Zen Class Model

Task:

Design database for Zen class programme

Users

Codekata

Attendance

Topics

Tasks

company_drives

Mentors

Queries:

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

Database: zenclassmodel

Collections:

Users:

[
  {
    "_id": ObjectId ("614d76a11e0a6864e1d41f18"),

    "id": 1,

    "studentName": "Student 1",

    "email": "student1@gmail.com",

    "password": "hashedpassword",

    "batch": "B25g",

```
"portfolio": "student1.com",
"codekata": [
    {
        "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),
        "questionId": "1",
        "userOutput": [
            "line1",
            "line2"
        ]
    },
    {
        "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),
        "questionId": "2",
        "userOutput": [
            "line1",
            "line2"
        ]
    },
    {
        "topicId": ObjectId("614d6e1c1e0a6864e1d41f0e"),
        "questionId": "1",
        "userOutput": [
            "line1",
            "line2"
        ]
    }
],
"codekataSolvedCount": 3,
"tasks": [
    {
```

```
      "taskId": ObjectId("614d6aa71e0a6864e1d41ef9"),

      "sourceCodeUrl": "github.com/student1/task-1",

      "deployedUrl": "task1.netlify.app",

      "submittedOn": ISODate("2020-10-01T00:00:00.000Z")

    },

    {

      "taskId": ObjectId("614d6aa71e0a6864e1d41efa"),

      "sourceCodeUrl": "github.com/student1/task-2",

      "deployedUrl": "task2.netlify.app",

      "submittedOn": ISODate("2020-10-16T00:00:00.000Z")

    },

    {

      "taskId": ObjectId("614d6aa71e0a6864e1d41efb"),

      "sourceCodeUrl": "github.com/student1/task-3",

      "deployedUrl": "task3.netlify.app",

      "submittedOn": ISODate("2020-10-20T00:00:00.000Z")

    },

    {

      "taskId": ObjectId("614d6aa71e0a6864e1d41efc"),

      "sourceCodeUrl": "github.com/student1/task-4",

      "deployedUrl": "task4.netlify.app",

      "submittedOn”: ISODate("2020-10-25T00:00:00.000Z")

    }

  ]

},

{

  "_id": ObjectId("614d76a11e0a6864e1d41f19"),

  "id": 2,

  "studentName": "Student 2",

  "email": "student2@gmail.com",
```

"password": "hashedpassword",

"batch": "B25g",

"portfolio": "student2.com",

"codekata": [

   {

      "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),

      "questionId": "1",

      "userOutput": [

         "line1",

         "line2"

     ]

   },

   {

      "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),

      "questionId": "2",

      "userOutput": [

         "line1",

         "line2"

     ]

   }

],

"codekataSolvedCount": 2,

"tasks": [

   {

      "taskId": ObjectId("614d6aa71e0a6864e1d41ef9"),

      "sourceCodeUrl": "github.com/student2/task-1",

      "deployedUrl": "task1.netlify.app",

      "submittedOn": ISODate("2020-10-10T00:00:00.000Z")

   },

   {

          "taskId": ObjectId("614d6aa71e0a6864e1d41efa"),

          "sourceCodeUrl": "github.com/student2/task-2",

          "deployedUrl": "task2.netlify.app",

          "submittedOn": ISODate("2020-10-20T00:00:00.000Z")

        },

        {

          "taskId": ObjectId("614d6aa71e0a6864e1d41efc"),

          "sourceCodeUrl": "github.com/student2/task-3",

          "deployedUrl": "task3.netlify.app",

          "submittedOn": ISODate("2020-10-28T00:00:00.000Z")

        }

      ]

    },

    {

      "_id": ObjectId("614d76a11e0a6864e1d41f1a"),

      "id": 3,

      "studentName": "Student 3",

      "email": "student3@gmail.com",

      "password": "hashedpassword",

      "batch": "B25g",

      "portfolio": "student3.com",

      "codekata": [

        {

          "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),

          "questionId": "1",

          "userOutput": [

            "line1",

            "line2"

          ]

