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Web 335 - Assignment 6.2 - Aggregate Queries

List of documents in the 'houses' collection

List of documents in the 'students' collection


```
web-335 — mongosh mongodb+srv://<credentials>@cluste...
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.students.find()
[
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd4"),
    firstName: 'Albus',
    lastName: 'Dumbledore',
    studentId: 's1007',
    houseId: 'h1007'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd5"),
    firstName: 'Minerva',
    lastName: 'McGonagall',
    studentId: 's1008',
    houseId: 'h1007'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd6"),
    firstName: 'Hagrid',
    lastName: 'Rubeus',
    studentId: 's1009',
    houseId: 'h1007'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd7"),
    firstName: 'Bridget',
    lastName: 'Wenlock',
    studentId: 's1010',
    houseId: 'h1008'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd8"),
    firstName: 'Cedric',
    lastName: 'Diggory',
    studentId: 's1011',
    houseId: 'h1008'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd9"),
    firstName: 'Hannah',
    lastName: 'Abbott',
    studentId: 's1012',
    houseId: 'h1008'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fda"),
    firstName: 'Luna',
    lastName: 'Lovegood',
    studentId: 's1013',
    houseId: 'h1009'
  },
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fdb"),
    firstName: 'Sybill',
```

Query adding a new student to the 'students' collection


```
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.students.insertOne({"firstName"
:"William", "lastName":"Austin", "studentId":"s1019", "houseId":"h1010"})
{
  acknowledged: true,
  insertedId: ObjectId("64a0a26c1c6a4160d2b33fe0")
}
Atlas atlas-w2iu9b-shard-0 [primary] web335DB>
```

Query finding the document we just added

```
[Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.students.findOne({studentId:"s1
019"})
{
  _id: ObjectId("64a0a26c1c6a4160d2b33fe0"),
  firstName: 'William',
  lastName: 'Austin',
  studentId: 's1019',
  houseId: 'h1010'
}
Atlas atlas-w2iu9b-shard-0 [primary] web335DB>
```

Deleting the newly added document

```
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.students.deleteOne({lastName:"Austin"})
{ acknowledged: true, deletedCount: 1 }
```

Proving the document was deleted

```
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.students.find({houseId:'h1010'})
[
  {
    _id: ObjectId("64a0a06e1c6a4160d2b33fdd"),
    firstName: 'Lucius',
    lastName: 'Malfoy',
    studentId: 's1016',
    houseId: 'h1010'
  },
  {
    _id: ObjectId("64a0a06e1c6a4160d2b33fde"),
    firstName: 'Albus',
    lastName: 'Potter',
    studentId: 's1017',
    houseId: 'h1010'
  },
  {
    _id: ObjectId("64a0a0721c6a4160d2b33fdf"),
    firstName: 'Bellatrix',
    lastName: 'Lestrange',
    studentId: 's1018',
    houseId: 'h1010'
  }
]
```

