00:00Z" },  
    "tech_used": "HTML, CSS, Tailwind CSS"  
  },  
  {  
    "task_name": "Mini Project",  
    "date": { "$date": "2020-10-14T00:00:00Z" },  
    "tech_used": "HTML, CSS, JavaScript"  
  },  
  {  
    "task_name": "Todo App",  
    "date": { "$date": "2020-10-16T00:00:00Z" },  
    "tech_used": "HTML, CSS, JavaScript"  
  },  
  {  
    "task_name": "Router Task",  
    "date": { "$date": "2020-10-18T00:00:00Z" },  
    "tech_used": "React"  
  },  
  {  
    "task_name": "React Model",  
    "date": { "$date": "2020-10-19T00:00:00Z" },  
    "tech_used": "CSS, React, JavaScript, React Hooks"  
  },  
  {  
    "task_name": "Movie Searching App",  
    "date": { "$date": "2020-10-30T00:00:00Z" },  
    "tech_used": "React"  
  },  
  {  
    "task_name": "Design DB - Zenclass",  
    "date": { "$date": "2020-10-28T00:00:00Z" },
```



```

    "tech_used": "MongoDB"
  },
  {
    "task_name": "Authentication & Authorization",
    "date": { "$date": "2020-10-15T00:00:00Z" },
    "tech_used": "NodeJS, MongoDB, JWT & Dotenv"
  },
  {
    "task_name": "Recipes App",
    "date": { "$date": "2020-10-18T00:00:00Z" },
    "tech_used": "React, MVC Architecture, Database Connectivity"
  },
  {
    "task_name": "SQL Task",
    "date": { "$date": "2020-10-15T00:00:00Z" },
    "tech_used": "MySQL"
  }
]

```

#### Company Drives Collection

```

[
  {
    "company_name": "Google",
    "drive_date": { "$date": "2020-10-28T00:00:00Z" },
    "students_participated": [
      { "$oid": "64b8b2f0cfa9f00012c3d459" },
      { "$oid": "64b8b2f0cfa9f00012c3d460" }
    ]
  },
  {
    "company_name": "HCL",
    "drive_date": { "$date": "2020-10-16T00:00:00Z" },
    "students_participated": [
      { "$oid": "64b8b2f0cfa9f00012c3d461" },
      { "$oid": "64b8b2f0cfa9f00012c3d462" }
    ]
  },
  {
    "company_name": "TCI",
    "drive_date": { "$date": "2020-10-16T00:00:00Z" },
    "students_participated": [
      { "$oid": "64b8b2f0cfa9f00012c3d459" },

```

```
{ "$oid": "64b8b2f0cfa9f00012c3d461" },
  { "$oid": "64b8b2f0cfa9f00012c3d460" }
]
}
]
```

## KODEKATA Collection

```
[
  {
    "problem_id": "P1",
    "problem_name": "FizzBuzz",
    "difficulty_level": "Easy",
    "date_created": { "$date": "2020-10-15T00:00:00Z" },
    "students_solved": [
      { "$oid": "64b8b2f0cfa9f00012c3d459" },
      { "$oid": "64b8b2f0cfa9f00012c3d460" },
      { "$oid": "64b8b2f0cfa9f00012c3d461" }
    ]
  },
  {
    "problem_id": "P2",
    "problem_name": "Palindrome Check",
    "difficulty_level": "Medium",
    "date_created": { "$date": "2020-10-16T00:00:00Z" },
    "students_solved": [
      { "$oid": "64b8b2f0cfa9f00012c3d456" },
      { "$oid": "64b8b2f0cfa9f00012c3d457" }
    ]
  },
  {
    "problem_id": "P3",
    "problem_name": "Reverse String",
    "difficulty_level": "Easy",
    "date_created": { "$date": "2020-10-17T00:00:00Z" },
    "students_solved": [
      { "$oid": "64b8b2f0cfa9f00012c3d456" },
      { "$oid": "64b8b2f0cfa9f00012c3d459" }
    ]
  },
  {
    "problem_id": "P4",
    "problem_name": "Fibonacci Series",

```

