Ex.No.: 14	
Date: 18/10/2024	**MONGO DB**

1. WRITE A MONGODB QUERY TO FIND THE RESTAURANT ID, NAME, BOROUGH AND CUISINE FOR THOSERESTAURANTS WHICH PREPARED DISH EXCEPT 'AMERICAN' AND 'CHINEES' OR RESTAURANT'S NAME BEGINS WITH LETTER 'WIL'.

```
DB.RESTAURANTS.FIND(
  {
   $OR: [
     { CUISINE: { $NIN: ["AMERICAN", "CHINEES"] } },
     { NAME: { $REGEX: /^WIL/I } }
   ]
  },
  {
   RESTAURANT_ID: 1,
   NAME: 1,
   BOROUGH: 1,
   CUISINE: 1,
   _ID: 0
  }
);
```

```
>_MONGOSH                                                    ℹ
< {
    borough: 'Bronx',
    cuisine: 'Bakery',
    name: 'Morris Park Bake Shop',
    restaurant_id: '30075445'
  }
  {
    borough: 'Bronx',
    cuisine: 'Bakery',
    name: 'Morris Park Bake Shop',
    restaurant_id: 30075445
  }
  {
    borough: 'Bronx',
    cuisine: 'Italian',
    name: 'Pasta Palace',
    restaurant_id: 30075446
  }
  {
    borough: 'Manhattan',
    cuisine: 'Chinese',
    name: 'Dragon Wok',
    restaurant_id: 30075447
  }
```

2. WRITE A MONGODB QUERY TO FIND THE RESTAURANT ID, NAME, AND GRADES FOR THOSE RESTAURANTS WHICH ACHIEVED A GRADE OF "A" AND SCORED 11 ON AN ISODATE "2014-08-11T00:00:00Z" AMONG MANY OF SURVEY DATES..

```
DB.RESTAURANTS.FIND(
  {
    GRADES: {
      $ELEMMATC
        H: {GRADE:
        "A", SCORE:
        11
      }
    }
  },
  {
    RESTAURANT_ID: 1,
    NAME: 1,
    GRADES: 1,
    _ID: 0
  }
);
```

```
‹ {
    grades: [
      {
        date: 2014-03-03T00:00:00.003Z,
        grade: 'A',
        score: 3
      },
      {
        date: 2013-09-11T00:00:00.003Z,
        grade: 'A',
        score: 7
      },
      {
        date: 2013-01-24T00:00:00.003Z,
        grade: 'A',
        score: 11
      },
      {
        date: 2011-11-23T00:00:00.003Z,
        grade: 'A',
        score: 5
      },
      {
        date: 2011-03-10T00:00:00.003Z,
        grade: 'B',
        score: 13
      }
    ],
```

3. WRITE A MONGODB QUERY TO FIND THE RESTAURANT ID, NAME AND GRADES FOR THOSE RESTAURANTS WHERE THE 2ND ELEMENT OF GRADES ARRAY CONTAINS A GRADE OF "A" AND SCORE 9ON AN ISODATE "2014-08-11T00:00:00Z".

```
DB.RESTAURANTS.FIND(
  {
   "GRADES.1": {
    $ELEMMATC
     H: {GRADE:
     "A", SCORE:
     9
    }
   }
  },
  {
   RESTAURANT_ID: 1,
   NAME: 1,
   GRADES: 1,
   _ID: 0
  }
);
```

4. WRITE A MONGODB QUERY TO FIND THE RESTAURANT ID, NAME, ADDRESS AND GEOGRAPHICAL LOCATION FOR THOSE RESTAURANTS WHERE 2ND ELEMENT OF COORD ARRAY CONTAINS A VALUE WHICHIS MORE THAN 42 AND UPTO 52..

```
DB.RESTAURANTS.FIND(
  {
   "ADDRESS.COORD.1": { $GT: 42, $LTE: 52 }
  },
  {
   RESTAURANT_ID: 1,
   NAME: 1,
   ADDRESS: 1,
   _ID: 0
  }
);
```

5. WRITE A MONGODB QUERY TO ARRANGE THE NAME OF THE RESTAURANTS IN ASCENDING ORDERALONG WITH ALL THE COLUMNS.

DB.RESTAURANTS.FIND().SORT({

NAME: 1 });SAMPLE OUTPUT:-

```
{
 _ID:
 OBJECTID('671B5E6D56EC9972CA8F5DC4'
 ),ADDRESS: {
  BUILDING:
  5566,COORD:
  [
   -73.867377,
   40.854047
  ],
  STREET: '28TH
  AVENUE',ZIPCODE:
  10490
 },
 BOROUGH:
 'BRONX',
 CUISINE: 'BBQ',
 GRADES: [
  {
   DATE: 2014-03-03T00:00:00.028Z,
   GRADE:
   'A',
   SCORE:
   10
  },
  {
   DATE: 2013-09-11T00:00:00.028Z,
   GRADE:
   'A',
   SCORE: 7
  },
  {
   DATE: 2013-01-24T00:00:00.028Z,
   GRADE:
   'A',
   SCORE:
   11
  },
  {
```

    DATE: 2011-11-23T00:00:00.028Z,
    GRADE:
    'A',
    SCORE: 9
},
{
    DATE: 2011-03-10T00:00:00.028Z,
    GRADE: 'B',

```
      SCORE: 15
    }
  ],
  NAME: 'BBQ HAVEN',
  RESTAURANT_ID:
  30075473
}


{
  _ID:
  OBJECTID('671B5DAB56EC9972CA8F5DB0'
  ),ADDRESS: {
   BUILDING:
   5566,COORD:
   [
     -73.859377,
     40.850047
   ],
   STREET: '8TH
   AVENUE',ZIPCODE:
   10470
  },
  BOROUGH:
  'MANHATTAN',
  CUISINE: 'FRENCH',
  GRADES: [
   {
    DATE: 2014-03-03T00:00:00.008Z,
    GRADE:
    'A',
    SCORE: 7
   },
   {
    DATE: 2013-09-11T00:00:00.008Z,
    GRADE:
    'A',
    SCORE: 9
   },
   {
    DATE: 2013-01-24T00:00:00.008Z,
    GRADE:
    'A',
    SCORE:
    10
   },
   {
```

