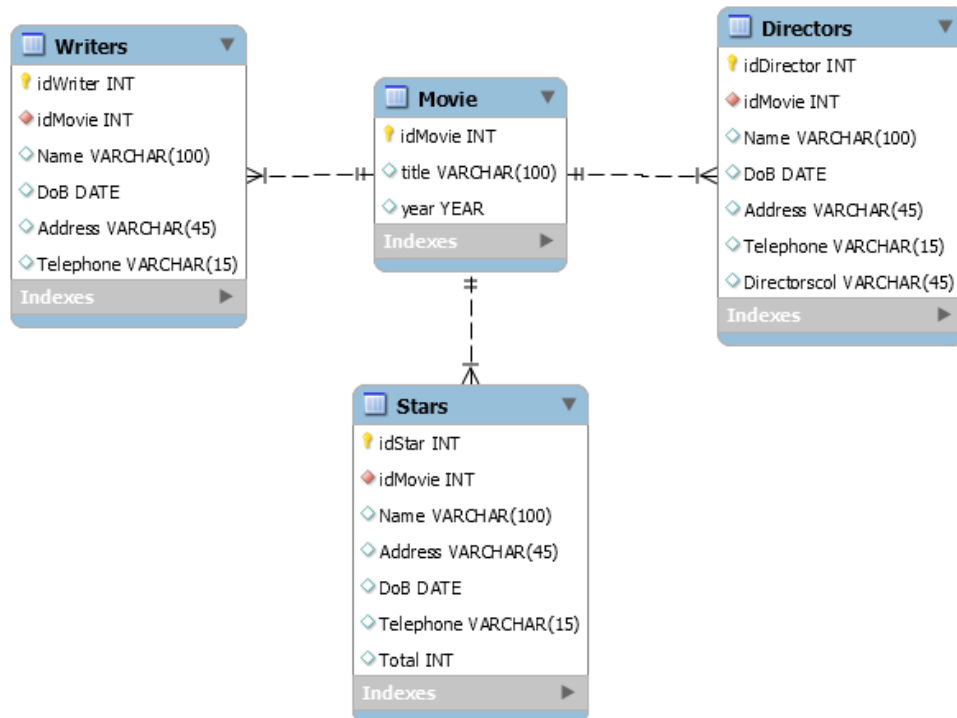


Consider the following moviedata which contains information on movies, directors, writers and stars. Based on this data, draw an ER diagram representing how you would translate this into a relational database. Suppose you would also like to store details on stars e.g. DOB, address, tel. Include this in your ER diagram also.



## JSON code and mongoddb

**use mdata** (mdata will be the movie database)

**db.mdata.insert( JSON code )** (screenshot)

## Insert movie The Matrix

```
C:\Windows\System32\cmd.exe

C:\MongoDB\bin>COLOR 1F

C:\MongoDB\bin>start /B /WAIT "Mongo 27017" mongo
MongoDB shell version: 3.0.1
connecting to: test
Welcome to the MongoDB shell.
For interactive help, type "help".
For more comprehensive documentation, see
  http://docs.mongodb.org/
Questions? Try the support group
  http://groups.google.com/group/mongodb-user
>
> use mdata
switched to db mdata
> db.mdata.insert(
... {
...   "idMovie": "M001",
...   "title": "The Matrix",
...   "year": "1999",
...   "Directors": [
...     {
...       "idDirector": "D001",
...       "Name": "Andy Wachowski",
...       "DoB": "22/02/1964",
...       "Address": "California",
...       "Telephone": "67868568"
...     },
...     {
...       "idDirector": "D002",
...       "Name": "Lana Wachowski",
...       "DoB": "12/02/1963",
...       "Address": "New York",
...       "Telephone": "62368238"
...     }
...   ],
...   "Writers": [
...     {
...       "idWriter": "W001",
...       "Name": "Andy Wachowski",
...       "DoB": "22/02/1964",
...       "Address": "California",
...       "Telephone": "67868568"
...     },
...     {
...       "idDirector": "W002",
...       "Name": "Lana Wachowski",
...       "DoB": "12/02/1963",
...       "Address": "New York",
...       "Telephone": "62368238"
...     }
...   ],
...   "Stars": [
...     {
...       "idStar": "S001",
...       "Name": "Keanu Reeves",
...       "DoB": "22/01/1964",
...       "Address": "San Francisco",
...       "Telephone": "67863338",
...       "Total": " "
...     },
...     {
...       "idStar": "S002",
...       "Name": "Laurence Fishburne",
...       "DoB": "12/04/1963",
...       "Address": "Nan Jing",
...       "Telephone": "62444238",
...     }
...   ]
... }
```

```
C:\Windows\System32\cmd.exe

...      "Telephone": "62447738",
...      "Total": " "
...    }
...  }
... }
WriteResult<< "nInserted" : 1 >>
> db.mdata.find().pretty();
{
  "_id" : ObjectId("5513d0be7bb5d3059143fb10"),
  "idMovie" : "M001",
  "title" : "The Matrix",
  "year" : "1999",
  "Directors" : [
    {
      "idDirector" : "D001",
      "Name" : "Andy Wachowski",
      "DoB" : "22/02/1964",
      "Address" : "California",
      "Telephone" : "67868568"
    },
    {
      "idDirector" : "D002",
      "Name" : "Lana Wachowski",
      "DoB" : "12/02/1963",
      "Address" : "New York",
      "Telephone" : "62368238"
    }
  ],
  "Writers" : [
    {
      "idWriter" : "W001",
      "Name" : "Andy Wachowski",
      "DoB" : "22/02/1964",
      "Address" : "California",
      "Telephone" : "67868568"
    },
    {
      "idDirector" : "W002",
      "Name" : "Lana Wachowski",
      "DoB" : "12/02/1963",
      "Address" : "New York",
      "Telephone" : "62368238"
    }
  ],
  "Stars" : [
    {
      "idStar" : "S001",
      "Name" : "Keanu Reeves",
      "DoB" : "22/01/1964",
      "Address" : "San Francisco",
      "Telephone" : "67863338",
      "Total" : " "
    },
    {
      "idStar" : "S002",
      "Name" : "Laurence Fishburne",
      "DoB" : "12/04/1963",
      "Address" : "Nan Jing",
      "Telephone" : "62444238",
      "Total" : " "
    },
    {
      "idStar" : "S003",
      "Name" : "Carrie Fisher",
      "DoB" : "12/05/1964",
      "Address" : "Tokyo",
      "Telephone" : "62447738",
      "Total" : " "
    }
  ]
}
1
>
```