```
"difficulty_level": "Medium",
"date_created": { "$date": "2020-10-18T00:00:00Z" },
"students_solved": [
  { "$oid": "64b8b2f0cfa9f00012c3d456" },
  { "$oid": "64b8b2f0cfa9f00012c3d458" },
  { "$oid": "64b8b2f0cfa9f00012c3d459" }
]
},
{
  "problem_id": "P5",
  "problem_name": "Factorial Calculation",
  "difficulty_level": "Easy",
  "date_created": { "$date": "2020-10-23T00:00:00Z" },
  "students_solved": [
    { "$oid": "64b8b2f0cfa9f00012c3d456" },
    { "$oid": "64b8b2f0cfa9f00012c3d457" }
  ]
},
{
  "problem_id": "P6",
  "problem_name": "Prime Number Check",
  "difficulty_level": "Hard",
  "date_created": { "$date": "2020-10-20T00:00:00Z" },
  "students_solved": [
    { "$oid": "64b8b2f0cfa9f00012c3d456" },
    { "$oid": "64b8b2f0cfa9f00012c3d459" }
  ]
},
{
  "problem_id": "P7",
  "problem_name": "Anagram Check",
  "difficulty_level": "Medium",
  "date_created": { "$date": "2020-10-21T00:00:00Z" },
  "students_solved": [
    { "$oid": "64b8b2f0cfa9f00012c3d457" },
    { "$oid": "64b8b2f0cfa9f00012c3d459" }
  ]
},
{
  "problem_id": "P8",
  "problem_name": "Sum of Digits",
  "difficulty_level": "Easy",
  "date_created": { "$date": "2020-10-27T00:00:00Z" },
  "students_solved": [
```

```

    { "$oid": "64b8b2f0cfa9f00012c3d456" },
    { "$oid": "64b8b2f0cfa9f00012c3d458" }
  ]
},
{
  "problem_id": "P9",
  "problem_name": "String Compression",
  "difficulty_level": "Hard",
  "date_created": { "$date": "2020-10-26T00:00:00Z" },
  "students_solved": [
    { "$oid": "64b8b2f0cfa9f00012c3d459" },
    { "$oid": "64b8b2f0cfa9f00012c3d457" }
  ]
},
{
  "problem_id": "P10",
  "problem_name": "Merge Sort Algorithm",
  "difficulty_level": "Hard",
  "date_created": { "$date": "2020-10-25T00:00:00Z" },
  "students_solved": [
    { "$oid": "64b8b2f0cfa9f00012c3d458" },
    { "$oid": "64b8b2f0cfa9f00012c3d459" }
  ]
}
]

```

#### Attendance COLLECTION

```

[
  {
    "student_id": { "$oid": "64b8b2f0cfa9f00012c3d456" },
    "attendance": [
      { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "absent" },
      { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "absent" }
    ]
  },
  {
    "student_id": { "$oid": "64b8b2f0cfa9f00012c3d457" },
    "attendance": [
      { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "present" },
      { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "absent" },
      { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },

```

```

    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ]
},
{
  "student_id": { "$oid": "64b8b2f0cfa9f00012c3d458" },
  "attendance": [
    { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ]
},
{
  "student_id": { "$oid": "64b8b2f0cfa9f00012c3d459" },
  "attendance": [
    { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "absent" }
  ]
},
{
  "student_id": { "$oid": "64b8b2f0cfa9f00012c3d460" },
  "attendance": [
    { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ]
},
{
  "student_id": { "$oid": "64b8b2f0cfa9f00012c3d461" },
  "attendance": [
    { "date": { "$date": "2020-10-23T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-21T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-19T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-16T00:00:00Z" }, "status": "absent" },

```