        }

        ],

        "codekataSolvedCount": 1,

        "tasks": [

            {

                "taskId": ObjectId("614d6aa71e0a6864e1d41ef9"),

                "sourceCodeUrl": "github.com/student3/task-1",

                "deployedUrl": "task1.netlify.app",

                "submittedOn”: ISODate("2020-10-13T00:00:00.000Z")

            }

        ]

    },

    {

        "_id": ObjectId("614d76a11e0a6864e1d41f1b"),

        "id": 4,

        "studentName": "Student 4",

        "email": "student4@gmail.com",

        "password": "hashedpassword",

        "batch": "B25g",

        "portfolio": "student4.com",

        "codekata": [

            {

                "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),

                "questionId": "1",

                "userOutput": [

                    "line1",

                    "line2"

                ]

            },

            {

                "topicId": ObjectId("614d6e1c1e0a6864e1d41f0d"),

```
        "questionId": "2",
        "userOutput": [
            "line1",
            "line2"
        ]
    },
    {
        "topicId": ObjectId("614d6e1c1e0a6864e1d41f0e"),
        "questionId": "1",
        "userOutput": [
            "line1",
            "line2"
        ]
    }
],
"codekataSolvedCount": 3,
"tasks": [
    {
        "taskId": ObjectId("614d6aa71e0a6864e1d41efa"),
        "sourceCodeUrl": "github.com/student4/task-1",
        "deployedUrl": "task1.netlify.app",
        "submittedOn": ISODate("2020-10-18T00:00:00.000Z")
    },
    {
        "taskId": ObjectId("614d6aa71e0a6864e1d41efb"),
        "sourceCodeUrl": "github.com/student4/task-2",
        "deployedUrl": "task2.netlify.app",
        "submittedOn": ISODate("2020-10-25T00:00:00.000Z")
    },
    {
```

              "taskId": ObjectId("614d6aa71e0a6864e1d41efc"),

              "sourceCodeUrl": "github.com/student4/task-3",

              "deployedUrl": "task3.netlify.app",

              "submittedOn": ISODate("2020-10-28T00:00:00.000Z")

          }

      ]

  }

]

Codekata:

[

  {

      "_id": ObjectId("614d6e1c1e0a6864e1d41f0d"),

      "id": 1,

      "title": "Input/Output",

      "questions": [

        {

            "questionId": 1,

            "question": "question-1",

            "inputDescription": "input description of question 1",

            "outputDescription": "Output description of question 1",

            "sampleInput": "sample input for question 1",

            "sampleOutput": "sample output for question 1"

        },

        {

            "questionId": 2,

            "question": "question-2",

            "inputDescription": "input description of question 2",

            "outputDescription": "Output description of question 2",

            "sampleInput": "sample input for question 2",

            "sampleOutput": "sample output for question 2"

```json
        },
        {
          "questionId": 3,
          "question": "question-3",
          "inputDescription": "input description of question 3",
          "outputDescription": "Output description of question 3",
          "sampleInput": "sample input for question 3",
          "sampleOutput": "sample output for question 3"
        }
      ]
    },
    {
      "_id": ObjectId("614d6e1c1e0a6864e1d41f0e"),
      "id": 2,
      "title": "Arrays",
      "questions": [
        {
          "questionId": 1,
          "question": "question-1",
          "inputDescription": "input description of question 1",
          "outputDescription": "Output description of question 1",
          "sampleInput": "sample input for question 1",
          "sampleOutput": "sample output for question 1"
        },
        {
          "questionId": 2,
          "question": "question-2",
          "inputDescription": "input description of question 2",
          "outputDescription": "Output description of question 2",
          "sampleInput": "sample input for question 2",
```

```
          "sampleOutput": "sample output for question 2"
        },
        {
          "questionId": 3,
          "question": "question-3",
          "inputDescription": "input description of question 3",
          "outputDescription": "Output description of question 3",
          "sampleInput": "sample input for question 3",
          "sampleOutput": "sample output for question 3"
        }
      ]
    },
    {
      "_id": ObjectId("614d6e1c1e0a6864e1d41f0f"),
      "id": 3,
      "title": "Strings",
      "questions": [
        {
          "questionId": 1,
          "question": "question-1",
          "inputDescription": "input description of question 1",
          "outputDescription": "Output description of question 1",
          "sampleInput": "sample input for question 1",
          "sampleOutput": "sample output for question 1"
        },
        {
          "questionId": 2,
          "question": "question-2",
          "inputDescription": "input description of question 2",
          "outputDescription": "Output description of question 2",
```

```
          "sampleInput": "sample input for question 2",

          "sampleOutput": "sample output for question 2"

        },

        {

          "questionId": 3,

          "question": "question-3",

          "inputDescription": "input description of question 3",

          "outputDescription": "Output description of question 3",

          "sampleInput": "sample input for question 3",

          "sampleOutput": "sample output for question 3"

        }

      ]

    }

]
```