## Insert movie Back to the future

```
>
> db.mdata.insert<
... <
...   "idMovie": "M002",
...   "title": "Back to the Future",
...   "year": "1985",
...   "Directors":
...     <
...       "idDirector": "D003",
...       "Name": "Robert Zemeckis",
...       "DoB": "22/02/1977",
...       "Address": "California",
...       "Telephone": "67868568"
...     >
...   ,
...   "Writers": [
...     <
...       "idWriter": "W003",
...       "Name": "Robert Zemeckis",
...       "DoB": "22/02/1977",
...       "Address": "California",
...       "Telephone": "33368568"
...     >,
...     <
...       "idDirector": "W004",
...       "Name": "Bob Gale",
...       "DoB": "12/02/1973",
...       "Address": "New York",
...       "Telephone": "62399938"
...     >
...   ],
...   "Stars": [ <
...     "idStar": "S004",
...     "Name": "Michael J. Fox",
...     "DoB": "22/01/1999",
...     "Address": "Bei Jing",
...     "Telephone": "67863448",
...     "Total": " "
...   >, <
...     "idStar": "S005",
...     "Name": "Christopher Lloyd",
...     "DoB": "12/04/1988",
...     "Address": "Nan Jing",
...     "Telephone": "62477738",
...     "Total": " "
...   >, <
...     "idStar": "S006",
...     "Name": "Lea Thompson",
...     "DoB": "12/05/1974",
...     "Address": "Tokyo",
...     "Telephone": "62447711",
...     "Total": " "
...   > ]
... > ]
... >>;
WriteResult<< "nInserted" : 1 >>
>
```

## Insert movie Avatar

```
C:\Windows\System32\cmd.exe

... >>>
WriteResult<< "nInserted" : 1 >>
>
>
> db.mdata.insert<
... {
...     "idMovie": "M003",
...     "title": "Avatar",
...     "year": "2009",
...     "Directors": [
...         {
...             "idDirector": "D004",
...             "Name": "James Cameron",
...             "DoB": "22/07/1964",
...             "Address": "California",
...             "Telephone": "67998568"
...         }
...     ],
...     "Writers": [
...         {
...             "idWriter": "W005",
...             "Name": "James Cameron",
...             "DoB": "22/07/1964",
...             "Address": "California",
...             "Telephone": "67998568"
...         }
...     ],
...     "Stars": [
...         {
...             "idStar": "S008",
...             "Name": "Sam Worthington",
...             "DoB": "12/04/1977",
...             "Address": "Bei Jing",
...             "Telephone": "62441118",
...             "Total": " "
...         },
...         {
...             "idStar": "S002",
...             "Name": "Zoe Saldana",
...             "DoB": "12/04/1963",
...             "Address": "Nan Jing",
...             "Telephone": "62444238",
...             "Total": " "
...         },
...         {
...             "idStar": "S009",
...             "Name": "Sigourney Weaver",
...             "DoB": "12/11/1966",
...             "Address": "Tokyo",
...             "Telephone": "62447218",
...             "Total": " "
...         }
...     ]
... }
... >>>
WriteResult<< "nInserted" : 1 >>
>
```

