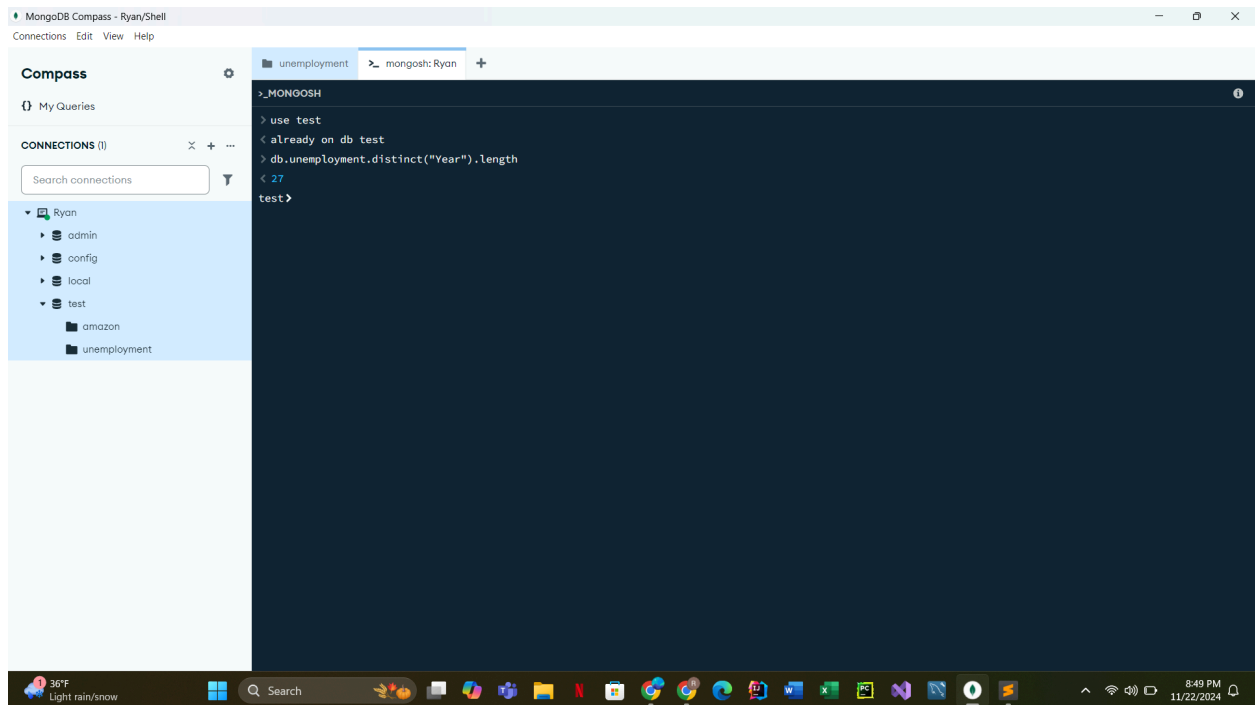


Title: DB Assignment 5

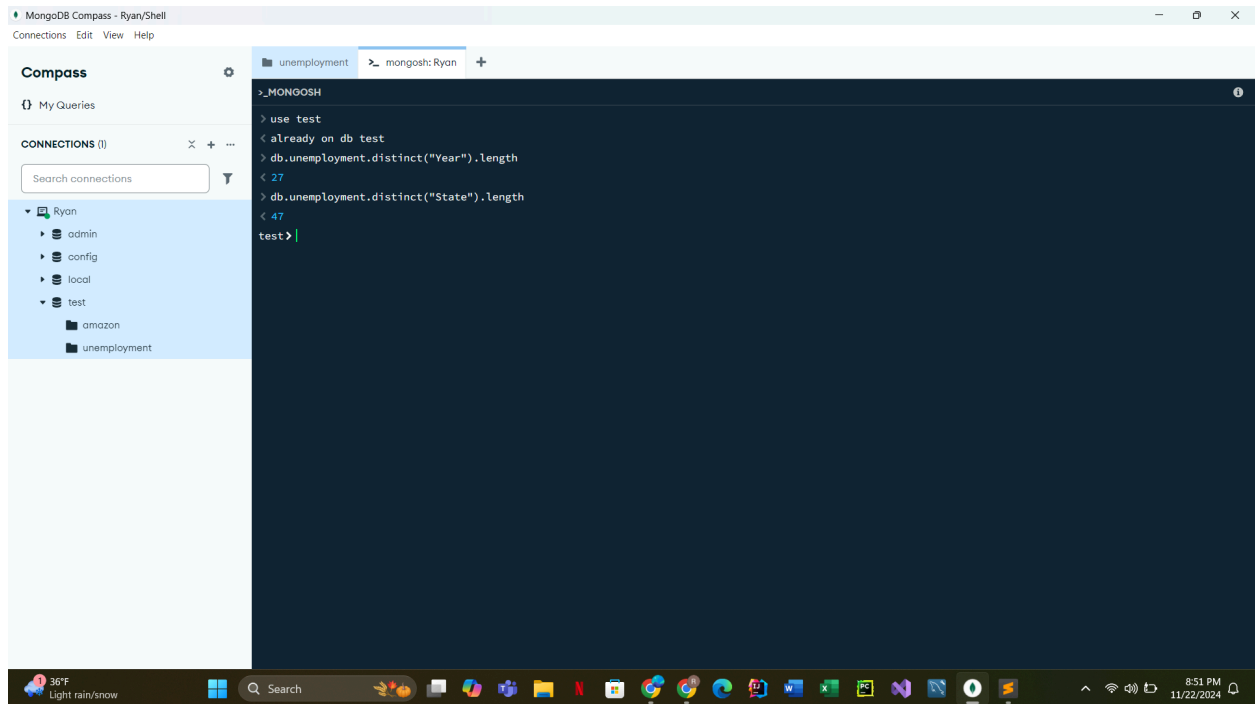
Your Name: Ryan Smith