attendance:

```
[

    {

      "_id": ObjectId("614d7fc41e0a6864e1d41f28"),

      "id": 1,

      "batch": "B25-G",

      "classes": [

        {

          "id": 1,

          "date": ISODate("2020-09-28T00:00:00.000Z"),

          "sessionLink": "session-link",

          "recordingLink": "recording-link",

          "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

          "attendance": [

            ObjectId("614d76a11e0a6864e1d41f18"),

            ObjectId("614d76a11e0a6864e1d41f19"),
```

```json
      ObjectId("614d76a11e0a6864e1d41f1a"),

      ObjectId("614d76a11e0a6864e1d41f1b")

    ],

    "topicId": ObjectId("614d6c901e0a6864e1d41f03"),

    "taskId": ObjectId("614d6aa71e0a6864e1d41ef9")

  },

  {

    "id": 2,

    "date": ISODate("2020-10-01T00:00:00.000Z"),

    "sessionLink": "session-link",

    "recordingLink": "recording-link",

    "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

    "attendance": [

      ObjectId("614d76a11e0a6864e1d41f18"),

      ObjectId("614d76a11e0a6864e1d41f19"),

      ObjectId("614d76a11e0a6864e1d41f1b")

    ],

    "topicId": ObjectId("614d6c901e0a6864e1d41f04"),

    "taskId": ObjectId("614d6aa71e0a6864e1d41efa")

  },

  {

    "id": 3,

    "date": ISODate("2020-10-02T00:00:00.000Z"),

    "sessionLink": "session-link",

    "recordingLink": "recording-link",

    "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

    "attendance": [

      ObjectId("614d76a11e0a6864e1d41f18"),

      ObjectId("614d76a11e0a6864e1d41f1a"),

      ObjectId("614d76a11e0a6864e1d41f1b")
```

```
    ],
    "topicId": ObjectId("614d6c901e0a6864e1d41f05"),
    "taskId": ObjectId("614d6aa71e0a6864e1d41efb")
},
{
    "id": 4,
    "date": ISODate("2020-10-05T00:00:00.000Z"),
    "sessionLink": "session-link",
    "recordingLink": "recording-link",
    "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
    "attendance": [
        ObjectId("614d76a11e0a6864e1d41f18")
    ],
    "topicId": ObjectId("614d6c901e0a6864e1d41f06"),
    "taskId": ObjectId("614d6aa71e0a6864e1d41efc")
},
{
    "id": 5,
    "date": ISODate("2020-10-08T00:00:00.000Z"),
    "sessionLink": "session-link",
    "recordingLink": "recording-link",
    "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
    "attendance": [
        ObjectId("614d76a11e0a6864e1d41f18"),
        ObjectId("614d76a11e0a6864e1d41f19"),
        ObjectId("614d76a11e0a6864e1d41f1a"),
        ObjectId("614d76a11e0a6864e1d41f1b")
    ],
    "topicId": ObjectId("614d6c901e0a6864e1d41f07"),
    "taskId": ObjectId("614d6aa71e0a6864e1d41efd")
```

```
    },
    {
      "id": 6,
      "date": ISODate("2020-10-12T00:00:00.000Z"),
      "sessionLink": "session-link",
      "recordingLink": "recording-link",
      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
      "attendance": [
        ObjectId("614d76a11e0a6864e1d41f1a"),
        ObjectId("614d76a11e0a6864e1d41f1b")
      ],
      "topicId": ObjectId("614d6c901e0a6864e1d41f08"),
      "taskId": ObjectId("614d6aa71e0a6864e1d41efe")
    },
    {
      "id": 7,
      "date": ISODate("2020-10-15T00:00:00.000Z"),
      "sessionLink": "session-link",
      "recordingLink": "recording-link",
      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
      "attendance": [
        ObjectId("614d76a11e0a6864e1d41f18")
      ],
      "topicId": ObjectId("614d6c901e0a6864e1d41f09"),
      "taskId": ObjectId("614d6aa71e0a6864e1d41eff")
    },
    {
      "id": 8,
      "date": ISODate("2020-10-19T00:00:00.000Z"),
      "sessionLink": "session-link",
```

```
      "recordingLink": "recording-link",

      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

      "attendance": [

        ObjectId("614d76a11e0a6864e1d41f1b")

      ],

      "topicId": ObjectId("614d6c901e0a6864e1d41f0a"),

      "taskId": ObjectId("614d6aa71e0a6864e1d41f00")

  },

  {

      "id": 9,

      "date": ISODate("2020-10-21T00:00:00.000Z"),

      "sessionLink": "session-link",

      "recordingLink": "recording-link",

      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

      "attendance": [

        ObjectId("614d76a11e0a6864e1d41f18"),

        ObjectId("614d76a11e0a6864e1d41f19"),

        ObjectId("614d76a11e0a6864e1d41f1a"),

        ObjectId("614d76a11e0a6864e1d41f1b")

      ],

      "topicId": ObjectId("614d6c901e0a6864e1d41f0b"),

      "taskId": ObjectId("614d6aa71e0a6864e1d41f01")

  },

  {

      "id": 10,

      "date": ISODate("2020-10-23T00:00:00.000Z"),

      "sessionLink": "session-link",

      "recordingLink": "recording-link",

      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

      "attendance": [
```

```
        ObjectId("614d76a11e0a6864e1d41f19"),

        ObjectId("614d76a11e0a6864e1d41f1b")

      ],

      "topicId": ObjectId("614d6c901e0a6864e1d41f0c"),

      "taskId": ObjectId("614d6aa71e0a6864e1d41f02")

    },

    {

      "id": 11,

      "date": ISODate("2020-10-26T00:00:00.000Z"),

      "sessionLink": "session-link",

      "recordingLink": "recording-link",

      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

      "attendance": [

        ObjectId("614d76a11e0a6864e1d41f18"),

        ObjectId("614d76a11e0a6864e1d41f19"),

        ObjectId("614d76a11e0a6864e1d41f1b")

      ],

      "topicId": ObjectId("614d6c901e0a6864e1d41f0c"),

      "taskId": ObjectId("614d6aa71e0a6864e1d41f02")

    },

    {

      "id": 12,

      "date": ISODate("2020-10-28T00:00:00.000Z"),

      "sessionLink": "session-link",

      "recordingLink": "recording-link",

      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),

      "attendance": [

        ObjectId("614d76a11e0a6864e1d41f18"),

        ObjectId("614d76a11e0a6864e1d41f19"),

        ObjectId("614d76a11e0a6864e1d41f1a")
```

```
      ],
      "topicId": ObjectId("614d6c901e0a6864e1d41f0c"),
      "taskId": ObjectId("614d6aa71e0a6864e1d41f02")
  },
  {
      "id": 13,
      "date": ISODate("2020-10-31T00:00:00.000Z"),
      "sessionLink": "session-link",
      "recordingLink": "recording-link",
      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
      "attendance": [
          ObjectId("614d76a11e0a6864e1d41f18"),
          ObjectId("614d76a11e0a6864e1d41f1b")
      ],
      "topicId": ObjectId("614d6c901e0a6864e1d41f0c"),
      "taskId": ObjectId("614d6aa71e0a6864e1d41f02")
  },
  {
      "id": 14,
      "date": ISODate("2020-11-01T00:00:00.000Z"),
      "sessionLink": "session-link",
      "recordingLink": "recording-link",
      "mentorId": ObjectId("614d79421e0a6864e1d41f1c"),
      "attendance": [
          ObjectId("614d76a11e0a6864e1d41f18"),
          ObjectId("614d76a11e0a6864e1d41f19"),
          ObjectId("614d76a11e0a6864e1d41f1a")
      ],
      "topicId": ObjectId("614d6c901e0a6864e1d41f0c"),
      "taskId": ObjectId("614d6aa71e0a6864e1d41f02")
```

```
          }
       ]
    }
]
```