## Insert movie Pulp Fiction

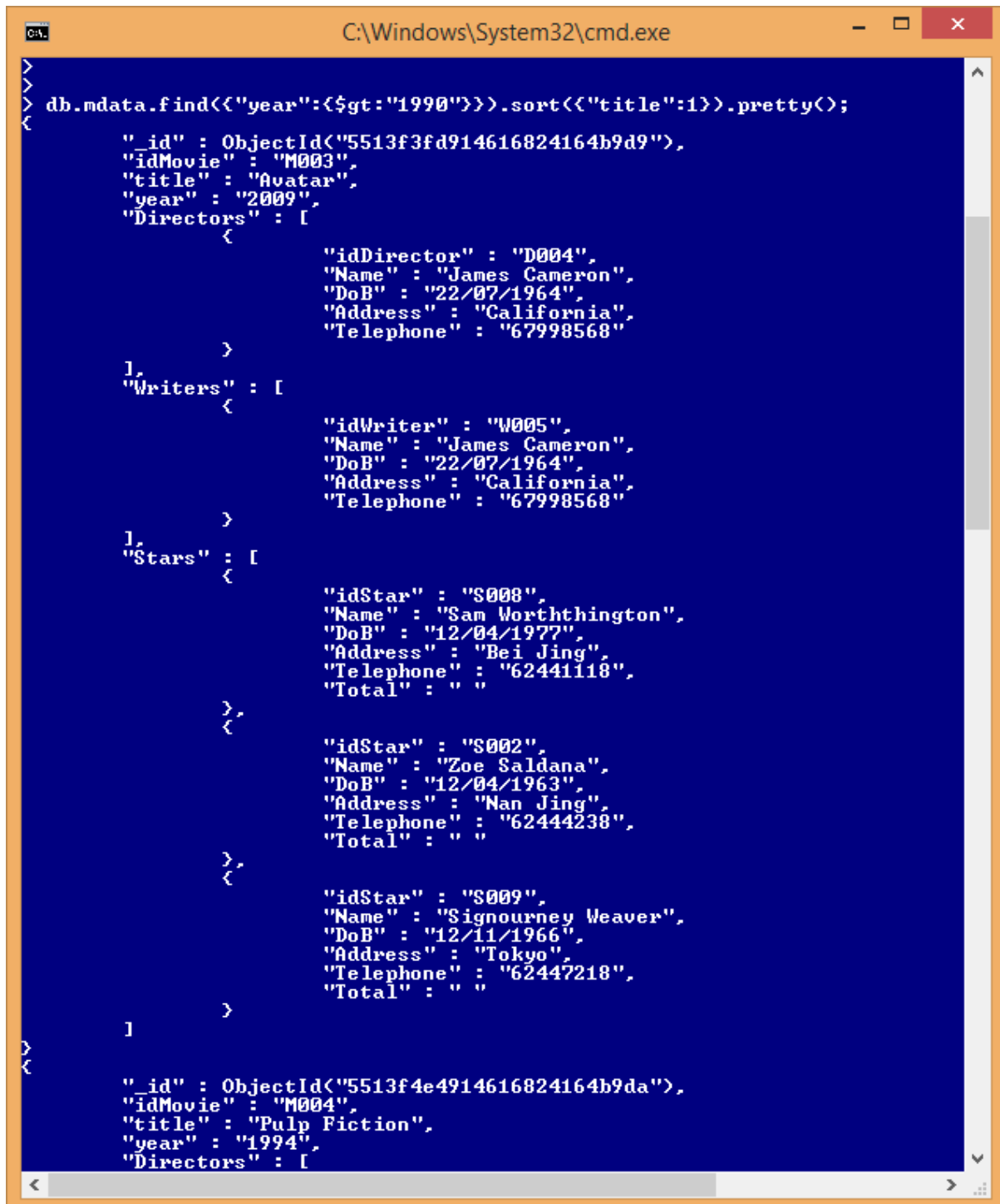
```
>
> db.mdata.insert(
... {
...   "idMovie": "M004",
...   "title": "Pulp Fiction",
...   "year": "1994",
...   "Directors": [
...     {
...       "idDirector": "D005",
...       "Name": "Quentin Tarantino",
...       "DoB": "11/02/1974",
...       "Address": "California",
...       "Telephone": "67328568"
...     }
...   ],
...   "Writers": [
...     {
...       "idWriter": "W006",
...       "Name": "Quentin Tarantino",
...       "DoB": "11/02/1974",
...       "Address": "California",
...       "Telephone": "67328568"
...     },
...     {
...       "idDirector": "W007",
...       "Name": "Roger Avarry",
...       "DoB": "23/02/1978",
...       "Address": "New York",
...       "Telephone": "62765238"
...     }
...   ],
...   "Stars": [
...     {
...       "idStar": "S010",
...       "Name": "John Travolta",
...       "DoB": "22/01/1978",
...       "Address": "Bei Jing",
...       "Telephone": "67345338",
...       "Total": " "
...     },
...     {
...       "idStar": "S011",
...       "Name": "Uma Thurman",
...       "DoB": "12/04/1983",
...       "Address": "Nan Jing",
...       "Telephone": "62441238",
...       "Total": " "
...     },
...     {
...       "idStar": "S012",
...       "Name": "Samuel L. Jackson",
...       "DoB": "12/05/1977",
...       "Address": "Tokyo",
...       "Telephone": "62412348",
...       "Total": " "
...     }
...   ]
... }
... >>>
WriteResult<< "nInserted" : 1 >>
>
```

## Insert movie Star Wars

```
>
>
> db.mdata.insert(
... {
...   "idMovie": "M005",
...   "title": "Star Wars",
...   "year": "1977",
...   "Directors": [
...     {
...       "idDirector": "D006",
...       "Name": "George Lucas",
...       "DoB": "22/02/1957",
...       "Address": "California",
...       "Telephone": "67868123"
...     }
...   ],
...   "Writers": [
...     {
...       "idWriter": "W007",
...       "Name": "George Lucas",
...       "DoB": "22/02/1957",
...       "Address": "California",
...       "Telephone": "67868123"
...     }
...   ],
...   "Stars": [
...     {
...       "idStar": "S013",
...       "Name": "Mark Hamill",
...       "DoB": "12/05/1969",
...       "Address": "Bei Jing",
...       "Telephone": "65444240",
...       "Total": " "
...     },
...     {
...       "idStar": "S014",
...       "Name": "Harrison Ford",
...       "DoB": "12/05/1974",
...       "Address": "Nan Jing",
...       "Telephone": "62489038",
...       "Total": " "
...     }
...   ]
... }
... >>;
WriteResult<< "nInserted" : 1 >>
>
```