```
    { "date": { "$date": "2020-10-17T00:00:00Z" }, "status": "absent" },
    { "date": { "$date": "2020-10-18T00:00:00Z" }, "status": "present" },
    { "date": { "$date": "2020-10-30T00:00:00Z" }, "status": "present" }
  ]
}
```

]

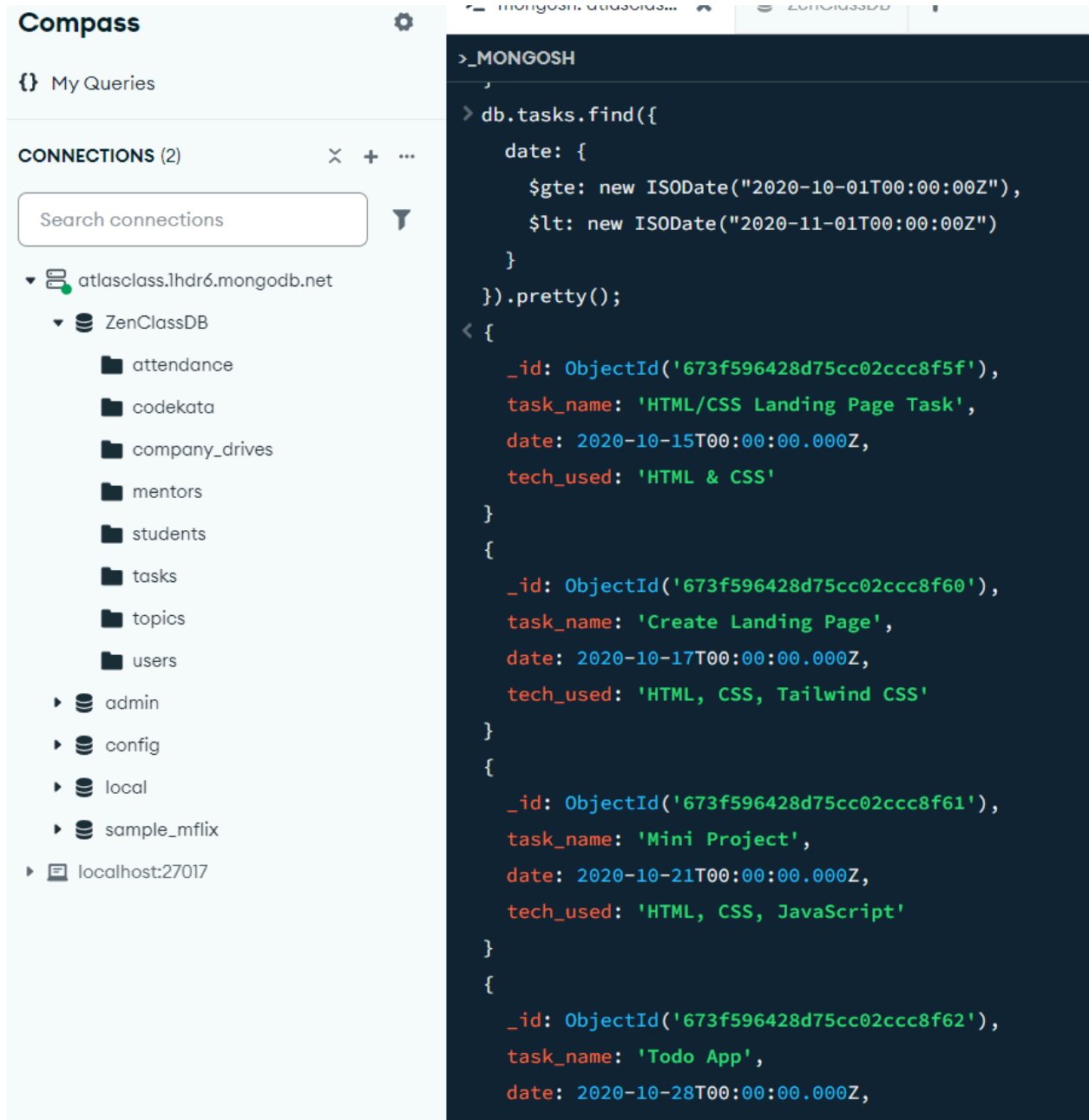
## Mentors COLLECTION