topics:

```
[
    {
       "_id": ObjectId("614d6c901e0a6864e1d41f03"),
       "id": 1,
       "title": "session title-1",
       "contents": "session contents-1",
       "pre-read": "pre-read session topics-1"
    },
    {
       "_id": ObjectId("614d6c901e0a6864e1d41f04"),
       "id": 2,
       "title": "session title-2",
       "contents": "session contents-2",
       "pre-read": "pre-read session topics-2"
    },
    {
       "_id": ObjectId("614d6c901e0a6864e1d41f05"),
       "id": 3,
       "title": "session title-3",
       "contents": "session contents-3",
       "pre-read": "pre-read session topics-3"
    },
    {
       "_id": ObjectId("614d6c901e0a6864e1d41f06"),
       "id": 4,
```

```json
      "title": "session title-4",

      "contents": "session contents-4",

      "pre-read": "pre-read session topics-4"

  },

  {

      "_id": ObjectId("614d6c901e0a6864e1d41f07"),

      "id": 5,

      "title": "session title-5",

      "contents": "session contents-5",

      "pre-read": "pre-read session topics-5"

  },

  {

      "_id": ObjectId("614d6c901e0a6864e1d41f08"),

      "id": 6,

      "title": "session title-6",

      "contents": "session contents-6",

      "pre-read": "pre-read session topics-6"

  },

  {

      "_id": ObjectId("614d6c901e0a6864e1d41f09"),

      "id": 7,

      "title": "session title-7",

      "contents": "session contents-7",

      "pre-read": "pre-read session topics-7"

  },

  {

      "_id": ObjectId("614d6c901e0a6864e1d41f0a"),

      "id": 8,

      "title": "session title-8",

      "contents": "session contents-8",
```

```
        "pre-read": "pre-read session topics-8"
    },
    {
        "_id": ObjectId("614d6c901e0a6864e1d41f0b"),
        "id": 9,
        "title": "session title-9",
        "contents": "session contents-9",
        "pre-read": "pre-read session topics-9"
    },
    {
        "_id": ObjectId("614d6c901e0a6864e1d41f0c"),
        "id": 10,
        "title": "session title-10",
        "contents": "session contents-10",
        "pre-read": "pre-read session topics-10"
    }
]
```