(i) List the titles of all Movies where year > 1990 ordered by title

```
db.mdata.find({"year":{"$gt":"1990"}}).sort({"title":1}).pretty();
```



```
C:\Windows\System32\cmd.exe

>
>
> db.mdata.find(<<"year":{$gt:"1990"}>>).sort(<<"title":1>>).pretty();
<
  "_id" : ObjectId<"5513f3fd914616824164b9d9">,
  "idMovie" : "M003",
  "title" : "Avatar",
  "year" : "2009",
  "Directors" : [
    <
      "idDirector" : "D004",
      "Name" : "James Cameron",
      "DoB" : "22/07/1964",
      "Address" : "California",
      "Telephone" : "67998568"
    >
  ],
  "Writers" : [
    <
      "idWriter" : "W005",
      "Name" : "James Cameron",
      "DoB" : "22/07/1964",
      "Address" : "California",
      "Telephone" : "67998568"
    >
  ],
  "Stars" : [
    <
      "idStar" : "S008",
      "Name" : "Sam Worththington",
      "DoB" : "12/04/1977",
      "Address" : "Bei Jing",
      "Telephone" : "62441118",
      "Total" : " "
    >,
    <
      "idStar" : "S002",
      "Name" : "Zoe Saldana",
      "DoB" : "12/04/1963",
      "Address" : "Nan Jing",
      "Telephone" : "62444238",
      "Total" : " "
    >,
    <
      "idStar" : "S009",
      "Name" : "Signourney Weaver",
      "DoB" : "12/11/1966",
      "Address" : "Tokyo",
      "Telephone" : "62447218",
      "Total" : " "
    >
  ]
}
<

  "_id" : ObjectId<"5513f4e4914616824164b9da">,
  "idMovie" : "M004",
  "title" : "Pulp Fiction",
  "year" : "1994",
  "Directors" : [
```



```
C:\Windows\System32\cmd.exe

    "idMovie" : "M004",
    "title" : "Pulp Fiction",
    "year" : "1994",
    "Directors" : [
        {
            "idDirector" : "D005",
            "Name" : "Quentin Tarantino",
            "DoB" : "11/02/1974",
            "Address" : "California",
            "Telephone" : "67328568"
        }
    ],
    "Writers" : [
        {
            "idWriter" : "W006",
            "Name" : "Quentin Tarantino",
            "DoB" : "11/02/1974",
            "Address" : "California",
            "Telephone" : "67328568"
        },
        {
            "idDirector" : "W007",
            "Name" : "Roger Avaray",
            "DoB" : "23/02/1978",
            "Address" : "New York",
            "Telephone" : "62765238"
        }
    ],
    "Stars" : [
        {
            "idStar" : "S010",
            "Name" : "John Travolta",
            "DoB" : "22/01/1978",
            "Address" : "Bei Jing",
            "Telephone" : "67345338",
            "Total" : " "
        },
        {
            "idStar" : "S011",
            "Name" : "Uma Thurman",
            "DoB" : "12/04/1983",
            "Address" : "Nan Jing",
            "Telephone" : "62441238",
            "Total" : " "
        },
        {
            "idStar" : "S012",
            "Name" : "Samuel L. Jackson",
            "DoB" : "12/05/1977",
            "Address" : "Tokyo",
            "Telephone" : "62412348",
            "Total" : " "
        }
    ]
}
<

    "_id" : ObjectId("5513f3b3914616824164b9d7"),
    "idMovie" : "M001",
    "title" : "The Matrix",
    "year" : "1999",
    "Directors" : [
        {
            "idDirector" : "D001",
            "Name" : "The Wachowskis",
            "DoB" : "1967/04/04",
            "Address" : "Austin, Texas",
            "Telephone" : "5124567890"
        }
    ],
    "Writers" : [
        {
            "idWriter" : "W001",
            "Name" : "The Wachowskis",
            "DoB" : "1967/04/04",
            "Address" : "Austin, Texas",
            "Telephone" : "5124567890"
        }
    ],
    "Stars" : [
        {
