

MONGODB DAY_2

Design database for Zen class programme

Collection: Users{

```
"_id": ObjectId("user_id"),
"name": "string",
"email": "string",
"phone": "string",
"joined_date": ISODate("2004-09-21"),
"tasks_submitted": [
  {
    "task_id": ObjectId("task_id"),
    "submitted_date": ISODate("2020-10-15"),
    "status": "string"
  }
],
"attendance": [
  {
    "date": ISODate("2020-10-15"),
    "status": "string"
  }
]
}
```

Collection: CodeKata{

```
"_id": ObjectId("kata_id"),
"user_id": ObjectId("user_id"),
"problem_name": "string",
"problems_solved": "number",
"date": ISODate("2020-10-15")
}
```

Collection: Topics{

```
"_id": ObjectId("topic_id"),
"topic_name": "string",
"tasks": [
  {
    "task_id": ObjectId("task_id"),
```

```

    "task_name": "string"
  }
],
"date_taught": ISODate("2020-10-15")
}

```

```

Collection: CompanyDrives{
  "_id": ObjectId("drive_id"),
  "company_name": "string",
  "date": ISODate("2020-10-15"),
  "students_appeared": [
    ObjectId("user_id")
  ]
}

```

```

Collection: CompanyDrives{
  "_id": ObjectId("drive_id"),
  "company_name": "string",
  "date": ISODate("yyyy-mm-dd"),
  "students_appeared": [
    ObjectId("user_id")
  ]
}

```

```

Collection: Mentors{
  "_id": ObjectId("mentor_id"),
  "name": "string",
  "mentees": [
    ObjectId("user_id")
  ]
}

```

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

```

db.topics.find({
  "date_taught": {
    $gte: ISODate("2020-10-01T00:00:00Z"),
    $lt: ISODate("2020-11-01T00:00:00Z")
  }})

```

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

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

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

```
db.companydrives.find({}, {
  "company_name": 1,
  "students_appeared": 1
})
```

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

```
db.codekata.aggregate([
  { $match: { "user_id": ObjectId("user_id") } },
  { $group: { _id: "$user_id", total_solved: { $sum: "$problems_solved" } } }
])
```

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

```
db.mentors.find({
  "mentees": { $size: { $gt: 15 } }
})
```

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([
  { $unwind: "$attendance" },
  { $unwind: "$tasks_submitted" },
  {
    $match: {
      "attendance.date": { $gte: ISODate("2020-10-15T00:00:00Z"), $lt: ISODate("2020-11-01T00:00:00Z") },
      "attendance.status": "absent",
      "tasks_submitted.status": "not submitted"
    }
  },
  { $count: "absent_and_not_submitted" }])
```