tasks:

```
[
    {
        "_id": ObjectId("614d6aa71e0a6864e1d41ef9"),
        "id": 1,
        "taskName": "task-1",
        "taskDescription": "task-1 description",
        "taskLink": "http://tasklink.com"
    },
    {
        "_id": ObjectId("614d6aa71e0a6864e1d41efa"),
        "id": 2,
        "taskName": "task-2",
```

```json
      "taskDescription": "task-2 description",

      "taskLink": "http://tasklink.com"

   },

   {

      "_id": ObjectId("614d6aa71e0a6864e1d41efb"),

      "id": 3,

      "taskName": "task-3",

      "taskDescription": "task-3 description",

      "taskLink": "http://tasklink.com"

   },

   {

      "_id": ObjectId("614d6aa71e0a6864e1d41efc"),

      "id": 4,

      "taskName": "task-4",

      "taskDescription": "task-4 description",

      "taskLink": "http://tasklink.com"

   },

   {

      "_id": ObjectId("614d6aa71e0a6864e1d41efd"),

      "id": 5,

      "taskName": "task-5",

      "taskDescription": "task-5 description",

      "taskLink": "http://tasklink.com"

   },

   {

      "_id": ObjectId("614d6aa71e0a6864e1d41efe"),

      "id": 6,

      "taskName": "task-6",

      "taskDescription": "task-6 description",

      "taskLink": "http://tasklink.com"
```

```
    },
    {
      "_id": ObjectId("614d6aa71e0a6864e1d41eff"),
      "id": 7,
      "taskName": "task-7",
      "taskDescription": "task-7 description",
      "taskLink": "http://tasklink.com"
    },
    {
      "_id": ObjectId("614d6aa71e0a6864e1d41f00"),
      "id": 8,
      "taskName": "task-8",
      "taskDescription": "task-8 description",
      "taskLink": "http://tasklink.com"
    },
    {
      "_id": ObjectId("614d6aa71e0a6864e1d41f01"),
      "id": 9,
      "taskName": "task-9",
      "taskDescription": "task-9 description",
      "taskLink": "http://tasklink.com"
    },
    {
      "_id": ObjectId("614d6aa71e0a6864e1d41f02"),
      "id": 10,
      "taskName": "task-10",
      "taskDescription": "task-10 description",
      "taskLink": "http://tasklink.com"
    }
]
```