Date: 11/22/2024

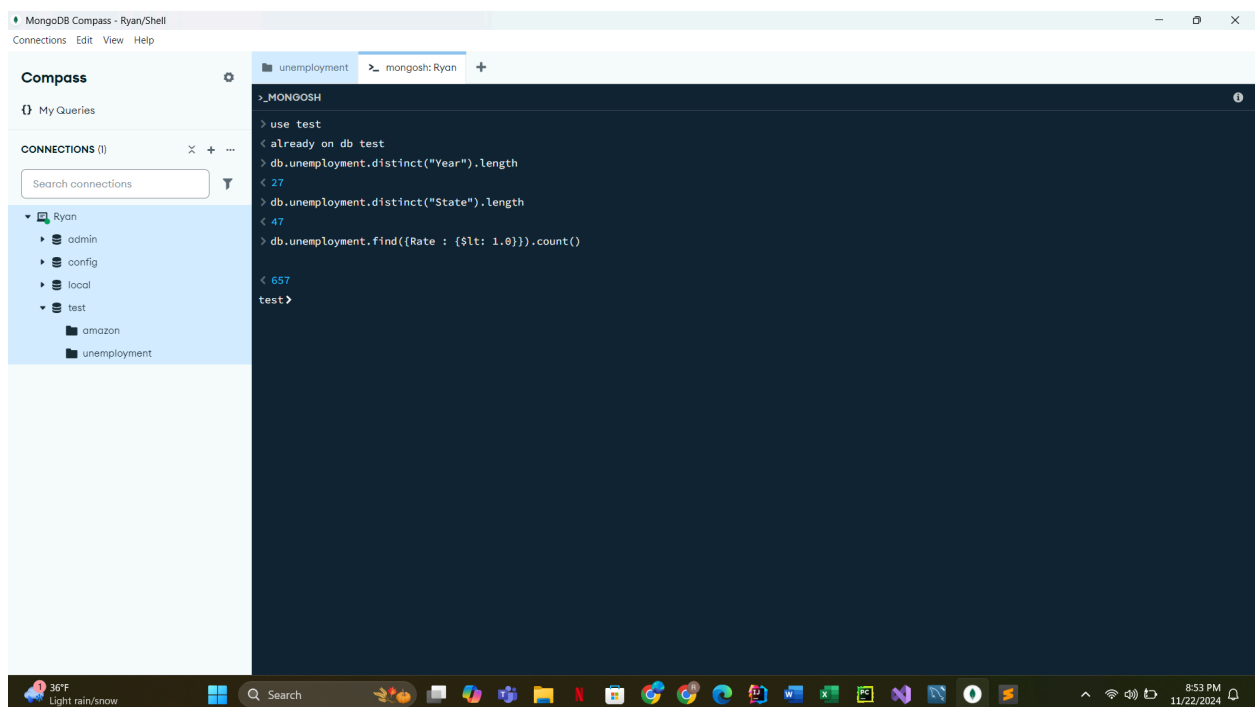
Github link: <https://github.com/rsmith1388/Databases.git>