```
[
{
  "_id": ObjectId("64b8b2f0cfa9f00012c3d470"),
  "name": "Sureshbabu Vikraman",
  "mentees": [
    { "name": "Mentee 1" },
    { "name": "Mentee 2" },
    { "name": "Mentee 3" },
    { "name": "Mentee 4" },
    { "name": "Mentee 5" },
    { "name": "Mentee 6" },
    { "name": "Mentee 7" },
    { "name": "Mentee 8" },
    { "name": "Mentee 9" },
    { "name": "Mentee 10" },
    { "name": "Mentee 11" },
    { "name": "Mentee 12" },
    { "name": "Mentee 13" },
    { "name": "Mentee 14" },
    { "name": "Mentee 15" },
    { "name": "Mentee 16" },
    { "name": "Mentee 17" }
  ],
  "topics_taught": [
    { "topic_name": "JavaScript Basics", "date": "2020-10-23" },
    { "topic_name": "HTML", "date": "2020-10-21" },
    { "topic_name": "CSS", "date": "2020-10-19" },
    { "topic_name": "Tailwind CSS", "date": "2020-10-16" },
    { "topic_name": "Advanced JavaScript", "date": "2020-10-17" },
    { "topic_name": "React JS", "date": "2020-10-18" }
  ]
}
]
```

## QUERY:-

1. Find all the topics and tasks that were taught in the month of October 2020.

```
db.tasks.find({
  date: {
    $gte: new ISODate("2020-10-01T00:00:00Z"),
    $lt: new ISODate("2020-11-01T00:00:00Z")
  }
}).pretty();
```



The image shows a screenshot of the MongoDB Compass interface on the left and a terminal window on the right. The Compass interface displays a connection to 'atlasclass.lhdr6.mongodb.net' with a database named 'ZenClassDB'. The 'tasks' collection is selected, showing a list of tasks. The terminal window shows a MongoDB query being executed in the 'MONGOSH' shell, which returns a list of tasks from the 'tasks' collection, filtered by date.

**Compass CONNECTIONS (2)**

- atlasclass.lhdr6.mongodb.net
  - ZenClassDB
    - attendance
    - codekata
    - company\_drives
    - mentors
    - students
    - tasks
    - topics
    - users
  - admin
  - config
  - local
  - sample\_mflix
- localhost:27017

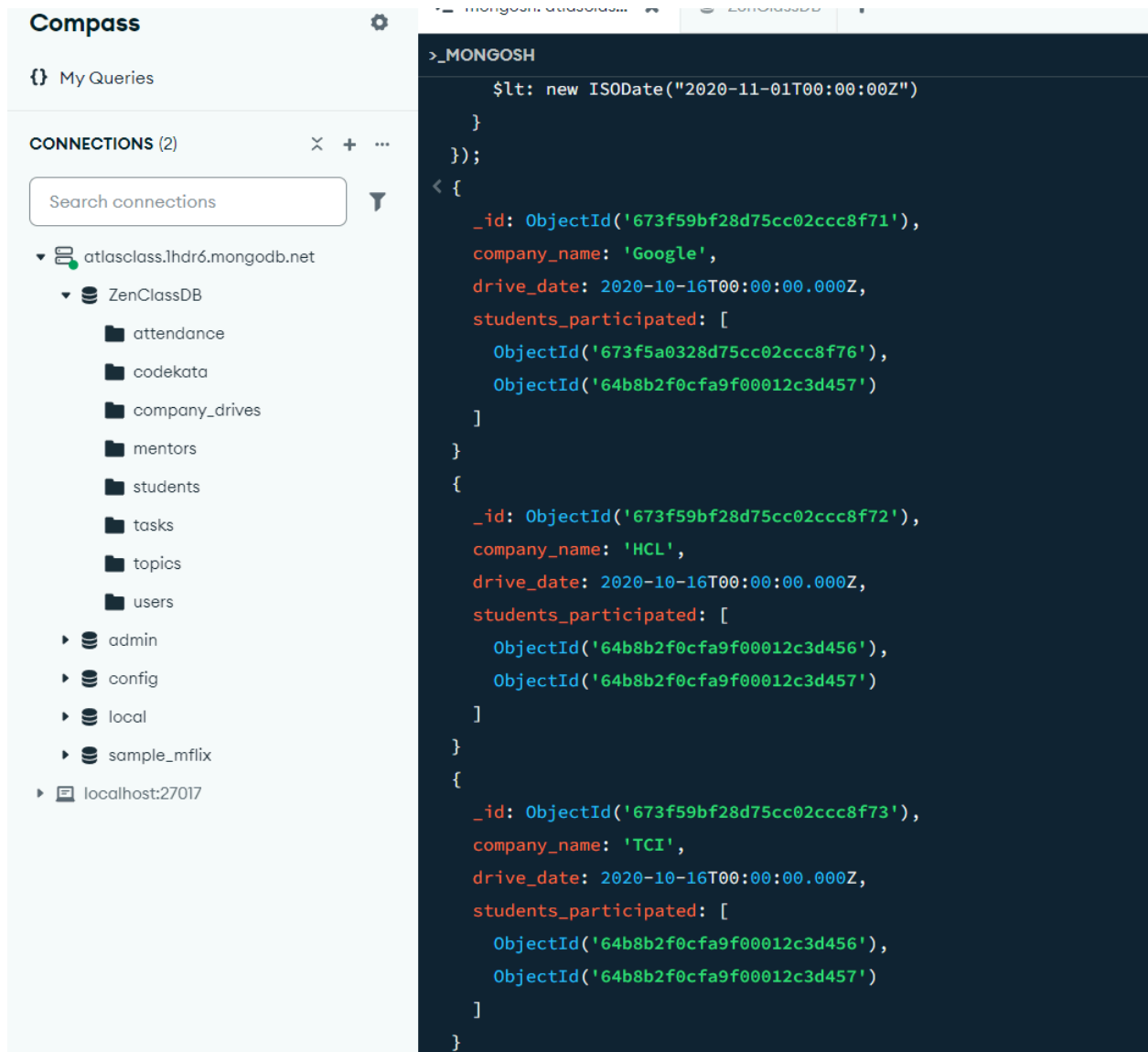
**MONGOSH**

