

Qn 1:

```
> db.companies.find({number_of_employees:{$gt:50}}, {name:1, _id:0}).toArray();
< [
  { name: 'Facebook' },
  { name: 'Twitter' },
  { name: 'Cisco' },
  { name: 'Yahoo!' },
  { name: 'Powerset' },
  { name: 'AddThis' },
  { name: 'OpenX' },
  { name: 'SmugMug' },
  { name: 'Ustream' },
  { name: 'Intel' },
  { name: 'KickApps' },
  { name: 'Slide' },
  { name: 'Meebo' },
  { name: 'LinkedIn' },
  { name: 'Conduit' },
  { name: 'oDesk' },
  { name: 'Simply Hired' },
  { name: 'Bazaarvoice' },
```

Qn:2

```
> db.companies.find({tag_list:{$regex:".*wiki*."}}, {name:1, _id:0}).toArray();
< [
  { name: 'GoLightly' },
  { name: 'Wikia' },
  { name: 'HiveLive' },
  { name: 'Atlassian' },
  { name: 'BrightSide Software' },
  { name: 'Wikimedia Foundation' },
  { name: 'WikiCity' }
]
gh22>
```

Qn:3

```
> db.companies.find( {$where:"this.funding_rounds.length>=3"},{name:1,_id:0})
< {
  name: 'Facebook'
}
{
  name: 'Twitter'
}
{
  name: 'Scribd'
}
{
  name: 'Slacker'
}
{
  name: 'Powerset'
}
{
  name: 'AddThis'
}
```

Qn:4

```
> db.companies.find({total_money_raised:{$regex:/^\${3-9}[0-9]\.[1-9]{1,2}[M,B]$/}}, {name:1,_id:0}).toArray()
< [
  { name: 'Slacker' },
  { name: 'OpenX' },
  { name: 'Veoh' },
  { name: 'Ustream' },
  { name: 'Jobster' },
  { name: 'iSkoot' },
  { name: 'PayScale' },
  { name: 'Kontera' },
  { name: 'Zopa' },
  { name: 'ContextWeb' },
  { name: 'ReachLocal' },
  { name: 'Thumbplay' },
  { name: 'AdMob' },
  { name: '4INFO' },
  { name: 'Clickable' },
  { name: 'Loudeye' },
  { name: 'Zillow' },
  { name: 'Eloqua' },
```

Qn:5

```

]
> db.companies.find({$and:[{category_code:"web"},{$or:[{number_of_employees:{$lt:50}, number_of_employees:{$eq:null}}]}], {name:1,_id:0}).toArray();
< [
  { name: 'Thoof' },
  { name: 'Info' },
  { name: 'Wesabe' },
  { name: 'Topix' },
  { name: 'TripUp' },
  { name: 'Zoomr' },
  { name: 'PlaceBlogger' },
  { name: 'coComment' },
  { name: 'RegOnline' },
  { name: 'Cyworld' },
  { name: 'Indeed' },
  { name: 'Cerado' },
  { name: 'Going' },
  { name: 'GoLightly' },
  { name: 'BZOIC' },
  { name: 'Phonezoo' },
  { name: 'Truemors' },
  { name: 'NowPublic' },

```

Qn:6

```

> db.companies.find({$or:[{deadpooled_year:1},{deadpooled_year:{$exists:false}}]}, {name:1,_id:0}).toArray()
< [ { name: 'CompanyWithAddress' }, { name: 'Kore.AI' } ]
ch22>

```

Qn:7

```

> db.companies.find({}, {name:1,_id:0,number_of_employees:1}).sort({number_of_employees:-1}).toArray();
< [
  { name: 'IBM', number_of_employees: 388000 },
  { name: 'Toyota', number_of_employees: 320000 },
  { name: 'PayPal', number_of_employees: 300000 },
  {
    name: 'Nippon Telegraph and Telephone Corporation',
    number_of_employees: 227000
  },
  { name: 'Samsung Electronics', number_of_employees: 221726 },
  { name: 'Tata Consultancy Services', number_of_employees: 200300 },
  { name: 'Flextronics International', number_of_employees: 200000 },
  { name: 'Sony', number_of_employees: 180500 },
  { name: 'LG', number_of_employees: 177000 },
  { name: 'Boeing', number_of_employees: 160000 },
  {
    name: 'Digital Equipment Corporation',
    number_of_employees: 140000
  },
  { name: 'Nokia', number_of_employees: 125000 },
  { name: 'Hewlett-Packard', number_of_employees: 107000 },

```

Qn:8

```

> db.companies.find({$and:[{twitter_username:{$ne:null}}, {twitter_username:{$ne:""}}, {twitter_username:{$exists:true}}]}).count()
< 2019
ch22>