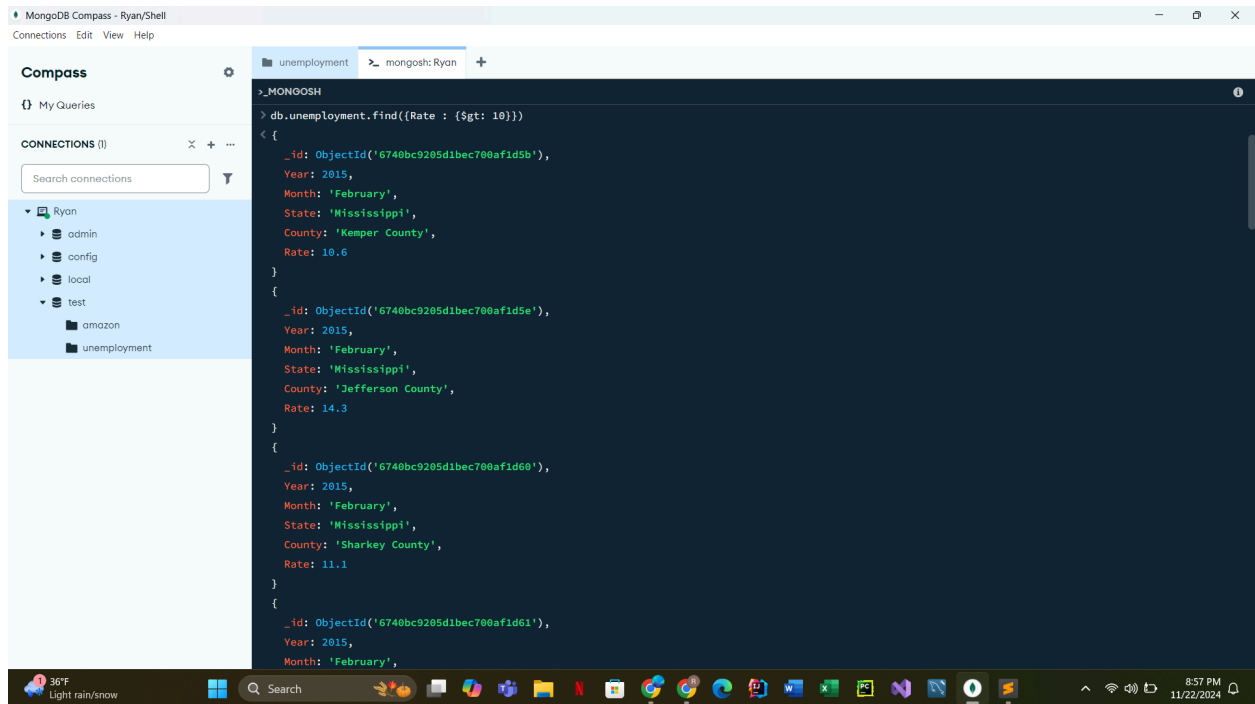
Query 1: This query counts the number of years where data was collected.