company_drives:

```
[
  {
    "_id": ObjectId("614d7aa31e0a6864e1d41f21"),
    "id": 1,
    "companyName": "company 1",
    "date": ISODate("2020-10-14T00:00:00.000Z"),
    "studentsAttended": [
       ObjectId("614d76a11e0a6864e1d41f18"),
       ObjectId("614d76a11e0a6864e1d41f19"),
       ObjectId("614d76a11e0a6864e1d41f1a"),
       ObjectId("614d76a11e0a6864e1d41f1b")
    ]
  },
  {
    "_id": ObjectId("614d7aa31e0a6864e1d41f22"),
    "id": 2,
    "companyName": "company 2",
    "date": ISODate("2020-10-15T00:00:00.000Z"),
    "studentsAttended": [
       ObjectId("614d76a11e0a6864e1d41f19"),
       ObjectId("614d76a11e0a6864e1d41f1a"),
       ObjectId("614d76a11e0a6864e1d41f1b")
    ]
  },
  {
    "_id": ObjectId("614d7aa31e0a6864e1d41f23"),
    "id": 3,
    "companyName": "company 3",
    "date": ISODate("2020-10-17T00:00:00.000Z"),
```

```
    "studentsAttended": [

      ObjectId("614d76a11e0a6864e1d41f18"),

      ObjectId("614d76a11e0a6864e1d41f19"),

      ObjectId("614d76a11e0a6864e1d41f1a"),

    ]

},

{

    "_id": ObjectId("614d7aa31e0a6864e1d41f24"),

    "id": 4,

    "companyName": "company 4",

    "date": ISODate("2020-10-19T00:00:00.000Z"),

    "studentsAttended": [

      ObjectId("614d76a11e0a6864e1d41f18"),

      ObjectId("614d76a11e0a6864e1d41f19")

    ]

},

{

    "_id": ObjectId("614d7aa31e0a6864e1d41f25"),

    "id": 5,

    "companyName": "company 5",

    "date": ISODate("2020-10-24T00:00:00.000Z"),

    "studentsAttended": [

      ObjectId("614d76a11e0a6864e1d41f19"),

      ObjectId("614d76a11e0a6864e1d41f1a"),

    ]

},

{

    "_id": ObjectId("614d7aa31e0a6864e1d41f26"),

    "id": 6,

    "companyName": "company 6",
```

```
    "date": ISODate("2020-11-01T00:00:00.000Z"),

    "studentsAttended": [

        ObjectId("614d76a11e0a6864e1d41f18"),

        ObjectId("614d76a11e0a6864e1d41f19"),

        ObjectId("614d76a11e0a6864e1d41f1b")

    ]

  }

]
```

<u>mentors:</u>

```
[

  {

    "_id": ObjectId("614d79421e0a6864e1d41f1c"),

    "id": 1,

    "mentorName": "mentor-1",

    "email": "mentor1@gmail.com",

    "password": "hashedpassword",

    "menteesCount": 21

  },

  {

    "_id": ObjectId("614d79421e0a6864e1d41f1d"),

    "id": 2,

    "mentorName": "mentor-2",

    "email": "mentor2@gmail.com",

    "password": "hashedpassword",

    "menteesCount": 12

  },

  {

    "_id": ObjectId("614d79421e0a6864e1d41f1e"),

    "id": 3,
```

```
    "mentorName": "mentor-3",

    "email": "mentor3@gmail.com",

    "password": "hashedpassword",

    "menteesCount": 18

  },

  {

    "_id": ObjectId("614d79421e0a6864e1d41f1f"),

    "id": 4,

    "mentorName": "mentor-4",

    "email": "mentor4@gmail.com",

    "password": "hashedpassword",

    "menteesCount": 24

  },

  {

    "_id": ObjectId("614d79421e0a6864e1d41f20"),

    "id": 5,

    "mentorName": "mentor-5",

    "email": "mentor5@gmail.com",

    "password": "hashedpassword",

    "menteesCount": 12

  }

]
```