```
> db.tasks.find({
  date: {
    $gte: new ISODate("2020-10-01T00:00:00Z"),
    $lt: new ISODate("2020-11-01T00:00:00Z")
  }
}).pretty();
< {
  _id: ObjectId('673f596428d75cc02ccc8f5f'),
  task_name: 'HTML/CSS Landing Page Task',
  date: 2020-10-15T00:00:00.000Z,
  tech_used: 'HTML & CSS'
}
{
  _id: ObjectId('673f596428d75cc02ccc8f60'),
  task_name: 'Create Landing Page',
  date: 2020-10-17T00:00:00.000Z,
  tech_used: 'HTML, CSS, Tailwind CSS'
}
{
  _id: ObjectId('673f596428d75cc02ccc8f61'),
  task_name: 'Mini Project',
  date: 2020-10-21T00:00:00.000Z,
  tech_used: 'HTML, CSS, JavaScript'
}
{
  _id: ObjectId('673f596428d75cc02ccc8f62'),
  task_name: 'Todo App',
  date: 2020-10-28T00:00:00.000Z,
```

2. Find all the company drives that appeared between 15 Oct 2020 and 31 Oct 2020.

```
db.company_drives.find({
  drive_date: {
    $gte: new ISODate("2020-10-15T00:00:00Z"),
    $lt: new ISODate("2020-11-01T00:00:00Z")
  }
});
```





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

```
db.company_drives.aggregate([
  {
    $lookup: {
      from: "users", // The name of the collection where student data is stored
      localField: "students_participated", // The field in the Company Drives collection
      foreignField: "_id", // The field in the User collection to match
      as: "students" // Alias for the matched students
    }
  },
  {
```