            "idStar" : "S001",
            "Name" : "Keanu Reeves",
            "DoB" : "1977/09/12",
            "Address" : "Beijing",
            "Telephone" : "8610123456",
            "Total" : " "
        },
        {
            "idStar" : "S002",
            "Name" : "Laurence Fishburne",
            "DoB" : "1961/07/30",
            "Address" : "New York",
            "Telephone" : "2125551234",
            "Total" : " "
        },
        {
            "idStar" : "S003",
            "Name" : "Carrie-Anne Moss",
            "DoB" : "1977/05/14",
            "Address" : "Los Angeles",
            "Telephone" : "3105551234",
            "Total" : " "
        },
        {
            "idStar" : "S004",
            "Name" : "Hugo Weaving",
            "DoB" : "1960/04/08",
            "Address" : "Sydney",
            "Telephone" : "6121234567",
            "Total" : " "
        },
        {
            "idStar" : "S005",
            "Name" : "Gloria Foster",
            "DoB" : "1921/01/16",
            "Address" : "New York",
            "Telephone" : "2125551234",
            "Total" : " "
        }
    ]
}
```

```
C:\Windows\System32\cmd.exe

>
<
  "_id" : ObjectId("5513f3b3914616824164b9d7"),
  "idMovie" : "M001",
  "title" : "The Matrix",
  "year" : "1999",
  "Directors" : [
    <
      "idDirector" : "D001",
      "Name" : "Andy Wachowski",
      "DoB" : "22/02/1964",
      "Address" : "California",
      "Telephone" : "67868568"
    >,
    <
      "idDirector" : "D002",
      "Name" : "Lana Wachowski",
      "DoB" : "12/02/1963",
      "Address" : "New York",
      "Telephone" : "62368238"
    >
  ],
  "Writers" : [
    <
      "idWriter" : "W001",
      "Name" : "Andy Wachowski",
      "DoB" : "22/02/1964",
      "Address" : "California",
      "Telephone" : "67868568"
    >,
    <
      "idDirector" : "W002",
      "Name" : "Lana Wachowski",
      "DoB" : "12/02/1963",
      "Address" : "New York",
      "Telephone" : "62368238"
    >
  ],
  "Stars" : [
    <
      "idStar" : "S001",
      "Name" : "Keanu Reeves",
      "DoB" : "22/01/1964",
      "Address" : "San Francisco",
      "Telephone" : "67863338",
      "Total" : " "
    >,
    <
      "idStar" : "S002",
      "Name" : "Laurence Fishburne",
      "DoB" : "12/04/1963",
      "Address" : "Nan Jing",
      "Telephone" : "62444238",
      "Total" : " "
    >,
    <
      "idStar" : "S003",
      "Name" : "Carrie Fisher",
      "DoB" : "12/05/1964",

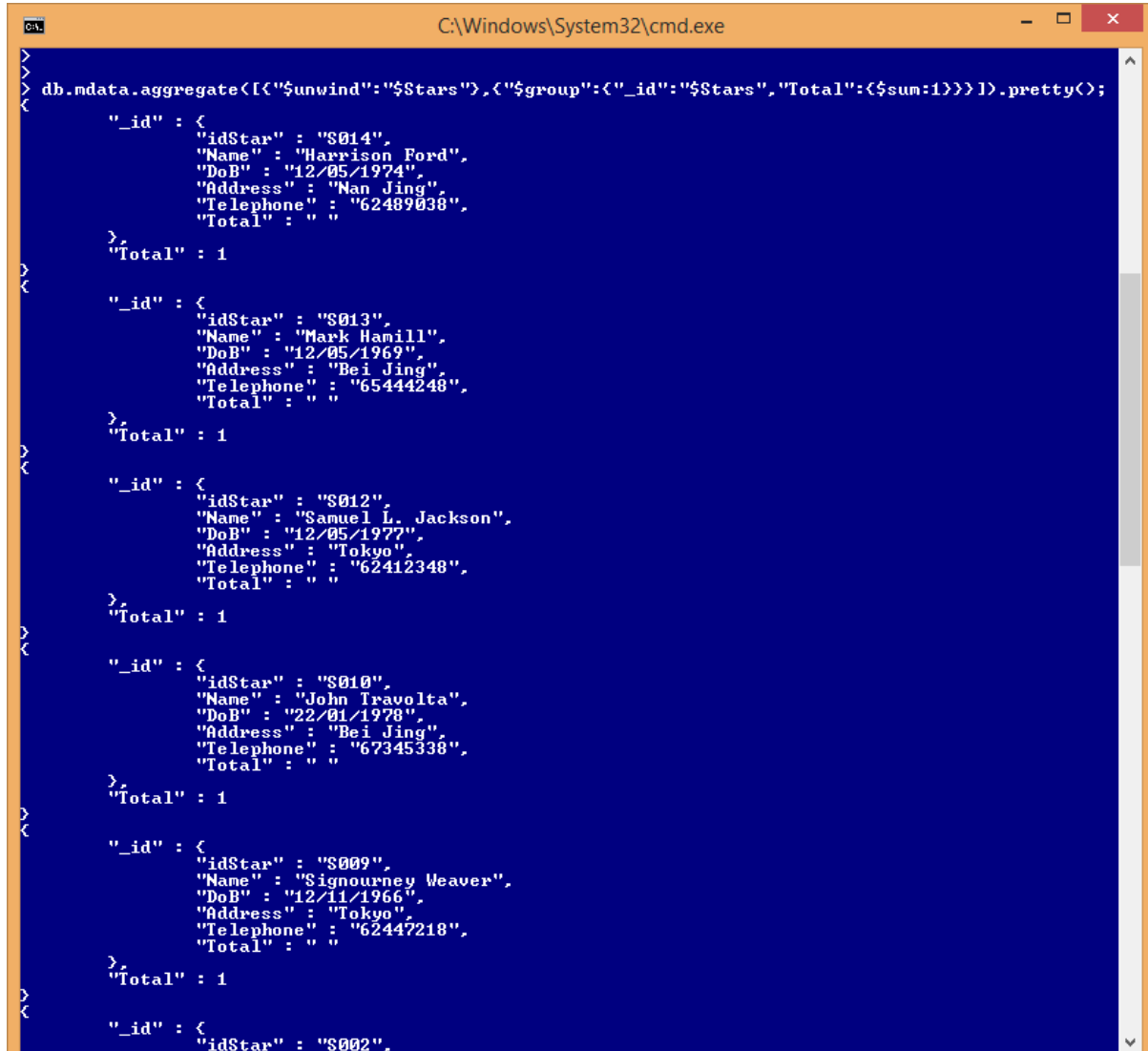
```

```
C:\Windows\System32\cmd.exe

"Telephone" : "67868568"
},
{
    "idDirector" : "D002",
    "Name" : "Lana Wachowski",
    "DoB" : "12/02/1963",
    "Address" : "New York",
    "Telephone" : "62368238"
}
],
" Writers" : [
{
    "idWriter" : "W001",
    "Name" : "Andy Wachowski",
    "DoB" : "22/02/1964",
    "Address" : "California",
    "Telephone" : "67868568"
},
{
    "idDirector" : "w002",
    "Name" : "Lana Wachowski",
    "DoB" : "12/02/1963",
    "Address" : "New York",
    "Telephone" : "62368238"
}
],
" Stars" : [
{
    "idStar" : "S001",
    "Name" : "Keanu Reeves",
    "DoB" : "22/01/1964",
    "Address" : "San Francisco",
    "Telephone" : "67863338",
    "Total" : " "
},
{
    "idStar" : "S002",
    "Name" : "Laurence Fishburne",
    "DoB" : "12/04/1963",
    "Address" : "Nan Jing",
    "Telephone" : "62444238",
    "Total" : " "
},
{
    "idStar" : "S003",
    "Name" : "Carrie Fisher",
    "DoB" : "12/05/1964",
    "Address" : "Tokyo",
    "Telephone" : "62447738",
    "Total" : " "
}
]
]
```