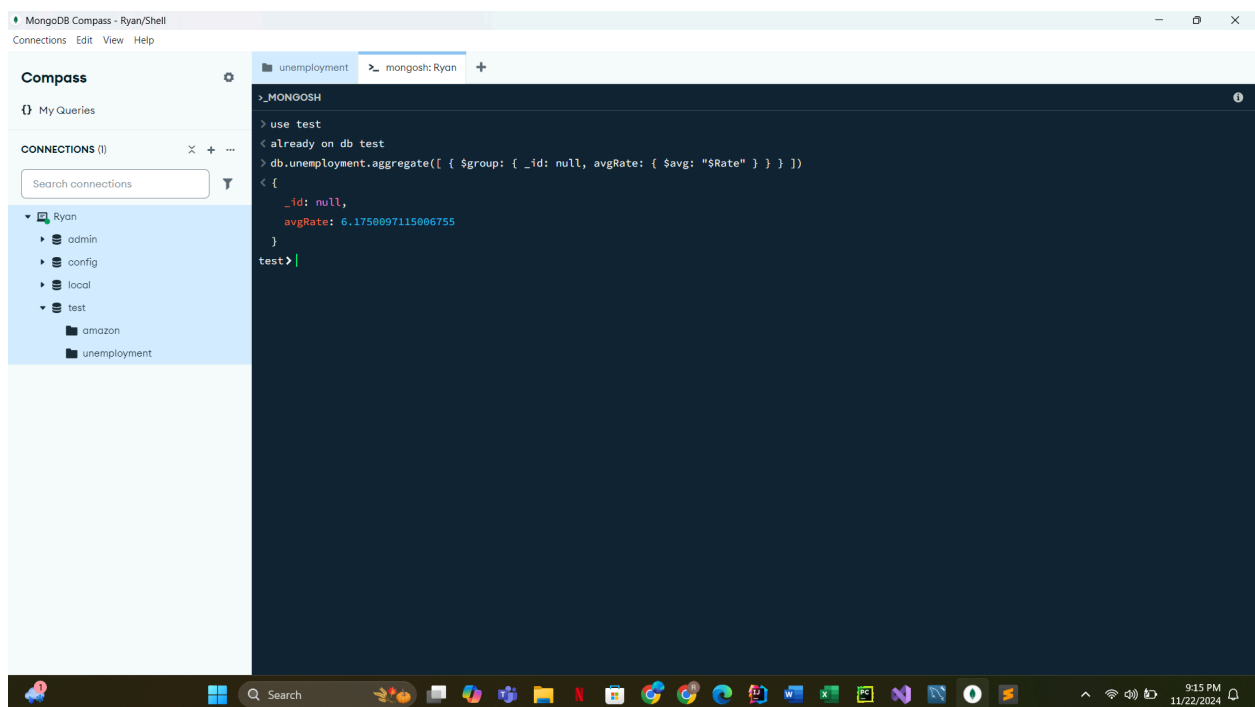
Query 2: Counts the number of states which were included in the dataset