DATE: 2011-11-23T00:00:00.008Z,
GRADE:
'B',
SCORE:
15
},
{
DATE: 2011-03-10T00:00:00.008Z,

```
      GRADE:
      'A',
      SCORE: 6
    }
  ],
  NAME: 'BISTRO
  BELLE',
  RESTAURANT_ID:
  30075453
}
```

6. WRITE A MONGODB QUERY TO ARRANGE THE NAME OF THE RESTAURANTS IN DESCENDING ALONGWITH ALL THE COLUMNS.

DB.RESTAURANTS.FIND().SORT({ NAME: -1 });

SAMPLE OUTPUT

```
{
  _ID:
  OBJECTID('671B5E9456EC9972CA8F5DC8'
  ),ADDRESS: {
    BUILDING:
    9900,COORD:
    [
      -73.868977,
      40.854847
    ],
    STREET: '32ND
    AVENUE',ZIPCODE:
    10494
  },
  BOROUGH:
  'MANHATTAN',
  CUISINE: 'RUSSIAN',
  GRADES: [
    {
      DATE: 2014-03-03T00:00:00.032Z,
      GRADE:
      'A',
      SCORE:
      10
```

```
    },
    {
      DATE: 2013-09-11T00:00:00.032Z,
      GRADE:
     'B',
      SCORE: 5
    },
    {
```

```
      DATE: 2013-01-24T00:00:00.032Z,
      GRADE:
      'A',
      SCORE: 9
    },
    {
      DATE: 2011-11-23T00:00:00.032Z,
      GRADE:
      'A',
      SCORE: 8
    },
    {
      DATE: 2011-03-10T00:00:00.032Z,
      GRADE:
      'A',
      SCORE:
      11
    }
  ],
  NAME: "TSAR'S
  TABLE",
  RESTAURANT_ID:
  30075477
}


{
  _ID:
  OBJECTID('671B5E6D56EC9972CA8F5DBE'
  ),ADDRESS: {
    BUILDING:
    9900,COORD:
    [
      -73.864977,
      40.852847
    ],
    STREET: '22ND
    AVENUE',ZIPCODE:
    10484
  },
  BOROUGH:
  'BRONX',
  CUISINE:
  'ITALIAN',
  GRADES: [
    {
```

```
   DATE: 2014-03-03T00:00:00.022Z,
   GRADE:
   'A',
   SCORE: 8
 },
 {
   DATE: 2013-09-11T00:00:00.022Z,
   GRADE:
   'B',
   SCORE: 5
 },
```

```
{
  DATE: 2013-01-24T00:00:00.022Z,
  GRADE:
  'A',
  SCORE:
  12
},
{
  DATE: 2011-11-23T00:00:00.022Z,
  GRADE:
  'A',
  SCORE: 9
},
{
  DATE: 2011-03-10T00:00:00.022Z,
  GRADE:
  'A',
  SCORE:
  14
}
],
NAME: 'TRATTORIA
BELLA',
RESTAURANT_ID:
30075467
}
```

7. WRITE A MONGODB QUERY TO ARRANGE THE NAME OF THE CUISINE IN ASCENDING ORDER AND FORTHAT SAME CUISINE BOROUGH SHOULD BE IN DESCENDING ORDER.

```
DB.RESTAURANTS.FIND().SORT({ CUISINE: 1,

BOROUGH: -1 });SAMPLE OUTPUT:-

{
  _ID:
  OBJECTID('671B5D549D3D63480E0A64E9'),
  ADDRESS: {
  BUILDING:
  2233,COORD:
  [
```

         -73.858177,
          40.849447
        ],
         STREET: '5TH
         AVENUE',ZIPCODE:
         10467
       },
      BOROUGH:
      'BRONX', CUISINE:
      'AMERICAN',

```
GRADES: [
  {
    DATE: 2014-03-03T00:00:00.005Z,
    GRADE:
    'A',
    SCORE:
    10
  },
  {
    DATE: 2013-09-11T00:00:00.005Z,
    GRADE:
    'A',
    SCORE: 6
  },
  {
    DATE: 2013-01-24T00:00:00.005Z,
    GRADE:
    'B',
    SCORE:
    12
  },
  {
    DATE: 2011-11-23T00:00:00.005Z,
    GRADE:
    'A',
    SCORE: 9
  },
  {
    DATE: 2011-03-10T00:00:00.005Z,
    GRADE:
    'A',
    SCORE:
    14
  }
],
NAME: 'BURGER
BISTRO',
RESTAURANT_ID:
30075450
}

{
_ID:
OBJECTID('671B5E6D56EC9972CA8F5DC4'
),ADDRESS: {
  BUILDING:
  5566,COORD:
```

```
[
  -73.867377,
  40.854047
],
STREET: '28TH
AVENUE',ZIPCODE:
10490
},
BOROUGH:
'BRONX',
CUISINE: 'BBQ',
```
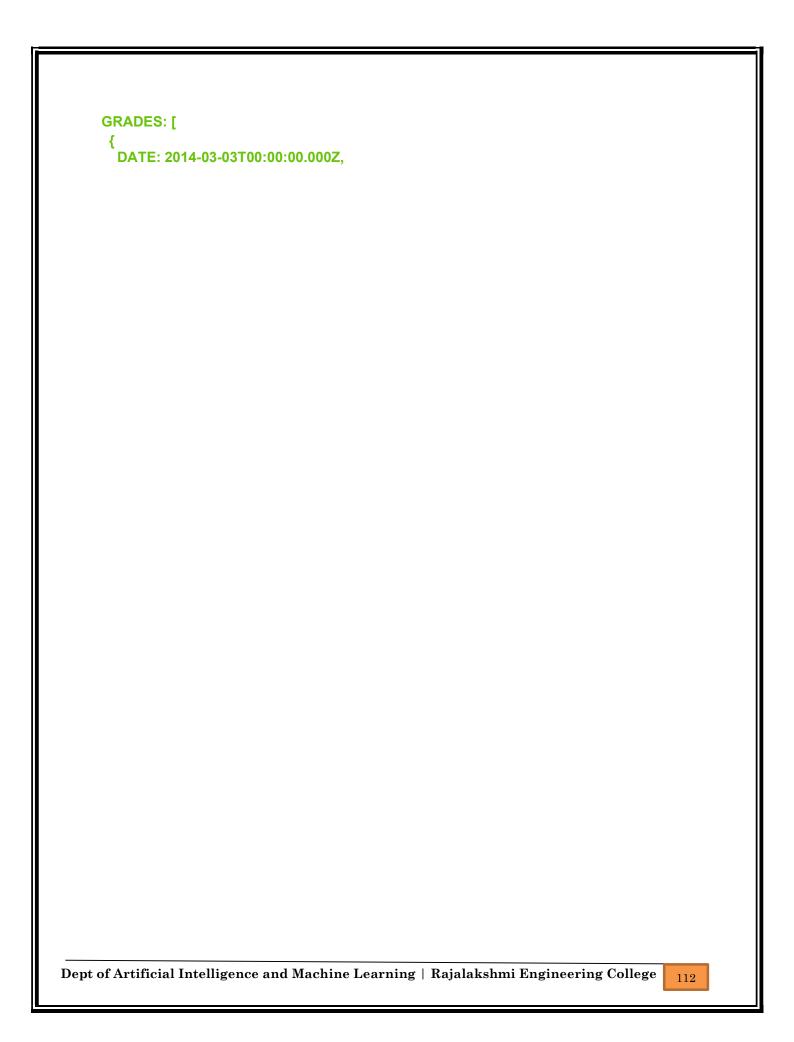
```
GRADES: [
 {
   DATE: 2014-03-03T00:00:00.028Z,
   GRADE:
   'A',
   SCORE:
   10
 },
 {
   DATE: 2013-09-11T00:00:00.028Z,
   GRADE:
   'A',
   SCORE: 7
 },
 {
   DATE: 2013-01-24T00:00:00.028Z,
   GRADE:
   'A',
   SCORE:
   11
 },
 {
   DATE: 2011-11-23T00:00:00.028Z,
   GRADE:
   'A',
   SCORE: 9
 },
 {
   DATE: 2011-03-10T00:00:00.028Z,
   GRADE:
   'B',
   SCORE:
   15
 }
],
NAME: 'BBQ HAVEN',
RESTAURANT_ID:
30075473
}
```