Students listed by house

```
]
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.houses.aggregate([
...     {
...         $lookup:
...         {
...             from:"students",
...             localField: "houseId",
...             foreignField: "houseId",
...             as: "house"
...         }
...     }
... ])
[
    {
        _id: ObjectId("64a0a06d1c6a4160d2b33fd0"),
        mascot: 'Lion',
        founder: 'Godric Gryffindor',
        houseId: 'h1007',
        house: [
            {
                _id: ObjectId("64a0a06d1c6a4160d2b33fd4"),
                firstName: 'Albus',
                lastName: 'Dumbledore',
                studentId: 's1007',
                houseId: 'h1007'
            },
            {
                _id: ObjectId("64a0a06d1c6a4160d2b33fd5"),
                firstName: 'Minerva',
                lastName: 'McGonagall',
                studentId: 's1008',
                houseId: 'h1007'
            },
            {
                _id: ObjectId("64a0a06d1c6a4160d2b33fd6"),
                firstName: 'Hagrid',
                lastName: 'Rubeus',
                studentId: 's1009',
                houseId: 'h1007'
            }
        ]
    },
    {
        _id: ObjectId("64a0a06d1c6a4160d2b33fd1"),
        mascot: 'Badger',
        founder: 'Helga Hufflepuff',
        houseId: 'h1008',
        house: [
            {
                _id: ObjectId("64a0a06d1c6a4160d2b33fd7"),
                firstName: 'Bridget',
                lastName: 'Wenlock',
                studentId: 's1010',
                houseId: 'h1008'
            },
            {
                _id: ObjectId("64a0a06d1c6a4160d2b33fd8"),
                firstName: 'Cedric',
                lastName: 'Diggory',
                studentId: 's1011',
                houseId: 'h1008'
            },
            {
                }
            ]
        },
        {
            _id: ObjectId("64a0a06d1c6a4160d2b33fd2"),
            mascot: 'Eagle',
            founder: 'Rowena Ravenclaw',
            houseId: 'h1009',
            house: [
                {
                    _id: ObjectId("64a0a06d1c6a4160d2b33fda"),
                    firstName: 'Luna',
                    lastName: 'Lovegood',
                    studentId: 's1013',
                    houseId: 'h1009'
                },
                {
                    _id: ObjectId("64a0a06d1c6a4160d2b33fdb"),
                    firstName: 'Sybill',
                    lastName: 'Trelawney',
                    studentId: 's1014',
                    houseId: 'h1009'
                },
                {
                    _id: ObjectId("64a0a06d1c6a4160d2b33fdc"),
                    firstName: 'Cho',
                    lastName: 'Chang',
                    studentId: 's1015',
                    houseId: 'h1009'
                }
            ]
        },
        {
            _id: ObjectId("64a0a06d1c6a4160d2b33fd3"),
            mascot: 'Snake',
            founder: 'Salazar Slytherin',
            houseId: 'h1010',
            house: [
                {
                    _id: ObjectId("64a0a06e1c6a4160d2b33fdd"),
                    firstName: 'Lucius',
                    lastName: 'Malfoy',
                    studentId: 's1016',
                    houseId: 'h1010'
                },
                {
                    _id: ObjectId("64a0a06e1c6a4160d2b33fde"),
                    firstName: 'Albus',
                    lastName: 'Potter',
                    studentId: 's1017',
                    houseId: 'h1010'
                },
                {
                    _id: ObjectId("64a0a0721c6a4160d2b33fdf"),
                    firstName: 'Bellatrix',
                    lastName: 'Lestrange',
                    studentId: 's1018',
                    houseId: 'h1010'
                }
            ]
        }
]
Atlas atlas-w2iu9b-shard-0 [primary] web335DB>
```

A list of students who are in Gryffindor

```
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.houses.aggregate([
...     {
...         $lookup:
...         {
...             from:"students",
...             localField:"houseId",
...             foreignField:"houseId",
...             as: "house"
...         }
...     },
...     {
...         $match:
...         {"house.houseId": "h1007"}
...     }
... ])
[
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd0"),
[   mascot: 'Lion',
    founder: 'Godric Gryffindor',
    houseId: 'h1007',
    house: [
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fd4"),
        firstName: 'Albus',
        lastName: 'Dumbledore',
        studentId: 's1007',
        houseId: 'h1007'
      },
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fd5"),
        firstName: 'Minerva',
        lastName: 'McGonagall',
        studentId: 's1008',
        houseId: 'h1007'
      },
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fd6"),
        firstName: 'Hagrid',
        lastName: 'Rubeus',
        studentId: 's1009',
        houseId: 'h1007'
      }
    ]
  }
]
Atlas atlas-w2iu9b-shard-0 [primary] web335DB>
```

A list of students who have the Eagle as their mascot

```
Atlas atlas-w2iu9b-shard-0 [primary] web335DB> db.houses.aggregate([
...     {
...         $lookup:
...         {
...             from:"students",
...             localField:"houseId",
...             foreignField:"houseId",
...             as: "Eagles"
...         }
...     },
...     {
...         $match:
...         {"mascot": "Eagle"}
...     }
[... ])
[
  {
    _id: ObjectId("64a0a06d1c6a4160d2b33fd2"),
    mascot: 'Eagle',
    founder: 'Rowena Ravenclaw',
    houseId: 'h1009',
    Eagles: [
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fda"),
        firstName: 'Luna',
        lastName: 'Lovegood',
        studentId: 's1013',
        houseId: 'h1009'
      },
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fdb"),
        firstName: 'Sybill',
        lastName: 'Trelawney',
        studentId: 's1014',
        houseId: 'h1009'
      },
      {
        _id: ObjectId("64a0a06d1c6a4160d2b33fdc"),
        firstName: 'Cho',
        lastName: 'Chang',
        studentId: 's1015',
        houseId: 'h1009'
      }
    ]
  }
]
Atlas atlas-w2iu9b-shard-0 [primary] web335DB>
```