(ii) List the number of movies each star has appeared in.

```
db.mdata.aggregate([{"$unwind":"$Stars"}, {"$group":{"_id":"$Stars", "Total":{$sum:1}}}).pretty();
```



```
C:\Windows\System32\cmd.exe

>
> db.mdata.aggregate([{"$unwind":"$Stars"}, {"$group":{"_id":"$Stars", "Total":{$sum:1}}}).pretty();
{
  "_id" : {
    "idStar" : "S014",
    "Name" : "Harrison Ford",
    "DoB" : "12/05/1974",
    "Address" : "Nan Jing",
    "Telephone" : "62489038",
    "Total" : "  "
  },
  "Total" : 1
}
{
  "_id" : {
    "idStar" : "S013",
    "Name" : "Mark Hamill",
    "DoB" : "12/05/1969",
    "Address" : "Bei Jing",
    "Telephone" : "65444248",
    "Total" : "  "
  },
  "Total" : 1
}
{
  "_id" : {
    "idStar" : "S012",
    "Name" : "Samuel L. Jackson",
    "DoB" : "12/05/1977",
    "Address" : "Tokyo",
    "Telephone" : "62412348",
    "Total" : "  "
  },
  "Total" : 1
}
{
  "_id" : {
    "idStar" : "S010",
    "Name" : "John Travolta",
    "DoB" : "22/01/1978",
    "Address" : "Bei Jing",
    "Telephone" : "67345338",
    "Total" : "  "
  },
  "Total" : 1
}
{
  "_id" : {
    "idStar" : "S009",
    "Name" : "Signourney Weaver",
    "DoB" : "12/11/1966",
    "Address" : "Tokyo",
    "Telephone" : "62447218",
    "Total" : "  "
  },
  "Total" : 1
}
{
  "_id" : {
    "idStar" : "S002",
```

```
C:\Windows\System32\cmd.exe

>,
"Total" : 1
}
<
  "_id" : {
    "idStar" : "S006",
    "Name" : "Lea Thompson",
    "DoB" : "12/05/1974",
    "Address" : "Tokyo",
    "Telephone" : "62447711",
    "Total" : " "
  },
  "Total" : 1
}
<
  "_id" : {
    "idStar" : "S005",
    "Name" : "Christopher Lloyd",
    "DoB" : "12/04/1988",
    "Address" : "Nan Jing",
    "Telephone" : "62477738",
    "Total" : " "
  },
  "Total" : 1
}
<
  "_id" : {
    "idStar" : "S011",
    "Name" : "Uma Thurman",
    "DoB" : "12/04/1983",
    "Address" : "Nan Jing",
    "Telephone" : "62441238",
    "Total" : " "
  },
  "Total" : 1
}
<
  "_id" : {
    "idStar" : "S008",
    "Name" : "Sam Worthington",
    "DoB" : "12/04/1977",
    "Address" : "Bei Jing",
    "Telephone" : "62441118",
    "Total" : " "
  },
  "Total" : 1
}
<
  "_id" : {
    "idStar" : "S001",
    "Name" : "Keanu Reeves",
    "DoB" : "22/01/1964",
    "Address" : "San Francisco",
    "Telephone" : "67863338",
    "Total" : " "
  },
  "Total" : 1
}
<
  "_id" : {
    "idStar" : "S003",
```

```
C:\Windows\System32\cmd.exe

>
"Total" : 1
<
  "_id" : {
    "idStar" : "S008",
    "Name" : "Sam Worththington",
    "DoB" : "12/04/1977",
    "Address" : "Bei Jing",
    "Telephone" : "62441118",
    "Total" : " "
  }
>
"Total" : 1
<
  "_id" : {
    "idStar" : "S001",
    "Name" : "Keanu Reeves",
    "DoB" : "22/01/1964",
    "Address" : "San Francisco",
    "Telephone" : "67863338",
    "Total" : " "
  }
>
"Total" : 1
<
  "_id" : {
    "idStar" : "S003",
    "Name" : "Carrie Fisher",
    "DoB" : "12/05/1964",
    "Address" : "Tokyo",
    "Telephone" : "62447738",
    "Total" : " "
  }
>
"Total" : 1
<
  "_id" : {
    "idStar" : "S004",
    "Name" : "Michael J. Fox",
    "DoB" : "22/01/1999",
    "Address" : "Bei Jing",
    "Telephone" : "67863448",
    "Total" : " "
  }
>
"Total" : 1
<
  "_id" : {
    "idStar" : "S002",
    "Name" : "Laurence Fishburne",
    "DoB" : "12/04/1963",
    "Address" : "Nan Jing",
    "Telephone" : "62444238",
    "Total" : " "
  }
>
"Total" : 1
>
>
>
```