```

Qn:9

```

> db.companies.insertOne({"name":"Kore.AI",
  "founded_year": 2004,
  "founded_month": 2,
  "founded_day": 1,
  "number_of_employees":3000,
  "Address":[{"City":"Chennai", State:"TamilNadu"}],
  "Contact":[{"Name":"Kannan",phone:8574894587, email:"kannan@gmail.com"}]
})
< {
  acknowledged: true,
  insertedId: ObjectId("6516ba30962150fd99bcc0b7")
}
> db.companies.find({name:"Kore.AI"});
< {
  _id: ObjectId("6516ba30962150fd99bcc0b7"),
  name: 'Kore.AI',
  founded_year: 2004,
  founded_month: 2,
  founded_day: 1,
  number_of_employees: 3000,
  Address: [

```

Qn:10

```

> db.companies.updateOne({name:"OmniDrive"},{$set:{contact:{name:"Omni", phone:9876548900, email:"omni@gmail.com"}}})
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

```

Qn: 11

```

> db.companies.updateMany({category_code:'network_hosting'},{$set:{category_code:'Software'}})
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 159,
  modifiedCount: 159,
  upsertedCount: 0
}
ch22> |

```

Qn:12

```
> db.companies.updateOne({name:"Kore.AI"},{$unset:{Contact:" "}})
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
ch22>
```

Qn:13

```
> db.companies.updateOne({_id:ObjectId("52cdef7f4bab8bd67529c6e6")}, {$inc:{number_of_employees:10}});
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

Qn:14

```
> db.companies.find({contacts:{$elemMatch:{name:"John"}}});
< {
  _id: ObjectId("64c0d98e5c231532f4928dd8"),
  name: 'CompanyWithAddress',
  address: {
    street: '123 Main Street',
    city: 'New York',
    country: 'USA'
  },
  contacts: [
    {
      name: 'John',
      email: 'john@example.com'
    },
    {
      name: 'Jane',
      email: 'jane@example.com'
    }
  ]
}
```

Qn:15

```
> db.companies.deleteMany({$or:[{number_of_employees:{$lt:50}},{number_of_employees:{$eq:null}}]})
< {
  acknowledged: true,
  deletedCount: 5052
}
```

Qn:16

```
> db.companies.deleteMany({created_at:{$lt:new Date(2022-1-1).toUTCString()}});
< {
  acknowledged: true,
  deletedCount: 458
}
```

Qn:17

```
> db.companies.deleteMany({$and:[{category_code:"web"},{$or:[{number_of_employees:{$lt:100}},{number_of_employees:{$eq:null}}]}})
< {
  acknowledged: true,
  deletedCount: 0
}
```

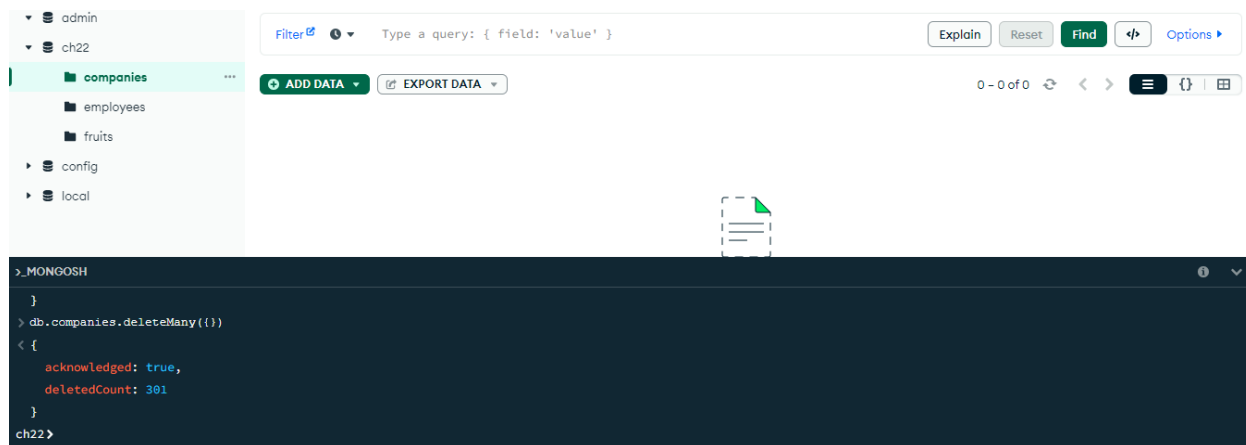
Qn:18

```
}
> db.companies.deleteOne({$and:[{category_code:"web"},{number_of_employees:{$eq:47}}]})
< {
  acknowledged: true,
  deletedCount: 0
}
ch22>
```

Qn:19

```
> db.companies.deleteOne({tag_list:{$regex:'media-platform'}},{name:1,_id:0})
< {
  acknowledged: true,
  deletedCount: 0
}
ch22>
```

Qn:20



The screenshot shows the MongoDB Compass web interface. On the left, a sidebar displays the database structure with collections: admin, ch22, companies (selected), employees, fruits, config, and local. The main area shows the 'companies' collection with 0 documents. A query bar at the top contains the text 'Type a query: { field: 'value' }'. Below the query bar are buttons for 'ADD DATA' and 'EXPORT DATA'. The bottom status bar shows '0 - 0 of 0' documents. A document icon is visible in the center of the main area.