8. **WRITE A MONGODB QUERY TO KNOW WHETHER ALL THE ADDRESSES CONTAINS THE STREET OR NOT.**

```
DB.RESTAURANTS.FIND(
 {
   "ADDRESS.STREET": { $EXISTS: FALSE }
 }
);
```

```
> db.restaurants.find(
    {
      "address.street": { $exists: false }
    }
  );
<
Customers >
```

9. WRITE A MONGODB QUERY WHICH WILL SELECT ALL DOCUMENTS IN THE RESTAURANTS COLLECTIONWHERE THE COORD FIELD VALUE IS DOUBLE.

```
DB.RESTAURANTS.FIND(
 {
   "ADDRESS.COORD": { $TYPE: "DOUBLE" }
 }
);
```

SAMPLE OUTPUT:-

```
{
  _ID:
  OBJECTID('671B92D339EC8A9BC8B6588B')
  ,ADDRESS: {
    BUILDING:
    '1007',COORD:
    [
      -73.856077,
      40.848447
    ],
    STREET: 'MORRIS
    PARK AVE',ZIPCODE:
    '10462'
  },
  BOROUGH:
  'BRONX',
  CUISINE:
  'BAKERY',
```

```
GRADES: [
 {
   DATE: 2014-03-03T00:00:00.000Z,
```

```
    GRADE:
    'A',
    SCORE: 2
   },
   {
    DATE: 2013-09-11T00:00:00.000Z,
    GRADE:
    'A',
    SCORE: 6
   },
   {
    DATE: 2013-01-24T00:00:00.000Z,
    GRADE:
    'A',
    SCORE:
    10
   },
   {
    DATE: 2011-11-23T00:00:00.000Z,
    GRADE:
    'A',
    SCORE: 9
   },
   {
    DATE: 2011-03-10T00:00:00.000Z,
    GRADE:
    'B',
    SCORE:
    14
   }
  ],
  NAME: 'MORRIS PARK BAKE
  SHOP',RESTAURANT_ID:
  '30075445'
}

{
  _ID:
  OBJECTID('671B5D549D3D63480E0A64E5'),
  ADDRESS: {
   BUILDING:
   1234,COORD:
   [
     -73.856577,
     40.848647
   ],
   STREET: '1ST
```

```
    AVENUE',ZIPCODE:
    10463
},
BOROUGH:
'BRONX',
CUISINE:
'ITALIAN',
GRADES: [
  {
    DATE: 2014-03-03T00:00:00.001Z,
```

```
      GRADE:
      'A',
      SCORE: 5
    },
    {
      DATE: 2013-09-11T00:00:00.001Z,
      GRADE:
      'A',
      SCORE: 8
    },
    {
      DATE: 2013-01-24T00:00:00.001Z,
      GRADE:
      'B',
      SCORE:
      12
    },
    {
      DATE: 2011-11-23T00:00:00.001Z,
      GRADE:
      'A',
      SCORE: 7
    },
    {
      DATE: 2011-03-10T00:00:00.001Z,
      GRADE:
      'A',
      SCORE:
      15
    }
  ],
  NAME: 'PASTA
  PALACE',
  RESTAURANT_ID:
  30075446
}
```

**10. WRITE A MONGODB QUERY WHICH WILL SELECT THE RESTAURANT ID,
NAME AND GRADES FORTHOSE
RESTAURANTS WHICH RETURNS 0 AS A REMAINDER AFTER DIVIDING THE SCORE BY 7.**

```
DB.RESTAURANTS.FIND(
  {
    "GRADES.SCORE": { $MOD: [7, 0] }
  },
  {
```

```
    RESTAURANT_ID: 1,
    NAME: 1,
    GRADES: 1,
    _ID: 0
  }
);
```

SAMPLE OUTPUT:-

{
 GRADES: [
  {
   DATE: 2014-03-03T00:00:00.000Z,
   GRADE:
   'A',
   SCORE: 2
  },
  {
   DATE: 2013-09-11T00:00:00.000Z,
   GRADE:
   'A',
   SCORE: 6
  },
  {
   DATE: 2013-01-24T00:00:00.000Z,
   GRADE:
   'A',
   SCORE:
   10
  },
  {
   DATE: 2011-11-23T00:00:00.000Z,
   GRADE:
   'A',
   SCORE: 9
  },
  {
   DATE: 2011-03-10T00:00:00.000Z,
   GRADE:
   'B',
   SCORE:
   14
  }
 ],
 NAME: 'MORRIS PARK BAKE
 SHOP',RESTAURANT_ID:
 '30075445'
}