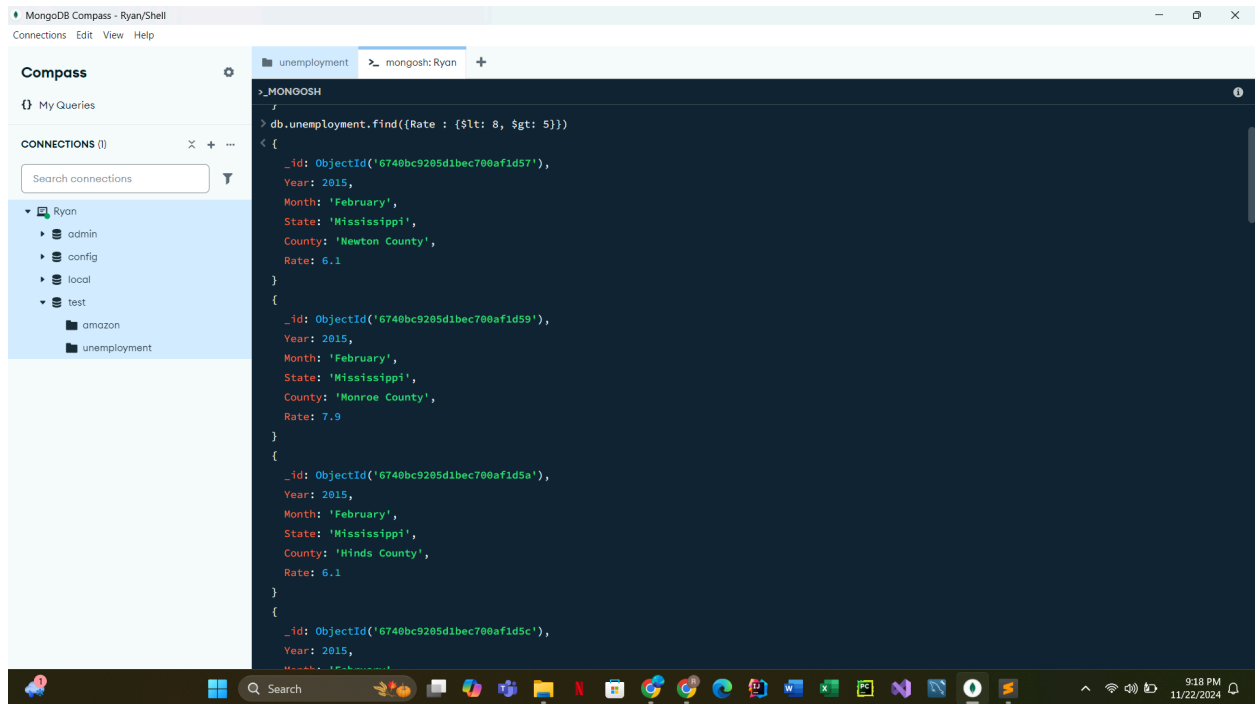
Query 3: Counts instances where the unemployment rate was less than 1%



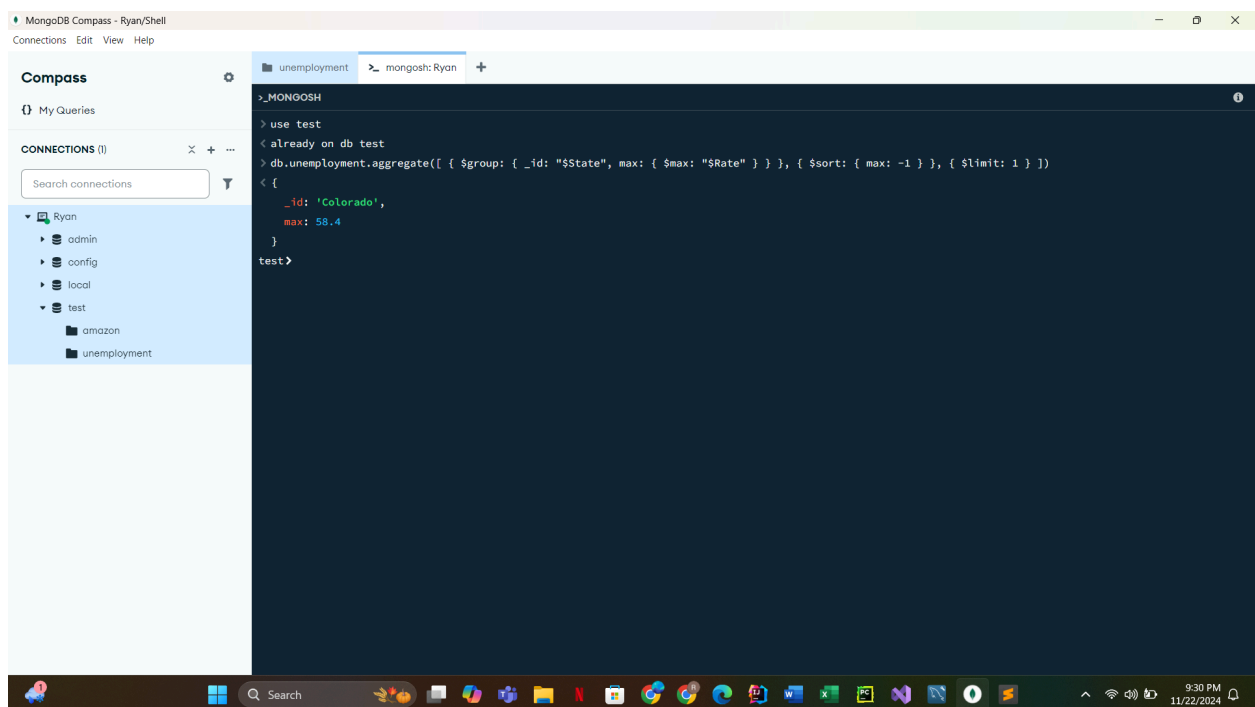
Query 4: Lists each county that had an unemployment rate higher than 10%