XML :

The Matrix :

```
1  <?xml version="1.0" encoding="UTF-8" ?>
2  <root>
3      <idMovie>M001</idMovie>
4      <title>The Matrix</title>
5      <year>1999</year>
6      <Directors>
7          <idDirector>D001</idDirector>
8          <Name>Andy Wachowski</Name>
9          <DoB>22/02/1964</DoB>
10         <Address>California</Address>
11         <Telephone>67868568</Telephone>
12     </Directors>
13     <Directors>
14         <idDirector>D002</idDirector>
15         <Name>Lana Wachowski</Name>
16         <DoB>12/02/1963</DoB>
17         <Address>New York</Address>
18         <Telephone>62368238</Telephone>
19     </Directors>
20     <Writers>
21         <idWriter>W001</idWriter>
22         <Name>Andy Wachowski</Name>
23         <DoB>22/02/1964</DoB>
24         <Address>California</Address>
25         <Telephone>67868568</Telephone>
26     </Writers>
27     <Writers>
28         <idDirector>W002</idDirector>
29         <Name>Lana Wachowski</Name>
30         <DoB>12/02/1963</DoB>
31         <Address>New York</Address>
32         <Telephone>62368238</Telephone>
33     </Writers>
34     <Stars>
35         <idStar>S001</idStar>
36         <Name>Keanu Reeves</Name>
37         <DoB>22/01/1964</DoB>
38         <Address>San Francisco</Address>
39         <Telephone>67863338</Telephone>
40         <Total></Total>
41     </Stars>
42     <Stars>
43         <idStar>S002</idStar>
44         <Name>Laurence Fishburne</Name>
45         <DoB>12/04/1963</DoB>
46         <Address>Nan Jing</Address>
```

```
41     </Stars>
42     <Stars>
43         <idStar>S002</idStar>
44         <Name>Laurence Fishburne</Name>
45         <DoB>12/04/1963</DoB>
46         <Address>Nan Jing</Address>
47         <Telephone>62444238</Telephone>
48         <Total></Total>
49     </Stars>
50     <Stars>
51         <idStar>S003</idStar>
52         <Name>Carrie Fisher</Name>
53         <DoB>12/05/1964</DoB>
54         <Address>Tokyo</Address>
55         <Telephone>62447738</Telephone>
56         <Total></Total>
57     </Stars>
58 </root>
```

eXtensible Markup Language file

eXtensible Markup Language file

```
<?xml version="1.0" encoding="UTF-8" ?>
<root>
  <idMovie>M001</idMovie>
  <title>The Matrix</title>
  <year>1999</year>
  <Directors>
    <idDirector>D001</idDirector>
    <Name>Andy Wachowski</Name>
    <DoB>22/02/1964</DoB>
    <Address>California</Address>
    <Telephone>67868568</Telephone>
  </Directors>
  <Directors>
    <idDirector>D002</idDirector>
    <Name>Lana Wachowski</Name>
    <DoB>12/02/1963</DoB>
    <Address>New York</Address>
    <Telephone>62368238</Telephone>
  </Directors>
  <Writers>
    <idWriter>W001</idWriter>
    <Name>Andy Wachowski</Name>
    <DoB>22/02/1964</DoB>
    <Address>California</Address>
    <Telephone>67868568</Telephone>
  </Writers>
  <Writers>
    <idDirector>W002</idDirector>
    <Name>Lana Wachowski</Name>
    <DoB>12/02/1963</DoB>
    <Address>New York</Address>
    <Telephone>62368238</Telephone>
  </Writers>
  <Stars>
    <idStar>S001</idStar>
    <Name>Keanu Reeves</Name>
    <DoB>22/01/1964</DoB>
    <Address>San Francisco</Address>
    <Telephone>67863338</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S002</idStar>
    <Name>Laurence Fishburne</Name>
    <DoB>12/04/1963</DoB>
    <Address>Nan Jing</Address>
    <Telephone>62444238</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S003</idStar>
    <Name>Carrie Fisher</Name>
    <DoB>12/05/1964</DoB>
    <Address>Tokyo</Address>
    <Telephone>62447738</Telephone>
    <Total></Total>
  </Stars>
</root>
```