{
 GRADES: [
  {

DATE: 2014-03-03T00:00:00.001Z,
GRADE:
'A',
SCORE: 5
},
{

```
    DATE: 2013-09-11T00:00:00.001Z,
    GRADE:
    'A',
    SCORE: 8
  },
  {
    DATE: 2013-01-24T00:00:00.001Z,
    GRADE:
    'B',
    SCORE:
    12
  },
  {
    DATE: 2011-11-23T00:00:00.001Z,
    GRADE:
    'A',
    SCORE: 7
  },
  {
    DATE: 2011-03-10T00:00:00.001Z,
    GRADE:
    'A',
    SCORE:
    15
  }
 ],
 NAME: 'PASTA
 PALACE',
 RESTAURANT_ID:
 30075446
}
```

11. WRITE A MONGODB QUERY TO FIND THE RESTAURANT NAME, BOROUGH, LONGITUDE AND ATTITUDE AND CUISINE FOR THOSE RESTAURANTS WHICH CONTAINS 'MON' AS THREE LETTERS SOMEWHERE IN ITSNAME.

```
DB.RESTAURANTS.FIND(
 {
  NAME: { $REGEX: /MON/I }
 },
 {
  NAME: 1,
  BOROUGH: 1,
  "ADDRESS.COORD.0": 1, //
```

```
    LONGITUDE
    "ADDRESS.COORD.1": 1, //
    LATITUDE CUISINE: 1,
    _ID: 0
  }
);
```

12. WRITE A MONGODB QUERY TO FIND THE RESTAURANT NAME, BOROUGH, LONGITUDE AND LATITUDEAND CUISINE FOR THOSE RESTAURANTS WHICH CONTAIN 'MAD' AS FIRST THREE LETTERS OF ITS NAME.

```
DB.RESTAURANTS.FIND(
  {
    NAME: { $REGEX: /^MAD/I }
  },
  {
    NAME: 1,
    BOROUGH: 1,
    "ADDRESS.COORD.0": 1, //
    LONGITUDE
    "ADDRESS.COORD.1": 1, //
    LATITUDE CUISINE: 1,
    _ID: 0
  }
);
```

13. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE AT LEAST ONE GRADE WITH ASCORE OF LESS THAN 5.

```
DB.RESTAURANTS.FIND(
  {
    "GRADES.SCORE": { $LT: 5 }
  }
);
```

SAMPLE OUTPUT:-

```
{
  _ID:
  OBJECTID('671B92D339EC8A9BC8B6588B')
  ,ADDRESS: {
    BUILDING: '1007',
```

COORD: [
  -73.856077,
  40.848447
],
STREET: 'MORRIS
PARK AVE',ZIPCODE:
'10462'
},
BOROUGH:
'BRONX',
CUISINE:
'BAKERY',
GRADES: [
  {
    DATE: 2014-03-03T00:00:00.000Z,
    GRADE:
    'A',
    SCORE: 2
  },
  {
    DATE: 2013-09-11T00:00:00.000Z,
    GRADE:
    'A',
    SCORE: 6
  },
  {
    DATE: 2013-01-24T00:00:00.000Z,
    GRADE:
    'A',
    SCORE:
    10
  },
  {
    DATE: 2011-11-23T00:00:00.000Z,
    GRADE:
    'A',
    SCORE: 9
  },
  {
    DATE: 2011-03-10T00:00:00.000Z,
    GRADE:
    'B',
    SCORE:
    14
  }
],
NAME: 'MORRIS PARK BAKE

SHOP',RESTAURANT_ID:
'30075445'
}

{
_ID:
OBJECTID('671B5D549D3D63480E0A64E6'),
ADDRESS: {

BUILDING:
5678,COORD:
[
  -73.856977,
  40.848847
],
STREET: '2ND
AVENUE',ZIPCODE:
10464
},
BOROUGH:
'MANHATTAN',
CUISINE: 'CHINESE',
GRADES: [
  {
    DATE: 2014-03-03T00:00:00.002Z,
    GRADE:
    'B',
    SCORE: 4
  },
  {
    DATE: 2013-09-11T00:00:00.002Z,
    GRADE:
    'A',
    SCORE: 9
  },
  {
    DATE: 2013-01-24T00:00:00.002Z,
    GRADE:
    'A',
    SCORE:
    10
  },
  {
    DATE: 2011-11-23T00:00:00.002Z,
    GRADE:
    'A',
    SCORE: 8
  },
  {
    DATE: 2011-03-10T00:00:00.002Z,
    GRADE:
    'B',
    SCORE:
    16
  }
],

```
NAME: 'DRAGON
WOK',
RESTAURANT_ID:
30075447
}
```

14. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE AT LEAST ONE GRADE WITH ASCORE OF LESS THAN 5 AND THAT ARE LOCATED IN THE BOROUGH OF MANHATTAN.

```
DB.RESTAURANTS.FIND(
 {
   "GRADES.SCORE": {
   $LT: 5 },BOROUGH:
   "MANHATTAN"
 }
);
```

```
_id: ObjectId('671b5d549d3d63480e0a64e6'),
address: {
  building: 5678,
  coord: [
    -73.856977,
    40.848847
  ],
  street: '2nd Avenue',
  zipcode: 10464
},
borough: 'Manhattan',
cuisine: 'Chinese',
grades: [
  {
    date: 2014-03-03T00:00:00.002Z,
    grade: 'B',
    score: 4
  },
  {
    date: 2013-09-11T00:00:00.002Z,
    grade: 'A',
    score: 9
  },
  {
    date: 2013-01-24T00:00:00.002Z,
    grade: 'A',
    score: 10
  },
  {
```

15. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE AT LEAST ONE GRADE WITH ASCORE OF LESS THAN 5 AND THAT ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN.

```
DB.RESTAURANTS.FIND(
 {
   "GRADES.SCORE": { $LT: 5 },
   BOROUGH: { $IN: ["MANHATTAN", "BROOKLYN"] }
 }
);
```

```
_id: ObjectId('671b5d549d3d63480e0a64e6'),
address: {
  building: 5678,
  coord: [
    -73.856977,
    40.848847
  ],
  street: '2nd Avenue',
  zipcode: 10464
},
borough: 'Manhattan',
cuisine: 'Chinese',
grades: [
  {
    date: 2014-03-03T00:00:00.002Z,
    grade: 'B',
    score: 4
  },
  {
    date: 2013-09-11T00:00:00.002Z,
    grade: 'A',
    score: 9
  },
  {
    date: 2013-01-24T00:00:00.002Z,
    grade: 'A',
    score: 10
  },
```

16. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE AT LEAST ONE GRADE WITH A SCORE OF LESS THAN 5 AND THAT ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN, ANDTHEIR CUISINE IS NOT AMERICAN.

```
DB.RESTAURANTS.FIND(
 {
  "GRADES.SCORE": { $LT: 5 },
  BOROUGH: { $IN: ["MANHATTAN",
  "BROOKLYN"] },CUISINE: { $NE:
  "AMERICAN" }
 }
);
```

```
  _id: ObjectId('671b5d549d3d63480e0a64e6'),
  address: {
    building: 5678,
    coord: [
      -73.856977,
      40.848847
    ],
    street: '2nd Avenue',
    zipcode: 10464
  },
  borough: 'Manhattan',
  cuisine: 'Chinese',
  grades: [
    {
      date: 2014-03-03T00:00:00.002Z,
      grade: 'B',
      score: 4
    },
    {
      date: 2013-09-11T00:00:00.002Z,
      grade: 'A',
      score: 9
    },
    {
      date: 2013-01-24T00:00:00.002Z,
      grade: 'A',
      score: 10
    },
    {
```

17. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE AT LEAST ONE GRADE WITH A SCORE OF LESS THAN 5 AND THAT ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN, ANDTHEIR CUISINE IS NOT AMERICAN OR CHINESE.

```
DB.RESTAURANTS.FIND(
 {
   "GRADES.SCORE": { $LT: 5 },
   BOROUGH: { $IN: ["MANHATTAN",
   "BROOKLYN"] },CUISINE: { $NIN:
   ["AMERICAN", "CHINESE"] }
 }
);
```

18. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ANDA GRADE WITH A SCORE OF 6.

```
DB.RESTAURANTS.FIND(
 {
   GRADES: {
    $ALL: [
     { $ELEMMATCH: { SCORE: 2 } },
```

```
          { $ELEMMATCH: { SCORE: 6 } }
        ]
      }
    }
);
```

SAMPLE OUTPUT:-

```
{
  _ID:
  OBJECTID('671B92D339EC8A9BC8B6588B')
  ,ADDRESS: {
    BUILDING:
    '1007',COORD:
    [
      -73.856077,
      40.848447
    ],
    STREET: 'MORRIS
    PARK AVE',ZIPCODE:
    '10462'
  },
  BOROUGH:
  'BRONX',
  CUISINE:
  'BAKERY',
  GRADES: [
    {
      DATE: 2014-03-03T00:00:00.000Z,
      GRADE:
      'A',
      SCORE: 2
    },
    {
      DATE: 2013-09-11T00:00:00.000Z,
      GRADE:
      'A',
      SCORE: 6
    },
    {
      DATE: 2013-01-24T00:00:00.000Z,
      GRADE:
      'A',
      SCORE:
      10
    },
    {
```

DATE: 2011-11-23T00:00:00.000Z,
GRADE:
'A',
SCORE: 9
},
{
DATE: 2011-03-10T00:00:00.000Z,

          GRADE:
          'B',
          SCORE:
          14
         }
      ],
      NAME: 'MORRIS PARK BAKE
      SHOP',RESTAURANT_ID:
      '30075445'
    }

    {
      _ID:
      OBJECTID('671B5C5F9D3D63480E0A64E4')
      ,ADDRESS: {
        BUILDING:
        1007,COORD:
        [
          -73.856077,
          40.848447
        ],
        STREET: 'MORRIS
        PARK AVE',ZIPCODE:
        10462
      },
      BOROUGH:
      'BRONX',
      CUISINE:
      'BAKERY',
      GRADES: [
        {
          DATE: 2014-03-03T00:00:00.000Z,
          GRADE:
          'A',
          SCORE: 2
        },
        {
          DATE: 2013-09-11T00:00:00.000Z,
          GRADE:
          'A',
          SCORE: 6
        },
        {
          DATE: 2013-01-24T00:00:00.000Z,
          GRADE:

'A',
SCORE:
10
},
{
DATE: 2011-11-23T00:00:00.000Z,
GRADE:
'A',
SCORE: 9
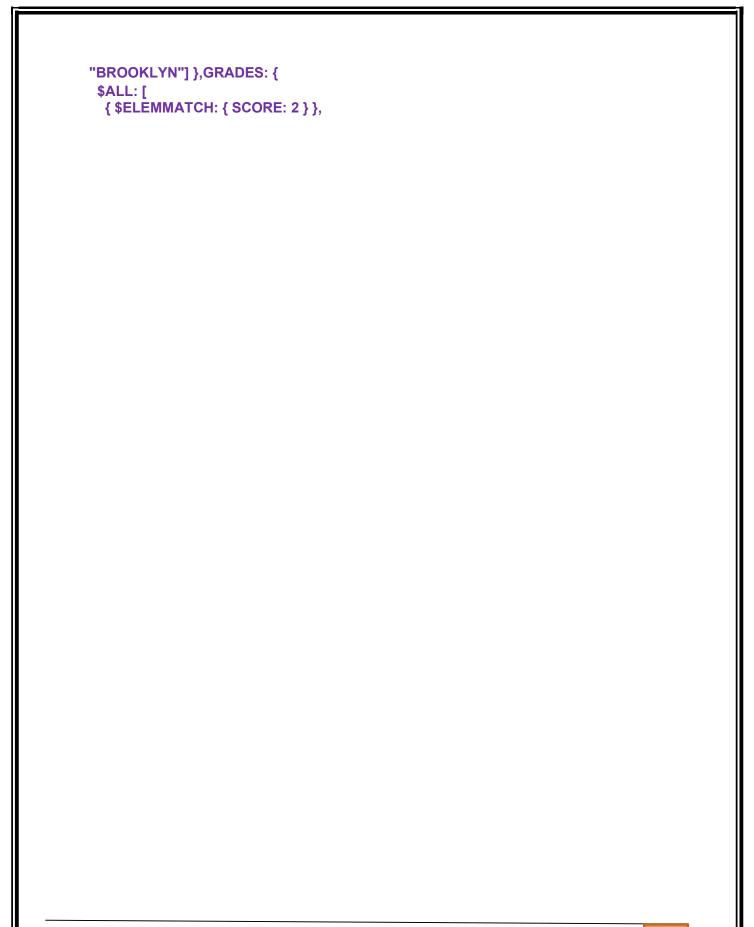},
{

```
     DATE: 2011-03-10T00:00:00.000Z,
     GRADE:
     'B',
     SCORE:
     14
   }
 ],
 NAME: 'MORRIS PARK BAKE
 SHOP',RESTAURANT_ID:
 30075445
}
```

19. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ANDA GRADE WITH A SCORE OF 6 AND ARE LOCATED IN THE BOROUGH OF MANHATTAN.

```
DB.RESTAURANTS.FIND(
  {
   BOROUGH:
   "MANHATTAN",
   GRADES: {
    $ALL: [
     { $ELEMMATCH: { SCORE: 2 } },
     { $ELEMMATCH: { SCORE: 6 } }
    ]
   }
  }
);
```

20. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ANDA GRADE WITH A SCORE OF 6 AND ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN.

```
DB.RESTAURANTS.FIND(
  {
   BOROUGH: { $IN: ["MANHATTAN",
```

```
"BROOKLYN"] },GRADES: {
 $ALL: [
  { $ELEMMATCH: { SCORE: 2 } },
```

```
      { $ELEMMATCH: { SCORE: 6 } }
    ]
   }
  }
);
```

21. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ANDA GRADE WITH A SCORE OF 6 AND ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN, AND THEIR CUISINE IS NOT AMERICAN.

```
DB.RESTAURANTS.FIND(
 {
  BOROUGH: { $IN: ["MANHATTAN",
  "BROOKLYN"] },GRADES: {
   $ALL: [
    { $ELEMMATCH: { SCORE: 2 } },
    { $ELEMMATCH: { SCORE: 6 } }
   ]
  },
  CUISINE: { $NE: "AMERICAN" }
 }
);
```

22. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ANDA GRADE WITH A SCORE OF 6 AND ARE LOCATED IN THE BOROUGH OF MANHATTAN OR BROOKLYN, AND THEIR CUISINE IS NOT AMERICAN OR CHINESE.

```
DB.RESTAURANTS.FIND(
 {
  BOROUGH: { $IN: ["MANHATTAN",
  "BROOKLYN"] },GRADES: {
   $ALL: [
    { $ELEMMATCH: { SCORE: 2 } },
    { $ELEMMATCH: { SCORE: 6 } }
   ]
  },
  CUISINE: { $NIN: ["AMERICAN", "CHINESE"] }
 }
);
```

23. WRITE A MONGODB QUERY TO FIND THE RESTAURANTS THAT HAVE A GRADE WITH A SCORE OF 2 ORA GRADE WITH A SCORE OF 6.

```
DB.RESTAURANTS.FIND(
 {
   $OR: [
     { "GRADES.SCORE": 2 },
     { "GRADES.SCORE": 6 }
   ]
 }
);
```

SAMPLE OUTPUT:-

```
{
 _ID:
  OBJECTID('671B5D549D3D63480E0A64E9'),
 ADDRESS: {
   BUILDING:
   2233,COORD:
   [
     -73.858177,
     40.849447
   ],
   STREET: '5TH
   AVENUE',ZIPCODE:
   10467
 },
 BOROUGH:
 'BRONX', CUISINE:
 'AMERICAN',
 GRADES: [
   {
     DATE: 2014-03-03T00:00:00.005Z,
     GRADE:
     'A',
     SCORE:
     10
   },
   {
     DATE: 2013-09-11T00:00:00.005Z,
     GRADE:
     'A',
```

    SCORE: 6
  },
  {
    DATE: 2013-01-24T00:00:00.005Z,

```
          GRADE:
          'B',
          SCORE:
          12
        },
        {
          DATE: 2011-11-23T00:00:00.005Z,
          GRADE:
          'A',
          SCORE: 9
        },
        {
          DATE: 2011-03-10T00:00:00.005Z,
          GRADE:
          'A',
          SCORE:
          14
        }
      ],
      NAME: 'BURGER
      BISTRO',
      RESTAURANT_ID:
      30075450
    }

    {
      _ID:
      OBJECTID('671B5DAB56EC9972CA8F5DA
      F'),ADDRESS: {
        BUILDING:
        4455,COORD:
        [
          -73.858977,
          40.849847
        ],
        STREET: '7TH
        AVENUE',ZIPCODE:
        10469
      },
      BOROUGH:
      'BRONX',
      CUISINE: 'THAI',
      GRADES: [
        {
          DATE: 2014-03-03T00:00:00.007Z,
          GRADE:
```

'A',
SCORE: 9
},
{
DATE: 2013-09-11T00:00:00.007Z,
GRADE:
'B',
SCORE: 6
},
{
DATE: 2013-01-24T00:00:00.007Z,

```
      GRADE:
      'A',
      SCORE:
      12
    },
    {
      DATE: 2011-11-23T00:00:00.007Z,
      GRADE:
      'A',
      SCORE: 8
    },
    {
      DATE: 2011-03-10T00:00:00.007Z,
      GRADE:
      'B',
      SCORE:
      14
    }
  ],
  NAME: 'THAI DELIGHT',
  RESTAURANT_ID:
  30075452
}
```

MOVIES COLLECTION

1.FIND ALL MOVIES WITH FULL INFORMATION FROM THE 'MOVIES' COLLECTION THATRELEASED IN THE YEAR 1893.