Queries:

Find all the topics and tasks which are thought in the month of October

```
db.attendance.aggregate ([

  {

    $match :{

      batch : "B25-G"

    }
```

```
    },
    {
      $lookup : {
        from:"tasks",
        localField:"classes.taskId",
        foreignField:"_id",
        as:"tasks"
      }
    },
    {
      $lookup:{
        from:"topics",
        localField: "classes.topicId",
        foreignField: "id",
        as:"topics"
      }
    },
    {
      $unwind : "$classes"
    },
    {
      $unwind : "$tasks"
    },
    {
      $unwind : "$topics"
    },
    {
      $group : {
        _id: {
          month: { $month: "$classes.date" },
```

```
        year: { $year: "$classes.date" }

      },

      topics : {

        $addToSet :"$topics.title"

      },

      tasks : {

        $addToSet : "$tasks.taskName"

      }

    }

  },

  {

    $match : {

      "_id.month": 10

    }

  }

]).pretty()
```

Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020

```
db.companydrives.aggregate ([

  {

    $group : {

      _id : {

        day : {$dayOfMonth : "$date"},

        month : {$month : "$date"},

        year : {$year : "$date"}

      },

      companyName : {

        $push : "$companyName"

      }

    }
```

```
    },
    {
      $match: {
        "_id.day": {$gte: 15, $lte: 31},
        "_id.month": 10,
        "_id.year": 2020
      }
    },
    {
      $project: {
        _id: 1,
        companyName: 1
      }
    }
])
```

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

```
db.companydrives.aggregate ([
  {
    $lookup:{
      from: "users",
      localField: "studentsAttended",
      foreignField:"_id",
      as: "students"
    }
  },
  {
    $unwind : "$students"
  },
  {
```

```
    $group: {

      _id: null,

      "students": {$addToSet: "$students.studentName" },

      "companyName": {$addToSet: "$companyName"}

    }

  },

  {

    $project: {

      _id: 0,

      students: 1,

      companyName: 1

    }

  }

]).pretty()
```

Find the number of problems solved by the user in codekata

```
db.users.find ({_id: ObjectId("614d76a11e0a6864e1d41f18")},{codekataSolvedCount :
1}).pretty()
```

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

```
db.mentor.find ({menteesCount: {$gt: 15}},{mentorName: 1, menteesCount: 1}).pretty()
```

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

```
let allStudentsID = db.users.find({}, {_id:1}).map((item) => item._id)

db.attendance.aggregate([

  {

    $match : {
```

```
                batch : "B25-G"
            }
        },
        {
            $unwind : "$classes"
        },
        {
            $lookup:{
                from:"users",
                localField:"classes.attendance",
                foreignField:"_id",
                as:"studentsAttendance"
            }
        },
        {
            $unwind : "$studentsAttendance"
        },
        {
            $match : {
                "classes.date" : {$gte : new ISODate("2020-10-15"),$lte : new ISODate("2020-10-
31")}
            }
        },
        {
            $group : {
                _id : {
                    day : {$dayOfMonth : "$classes.date"},
                    month : {$month : "$classes.date"},
                    year : {$year : "$classes.date"},
                },
                studentsPresent : {
```

```
            $addToSet : "$studentsAttendance._id"
        },
        tasksId : {
            $addToSet : "$classes.taskId"
        }
    }
},{
    $project : {
        _id : 1 ,
        studentsAbsent : {
            $setDifference : [allStudentsID,"$studentsPresent"]
        }
    }
}
]).pretty()
```