```

$project: {
  company_name: 1, // Display the company name
  drive_date: 1, // Display the drive date
  students: { // Display the list of students who participated
    name: 1,
    email: 1
  }
}
}
}
});

```

The screenshot displays the MongoDB Compass interface on the left and the Mongosh terminal on the right.

**Compass Interface:**

- Connections:** Shows a connection to `atlasclass.1hdr6.mongodb.net` with a database named `ZenClassDB`.
- Database Structure:** Lists collections including `attendance`, `codekata`, `company_drives`, `mentors`, `students`, `tasks`, `topics`, `users`, `admin`, `config`, `local`, and `sample_mflix`.

**Mongosh Terminal:**

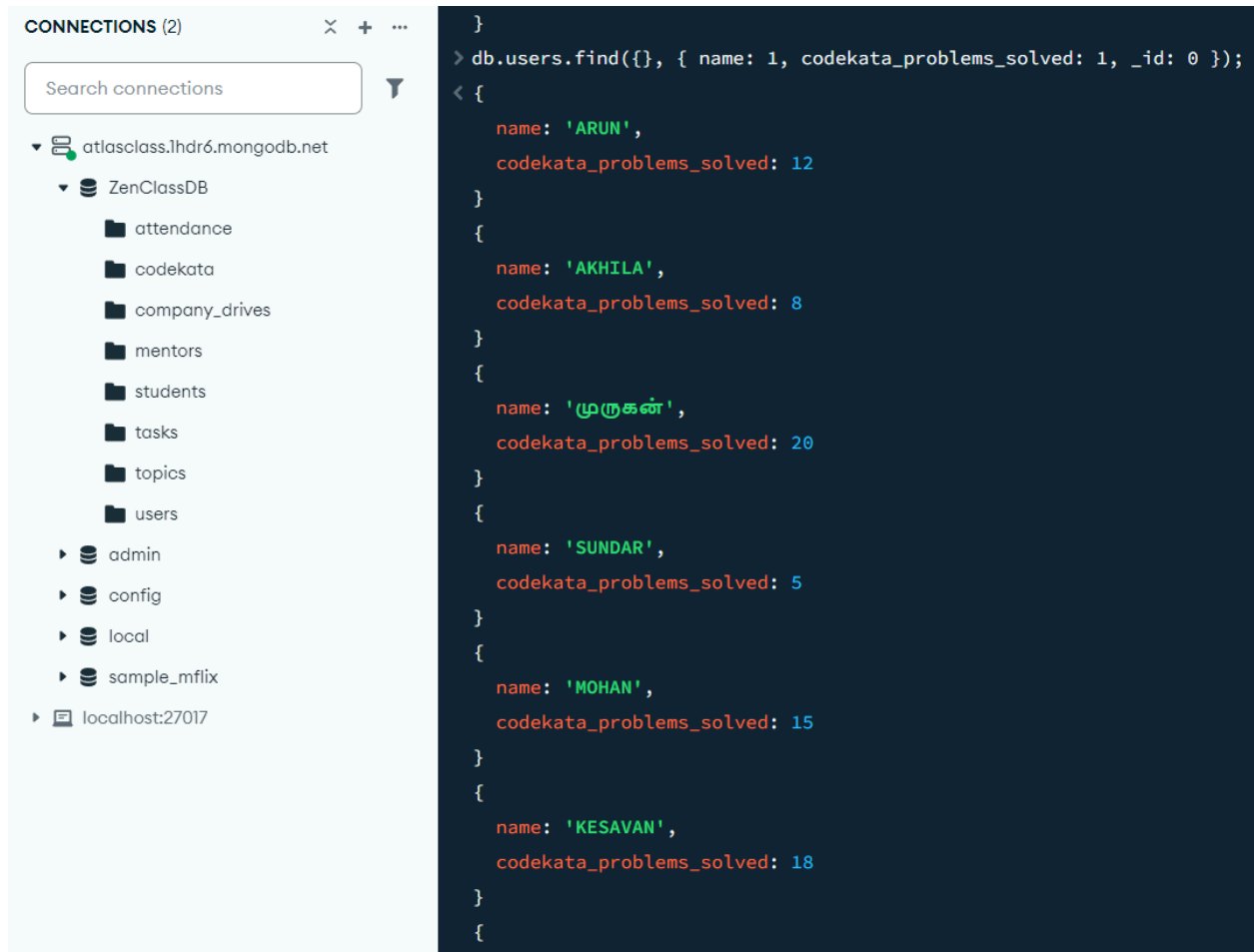
```