Query 5: Calculates the average unemployment rate among every state



Query 6: Lists all of the counties which had an unemployment rate between 5% and 8%



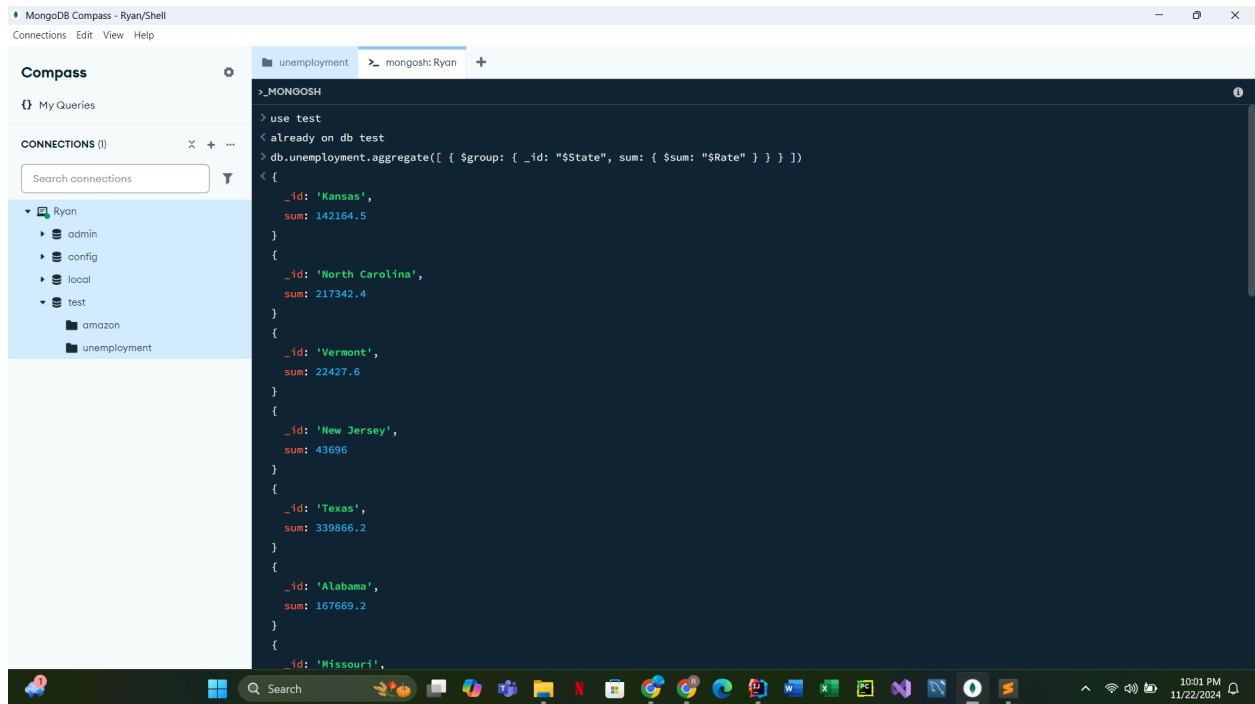
Query 7: Lists the state that has the highest unemployment rate

```
> use test
< already on db test
> db.unemployment.aggregate([ { $group: { _id: "$State", max: { $max: "$Rate" } } }, { $sort: { max: -1 } }, { $limit: 1 } ])
< {
  _id: 'Colorado',
  max: 58.4
}
> db.unemployment.find({Rate : { $gt: 5}}).count()
< 510173
test>
```