DB.MOVIES.FIND({ YEAR: 1893 });

2. FIND ALL MOVIES WITH FULL INFORMATION FROM THE 'MOVIES' COLLECTIONTHAT HAVE A RUNTIME GREATER THAN 120 MINUTES.

DB.MOVIES.FIND({ RUNTIME: { $GT:

120 } }); SAMPLE OUTPUT:-

```
{
  _ID: OBJECTID('573A1390F29313CAABCD42EC'),
  PLOT: 'AN ASTRONAUT STRANDED ON MARS MUST
  SURVIVE ALONE.',GENRES: [
    'SCI-FI',
    'DRAM
    A'
  ],
  RUNTIME:
  135,CAST: [
    'MATT DAMON',
    'JESSICA
    CHASTAIN'
  ],
  POSTER: 'HTTPS://M.MEDIA-
  AMAZON.COM/IMAGES/POSTER4.JPG',TITLE: 'MARS
  ALONE',
  FULLPLOT: 'AN ASTRONAUT, LEFT ALONE ON MARS, STRUGGLES TO
```

**SURVIVE WITH
LIMITED RESOURCES WHILE AWAITING
RESCUE.',LANGUAGES: [**

  'ENGLISH'
],
RELEASED: 2015-10-02T00:00:00.000Z,
DIRECTORS: [
  'RIDLEY
  SCOTT'
],
RATED: 'PG-
13',AWARDS:
{ WINS: 8,
  NOMINATIONS: 6,
  TEXT: '8 WINS & 6 NOMINATIONS.'
},
LASTUPDATED: '2021-08-09 17:22:30.000000000',
YEAR:
2015,
IMDB: {
RATING:
8,
  VOTES: 25650,
  ID: 443
},
COUNTRIE
  S: ['USA'
],
TYPE:
'MOVIE',
TOMATOES:
{ VIEWER: {
    RATING: 4.5,
    NUMREVIEWS: 2201,
    METER: 93
  },
  FRESH: 18,
  CRITIC: {
RATING:
8.5,

```
    NUMREVIEWS: 25,
    METER: 96
},
```

ROTTEN: 1,
    LASTUPDATED: 2021-07-19T21:20:55.000Z
  }
}

3. FIND ALL MOVIES WITH FULL INFORMATION FROM THE 'MOVIES' COLLECTIONTHAT HAVE "SHORT" GENRE.

DB.MOVIES.FIND({ GENRES:

"SHORT" });<u>SAMPLE OUTPUT:-</u>

```
{
  _ID: OBJECTID('573A1390F29313CAABCD42E8'),
  PLOT: 'A GROUP OF BANDITS STAGE A BRAZEN TRAIN HOLD-UP, ONLY
  TO FIND A
DETERMINED POSSE HOT ON THEIR
  HEELS.',GENRES: [
    'SHORT',
    'WESTE
    RN'
  ],
  RUNTIME:
  11,CAST: [
    'A.C. ABADIE',
    "GILBERT M. 'BRONCHO BILLY'
    ANDERSON",'GEORGE BARNES',
    'JUSTUS D. BARNES'
  ],
  POSTER: 'HTTPS://M.MEDIA-
AMAZON.COM/IMAGES/M/MV5BMTU3NJE5NZYTYTYYNS00MDVMLWIWYJG
TMMYWYWIXZDYYNZU2XKEYXKFQCGDEQXVYNZQZNZQXNZI@._V1_SY1
000_SX677_AL_.JPG',
  TITLE: 'THE GREAT TRAIN ROBBERY',
  FULLPLOT: "AMONG THE EARLIEST EXISTING FILMS IN
AMERICAN CINEMA - NOTABLE AS THE FIRST FILM THAT
PRESENTED A NARRATIVE STORY TO TELL - IT DEPICTS A GROUP
```

OF COWBOY OUTLAWS WHO HOLD UP A TRAIN AND ROB THE

PASSENGERS. THEY ARE THEN PURSUED BY A SHERIFF'S POSSE.
SEVERALSCENES HAVE COLOR INCLUDED - ALL HAND TINTED.",
LANGUAGE
S: [
'ENGLISH'
],
RELEASED: 1903-12-01T00:00:00.000Z,
DIRECTORS: [
'EDWIN S.
PORTER'
],
RATED: 'TV-
G',AWARDS:
{ WINS: 1,
NOMINATIONS: 0,
TEXT: '1 WIN.'
},
LASTUPDATED: '2015-08-13 00:27:59.177000000',
YEAR: 1903,
IMDB: {
RATING:
7.4,
VOTES: 9847,
ID: 439
},
COUNTRIE
S: ['USA'
],
TYPE:
'MOVIE',
TOMATOES:
{ VIEWER: {
RATING: 3.7,
NUMREVIEWS: 2559,
METER: 75
},
FRESH: 6,

CRITIC: {
RATING:
7.6,

```
    NUMREVIEWS: 6,
    METER: 100
  },
  ROTTEN: 0,
  LASTUPDATED: 2015-08-08T19:16:10.000Z
 }
}
```

4. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT WERE DIRECTED BY "WILLIAM K.L. DICKSON" AND INCLUDE COMPLETE INFORMATION FOR EACHMOVIE.

DB.MOVIES.FIND({ DIRECTORS: "WILLIAM K.L. DICKSON" });

6. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT WERE RELEASEDIN THE USA AND INCLUDE COMPLETE INFORMATION FOR EACH MOVIE.

DB.MOVIES.FIND({ COUNTRIES: "USA" });

```
_id: ObjectId('573a1390f29313caabcd42e8'),
plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
genres: [
  'Short',
  'Western'
],
runtime: 11,
cast: [
  'A.C. Abadie',
  "Gilbert M. 'Broncho Billy' Anderson",
  'George Barnes',
  'Justus D. Barnes'
],
poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000_
title: 'The Great Train Robbery',
fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - it
languages: [
  'English'
],
released: 1903-12-01T00:00:00.000Z,
directors: [
```

7. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT HAVE COMPLETEINFORMATION AND ARE RATED AS "UNRATED".

DB.MOVIES.FIND({ RATED: "UNRATED" });

8. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT HAVE COMPLETEINFORMATION AND HAVE RECEIVED MORE THAN 1000 VOTES ON IMDB.

DB.MOVIES.FIND({ "IMDB.VOTES": { $GT: 1000 } });

```
< {
    _id: ObjectId('573a1390f29313caabcd42e8'),
    plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
    genres: [
      'Short',
      'Western'
    ],
    runtime: 11,
    cast: [
      'A.C. Abadie',
      "Gilbert M. 'Broncho Billy' Anderson",
      'George Barnes',
      'Justus D. Barnes'
    ],
    poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000
    title: 'The Great Train Robbery',
    fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i
    languages: [
      'English'
    ],
    released: 1903-12-01T00:00:00.000Z,
    directors: [
      'Edwin S. Porter'
    ],
```

9. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT HAVE COMPLETEINFORMATION AND HAVE AN IMDB RATING HIGHER THAN 7.