>_MONGOSH
]);
< {
  _id: ObjectId('674313528bfe9e14ff6fd47b'),
  company_name: 'Google',
  drive_date: 2020-10-28T00:00:00.000Z,
  students: [
    {
      name: 'முருகன்',
      email: 'murugan@example.com'
    },
    {
      name: 'ARUN',
      email: 'arun@example.com'
    },
    {
      name: 'AKHILA',
      email: 'akhila@example.com'
    },
    {
      name: 'SUNDAR',
      email: 'sundar@example.com'
    }
  ]
}
{
  _id: ObjectId('674313528bfe9e14ff6fd47c'),
  company_name: 'HCL',
  drive_date: 2020-10-16T00:00:00.000Z,
  students: [

```

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

```
db.users.find({}, { name: 1, codekata_problems_solved: 1, _id: 0 });
```



The screenshot shows the MongoDB Compass interface. On the left, the 'CONNECTIONS (2)' panel lists the connection 'atlasclass.1hdr6.mongodb.net' and the database 'ZenClassDB'. The 'codekata' collection is selected. On the right, the query editor shows the command: `> db.users.find({}, { name: 1, codekata_problems_solved: 1, _id: 0 });`. The results panel displays five documents:

name	codekata_problems_solved
'ARUN'	12
'AKHILA'	8
'முருகன்'	20
'SUNDAR'	5
'MOHAN'	15
'KESAVAN'	18

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

```
db.mentors.aggregate([
{
  $project: {
    name: 1,
    menteeCount: { $size: "$mentees" }
  }
})
```

```

    }
  },
  {
    $match: {
      menteeCount: { $gt: 15 }
    }
  }
]

```

```

    }
  > db.mentors.aggregate([
    {
      $project: {
        name: 1,
        menteeCount: { $size: "$mentees" }
      }
    },
    {
      $match: {
        menteeCount: { $gt: 15 }
      }
    }
  ])
< {
  _id: ObjectId('67431c018bfe9e14ff6fd4be'),
  name: 'Sureshbabu Vikraman',
  menteeCount: 16
}
Atlas atlas-ggnisl-shard-0 [primary] ZenClassDB>

```

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

```

db.users.aggregate([
  {
    $match: {
      "attendance.date": {
        $gte: new Date("2020-10-15T00:00:00.000Z"),
        $lte: new Date("2020-10-31T23:59:59.999Z")
      }
    }
  },
]

```

```

{
  $project: {
    attendance: 1,
    tasks: 1
  }
},
{
  $addFields: {
    absentStatus: {
      $in: ["absent", "$attendance.status"]
    },
    taskNotSubmitted: {
      $not: {
        $gt: [
          { $size: { $filter: { input: "$tasks", as: "task", cond: { $and: [{ $gte: ["$$task.date",
new Date("2020-10-15T00:00:00.000Z")] }, { $lte: ["$$task.date", new
Date("2020-10-31T23:59:59.999Z")] }] } } } } },
          0
        ]
      }
    }
  },
{
  $match: {
    absentStatus: true,
    taskNotSubmitted: true
  }
},
{
  $count: "absentAndNotSubmittedCount"
}
])

```

Compass

My Queries

CONNECTIONS (2)

Search connections

atlasclass.1h4r6.mongodb.net

ZenClassDB

attendance

codekata

company\_drives

mentors

students

tasks

topics

users

admin

config

local

sample\_mflix

localhost:27017

mongosh. atlasclass...

Students

attend...

mentors

mongosh. u

>\_MONGOSH

```
,
},
{
  $addField: {
    absentStatus: {
      $in: ["absent", "$attendance.status"]
    },
    taskNotSubmitted: {
      $not: {
        $gt: [
          { $size: { $filter: { input: "$tasks", as: "task", cond:
0
          ]
        }
      }
    }
  },
  {
    $match: {
      absentStatus: true,
      taskNotSubmitted: true
    }
  },
  {
    $count: "absentAndNotSubmittedCount"
  }
])
< {
  absentAndNotSubmittedCount: 1
}
```