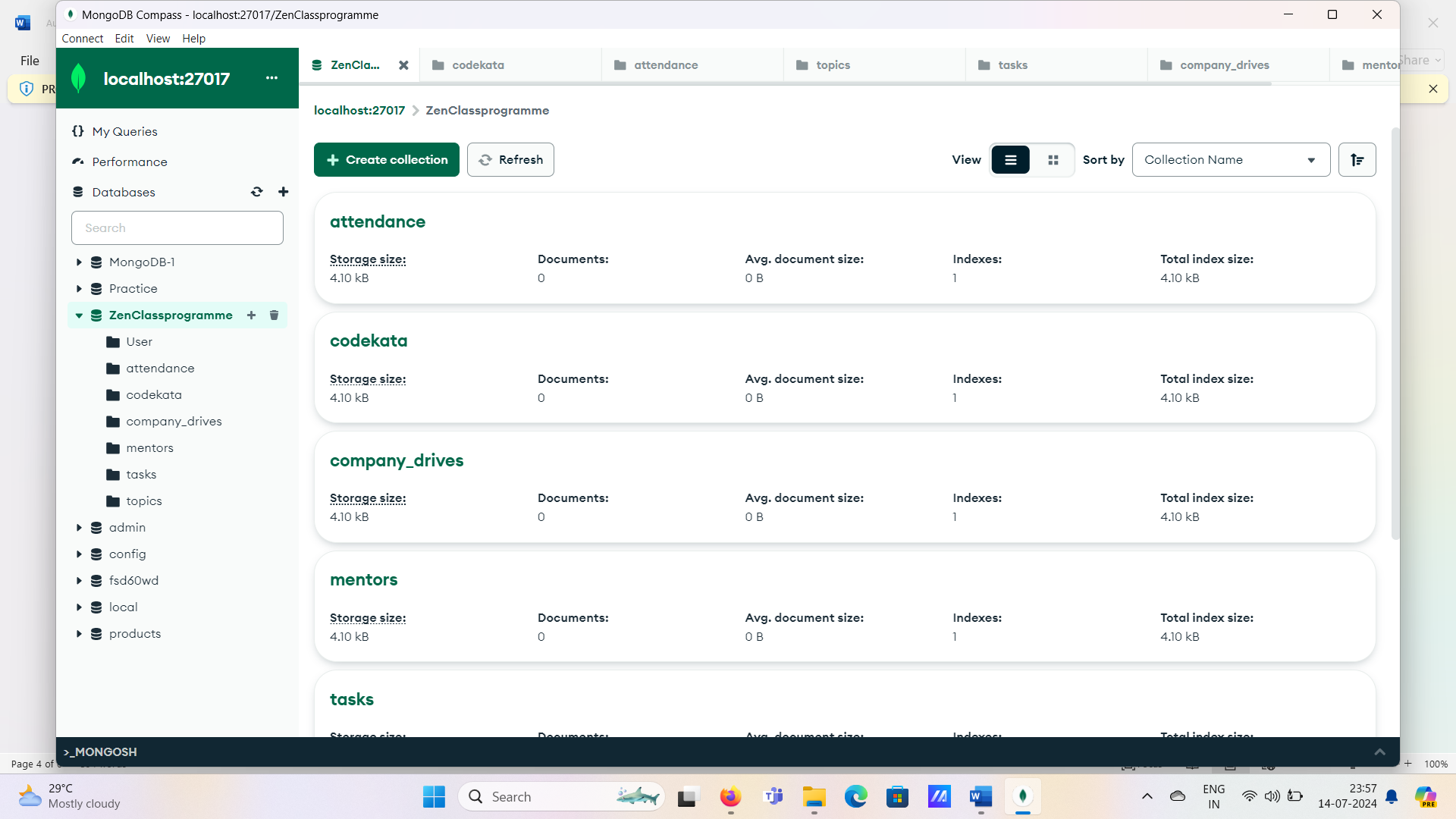
**Database for Zen Class Programme**



**Q1. Find all the topics and tasks which are thought in the month of October?**  
db.topics.aggregate([

{

$lookup: {

from: "tasks",

localField: "topic\_id",

foreignField: "topic\_id",

as: "task\_info"

}},

{$match: {

$and: [

{ topic\_date: { $gte: new Date("01 oct-2020"), $lt: new Date("01-nov-2020") } },

{

$or: [

{ "task\_info.due\_date": { $gte: new Date("01 oct-2020"), $lt: new Date("01-nov-2020") } },

{ "task\_info.due\_date": { $exists: false } }

]

}]

}},

{

$project: {

\_id: 0,

topic\_id: 1,

topic: 1,

topic\_date: 1,

tasks: "$task\_info.task",

due\_dates: "$task\_info.due\_date"

}}

])

**2)** **Find all the company drives** **which appeared between 15 oct-2020 and 31-oct-2020?**  
  
db.companydrives.find({

$or: [

{ drive\_date: { $gte: new Date("15 oct-2020") } },

{ drive\_date: { $lte: new Date("31-oct-2020") } }

]

})  
  
  
**3) Find all the company drives and students who are appeared for the placement?**  
  
db.company\_drives.aggregate([

{

$lookup: {

from: "users",

localField: "user\_id",

foreignField: "user\_id",

as: "user\_info"

}},

{

$project: {

\_id: 0,

company: 1,

drive\_date: 1,

students: "$user\_info"

}}

])

**4) Find the number of problems solved by the user in codekata?**  
  
db.codekata.aggregate([

{

$lookup: {

from: "users",

localField: "user\_id",

foreignField: "user\_id",

as: "user\_info"

}},

{

$group: {

\_id: {

user\_id: "$user\_id",

user\_name: "$user\_info.name"

},

total\_problems\_solved: { $sum: "$problems" }

}},

{

$project: {

\_id: 0,

user\_id: "$\_id.user\_id",

user\_name: "$\_id.user\_name",

total\_problems\_solved: 1

}}

])

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

db.users.aggregate([

{

$match: { mentor\_id: { $exists: true } }

},

{

$group: {

\_id: "$mentor\_id",

mentor\_name: { $first: "$mentor\_name" },

mentee\_count: { $sum: 1 }

}},

{

$match: { mentee\_count: { $gt: 15 } }

},

{

$project: {

\_id: 0,

mentor\_id: "$\_id",

mentor\_name: 1,

mentee\_count: 1

}}

])

**6) Find the number of users who are absent and task is not submitted  between 15 oct-2020 and 31-oct-2020?**  
  
db.attendance.aggregate([

{

$lookup: {

from: "topics",

localField: "topic\_id",

foreignField: "topic\_id",

as: "topics"

}},

{

$lookup: {

from: "tasks",

localField: "topic\_id",

foreignField: "topic\_id",

as: "tasks"

}},

{

$match: {

attended: false,

"tasks\_submitted": false,

$and: [

{ "topics.topic\_date": { $gte: newDate("15-oct-2020") } },

{ "topics.topic\_date": { $lte: newDate("31-oct-2020") } },

{ "tasks.due\_date": { $gte: newDate("15-oct-2020") } },

{ "tasks.due\_date": { $lte: newDate("31-oct-2020") } }

]

}},

{$count: "No\_of\_students\_absent"}])