DB.MOVIES.FIND({ "IMDB.RATING": { $GT: 7 } });

```
> db.movies.find({ "imdb.rating": { $gt: 7 } });
< {
    _id: ObjectId('573a1390f29313caabcd42e8'),
    plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
    genres: [
      'Short',
      'Western'
    ],
    runtime: 11,
    cast: [
      'A.C. Abadie',
      "Gilbert M. 'Broncho Billy' Anderson",
      'George Barnes',
      'Justus D. Barnes'
    ],
    poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000
    title: 'The Great Train Robbery',
    fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i
    languages: [
      'English'
    ],
    released: 1903-12-01T00:00:00.000Z,
    directors: [
      'Edwin S. Porter'
    ],
    rated: 'TV-G',
    awards: {
      wins: 1,
```

10. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT HAVE COMPLETE INFORMATION AND HAVE A VIEWER RATING HIGHER THAN 4 ONTOMATOES.

DB.MOVIES.FIND({ "TOMATOES.VIEWER.RATING": { $GT: 4 } });

```
> db.movies.find({ "tomatoes.viewer.rating": { $gt: 4 } });
< {
    _id: ObjectId('573a1390f29313caabcd42ea'),
    plot: 'A chef tries to open a restaurant amidst a series of challenges.',
    genres: [
      'Drama',
      'Comedy'
    ],
    runtime: 120,
    cast: [
      'Emma Stone',
      'Chris Pratt',
      'Anna Kendrick'
    ],
    poster: 'https://m.media-amazon.com/images/poster2.jpg',
    title: 'The Culinary Dream',
    fullplot: "A chef's journey to make his dream restaurant come true, overcoming family and financial obstacles.",
    languages: [
      'English',
      'French'
    ],
    released: 2015-02-12T00:00:00.000Z,
    directors: [
      'Samantha Jones'
    ],
    rated: 'PG-13',
    awards: {
      wins: 1,
```

11. RETRIEVE ALL MOVIES FROM THE 'MOVIES' COLLECTION THAT HAVE RECEIVEDAN AWARD.

DB.MOVIES.FIND({ "AWARDS.WINS": { $GT: 0 } });

```
> db.movies.find({ "awards.wins": { $gt: 0 } });
< {
    _id: ObjectId('573a1390f29313caabcd42e8'),
    plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
    genres: [
      'Short',
      'Western'
    ],
    runtime: 11,
    cast: [
      'A.C. Abadie',
      "Gilbert M. 'Broncho Billy' Anderson",
      'George Barnes',
      'Justus D. Barnes'
    ],
    poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000
    title: 'The Great Train Robbery',
    fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i
    languages: [
      'English'
    ],
    released: 1903-12-01T00:00:00.000Z,
    directors: [
      'Edwin S. Porter'
    ],
    rated: 'TV-G',
    awards: {
      wins: 1,
```

12. FIND ALL MOVIES WITH TITLE, LANGUAGES, RELEASED, DIRECTORS, WRITERS,AWARDS, YEAR, GENRES, RUNTIME, CAST, COUNTRIES FROM THE 'MOVIES' COLLECTION IN MONGODB THAT HAVE AT LEAST ONE NOMINATION.

```
DB.MOVIES.FIND(
  { "AWARDS.NOMINATIONS": { $GT: 0 } },
  {
    TITLE: 1,
    LANGUAGES: 1,
    RELEASED: 1,
    DIRECTORS: 1,
    WRITERS: 1,
    AWARDS: 1,
    YEAR: 1,
    GENRES: 1,
    RUNTIME: 1,
    CAST: 1,
    COUNTRIES: 1
```

```
    }
);
```

>_MONGOSH   ℹ
 '),
< {
    _id: ObjectId('573a1390f29313caabcd42e9'),
    genres: [
      'Adventure',
      'Fantasy'
    ],
    runtime: 95,
    cast: [
      'Ethan Hawke',
      'Jane Doe',
      'Mark Strong'
    ],
    title: 'The Amulet Quest',
    languages: [
      'English'
    ],
    released: 2008-07-15T00:00:00.000Z,
    directors: [
      'John Smith'
    ],
    awards: {
      wins: 2,
      nominations: 1,
      text: '2 wins & 1 nomination.'
    },
    year: 2008,
    countries: [
      'USA'
```

**13. FIND ALL MOVIES WITH TITLE, LANGUAGES, RELEASED, DIRECTORS, WRITERS,AWARDS, YEAR, GENRES, RUNTIME, CAST, COUNTRIES FROM THE 'MOVIES' COLLECTION IN MONGODB WITH CAST INCLUDING  "CHARLES KAYSER".**

**DB.MOVIES.FIND(**
**  { CAST: "CHARLES KAYSER" },**
**  {**
**    TITLE: 1,**
**    LANGUAGES: 1,**
**    RELEASED: 1,**
**    DIRECTORS: 1,**
**    WRITERS: 1,**
**    AWARDS: 1,**
**    YEAR: 1,**

```
        GENRES: 1,
        RUNTIME: 1,
        CAST: 1,
        COUNTRIES: 1
    }
);
```

14. RETRIEVE ALL MOVIES WITH TITLE, LANGUAGES, RELEASED, DIRECTORS, WRITERS, COUNTRIES FROM THE 'MOVIES' COLLECTION IN MONGODB THATRELEASED ON MAY 9, 1893.

```
DB.MOVIES.FIND(
    { RELEASED: ISODATE("1893-05-09T00:00:00Z") },
    {
        TITLE: 1,
        LANGUAGES: 1,
        RELEASED: 1,
        DIRECTORS: 1,
        WRITERS: 1,
        COUNTRIES: 1
    }
);
```

14. RETRIEVE ALL MOVIES WITH TITLE, LANGUAGES, RELEASED, DIRECTORS, WRITERS, COUNTRIES FROM THE 'MOVIES' COLLECTION IN MONGODB THAT HAVE AWORD "SCENE" IN THE TITLE.

```
DB.MOVIES.FIND(
    { TITLE: { $REGEX: /SCENE/I } },
    {
        TITLE: 1,
        LANGUAGES: 1,
```

```
        RELEASED: 1,
        DIRECTORS: 1,
        WRITERS: 1,
        COUNTRIES: 1
    }
);
```