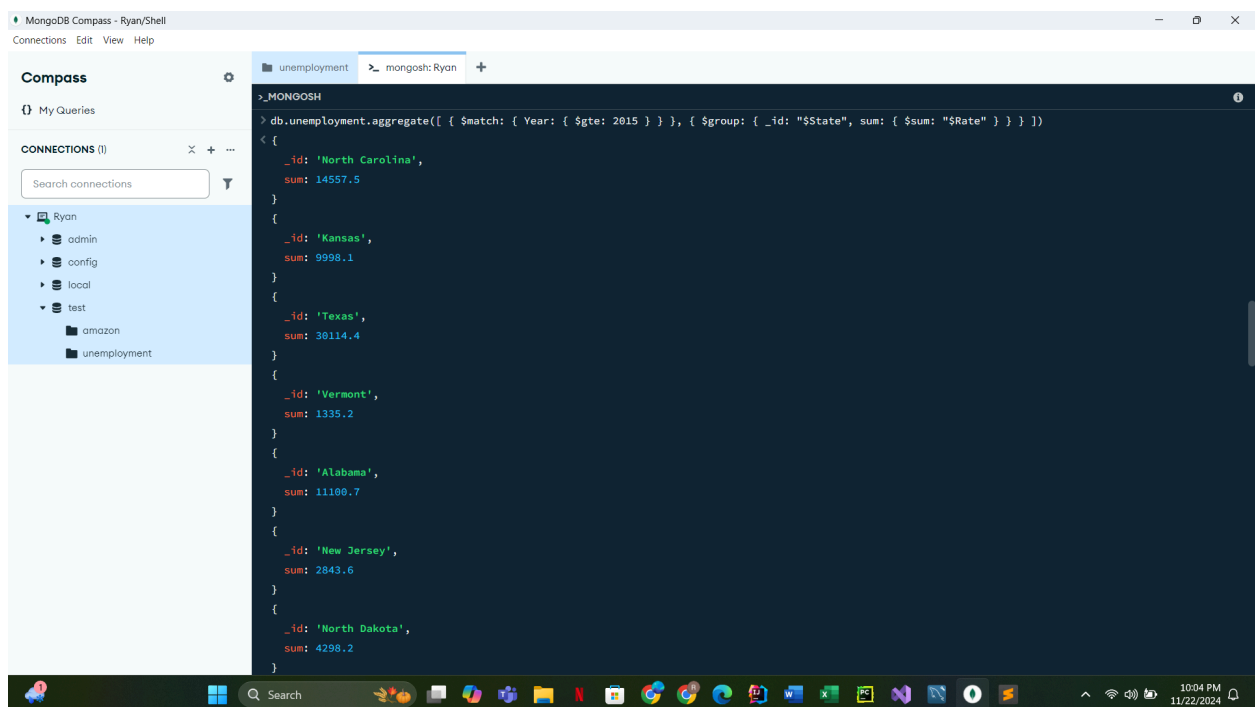
Query 8: This query returns the number of counties that had an unemployment rate higher than 5%

```
> db.unemployment.aggregate([ { $group: { _id: { State: "$State", Year: "$Year" }, avg: { $avg: "$Rate" } } } ])
< {
  _id: {
    State: 'California',
    Year: 1998
  },
  avg: 8.383448275862069
},
{
  _id: {
    State: 'Wisconsin',
    Year: 1995
  },
  avg: 4.796875
},
{
  _id: {
    State: 'Nebraska',
    Year: 1998
  },
  avg: 2.681451612903226
},
{
  _id: {
    State: 'New Mexico',
    Year: 2004
  },
  avg: 6.074494949494949
}
```

Query 9: This calculates the average unemployment rate of each state for each year in the dataset



Query 10: Calculates the sum total of all county unemployment rates in each state



Query 11: Calculate the sum total of all county unemployment rates in each state based on data from 2015 and on