## Back to the Future

```
<?xml version="1.0" encoding="UTF-8" ?>
<root>
  <idMovie>M002</idMovie>
  <title>Back to the Future</title>
  <year>1985</year>
  <Directors>
    <idDirector>D003</idDirector>
    <Name>Robert Zemeckis</Name>
    <DoB>22/02/1977</DoB>
    <Address>California</Address>
    <Telephone>67868568</Telephone>
  </Directors>
  <Writers>
    <idWriter>W003</idWriter>
    <Name>Robert Zemeckis</Name>
    <DoB>22/02/1977</DoB>
    <Address>California</Address>
    <Telephone>33368568</Telephone>
  </Writers>
  <Writers>
    <idDirector>W004</idDirector>
    <Name>Bob Gale</Name>
    <DoB>12/02/1973</DoB>
    <Address>New York</Address>
    <Telephone>62399938</Telephone>
  </Writers>
  <Stars>
    <idStar>S004</idStar>
    <Name>Michael J. Fox</Name>
    <DoB>22/01/1999</DoB>
    <Address>Bei Jing</Address>
    <Telephone>67863448</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S005</idStar>
    <Name>Christopher Lloyd</Name>
    <DoB>12/04/1988</DoB>
    <Address>Nan Jing</Address>
    <Telephone>62477738</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S006</idStar>
    <Name>Lea Thompson</Name>
    <DoB>12/05/1974</DoB>
    <Address>Tokyo</Address>
    <Telephone>62447711</Telephone>
    <Total></Total>
  </Stars>
</root>
```

## Avatar

```
<?xml version="1.0" encoding="UTF-8" ?>
<root>
  <idMovie>M003</idMovie>
  <title>Avatar</title>
  <year>2009</year>
  <Directors>
    <idDirector>D004</idDirector>
    <Name>James Cameron</Name>
    <DoB>22/07/1964</DoB>
    <Address>California</Address>
    <Telephone>67998568</Telephone>
  </Directors>
  <Writers>
    <idWriter>W005</idWriter>
    <Name>James Cameron</Name>
    <DoB>22/07/1964</DoB>
    <Address>California</Address>
    <Telephone>67998568</Telephone>
  </Writers>
  <Stars>
    <idStar>S008</idStar>
    <Name>Sam Worthington</Name>
    <DoB>12/04/1977</DoB>
    <Address>Bei Jing</Address>
    <Telephone>62441118</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S002</idStar>
    <Name>Zoe Saldana</Name>
    <DoB>12/04/1963</DoB>
    <Address>Nan Jing</Address>
    <Telephone>62444238</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S009</idStar>
    <Name>Sigourney Weaver</Name>
    <DoB>12/11/1966</DoB>
    <Address>Tokyo</Address>
    <Telephone>62447218</Telephone>
    <Total></Total>
  </Stars>
</root>
```

## Pulp Fiction

```
<?xml version="1.0" encoding="UTF-8" ?>
<root>
  <idMovie>M004</idMovie>
  <title>Pulp Fiction</title>
  <year>1994</year>
  <Directors>
    <idDirector>D005</idDirector>
    <Name>Quentin Tarantino</Name>
    <DoB>11/02/1974</DoB>
    <Address>California</Address>
    <Telephone>67328568</Telephone>
  </Directors>
  <Writers>
    <idWriter>W006</idWriter>
    <Name>Quentin Tarantino</Name>
    <DoB>11/02/1974</DoB>
    <Address>California</Address>
    <Telephone>67328568</Telephone>
  </Writers>
  <Writers>
    <idDirector>w007</idDirector>
    <Name>Roger Avary</Name>
    <DoB>23/02/1978</DoB>
    <Address>New York</Address>
    <Telephone>62765238</Telephone>
  </Writers>
  <Stars>
    <idStar>S010</idStar>
    <Name>John Travolta</Name>
    <DoB>22/01/1978</DoB>
    <Address>Bei Jing</Address>
    <Telephone>67345338</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S011</idStar>
    <Name>Uma Thurman</Name>
    <DoB>12/04/1983</DoB>
    <Address>Nan Jing</Address>
    <Telephone>62441238</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S012</idStar>
    <Name>Samuel L. Jackson</Name>
    <DoB>12/05/1977</DoB>
    <Address>Tokyo</Address>
    <Telephone>62412348</Telephone>
    <Total></Total>
  </Stars>
</root>
```

## Star Wars

```
<?xml version="1.0" encoding="UTF-8" ?>
<root>
  <idMovie>M005</idMovie>
  <title>Star Wars</title>
  <year>1977</year>
  <Directors>
    <idDirector>D006</idDirector>
    <Name>George Lucas</Name>
    <DoB>22/02/1957</DoB>
    <Address>California</Address>
    <Telephone>67868123</Telephone>
  </Directors>
  <Writers>
    <idWriter>W007</idWriter>
    <Name>George Lucas</Name>
    <DoB>22/02/1957</DoB>
    <Address>California</Address>
    <Telephone>67868123</Telephone>
  </Writers>
  <Stars>
    <idStar>S013</idStar>
    <Name>Mark Hamill</Name>
    <DoB>12/05/1969</DoB>
    <Address>Bei Jing</Address>
    <Telephone>65444248</Telephone>
    <Total></Total>
  </Stars>
  <Stars>
    <idStar>S014</idStar>
    <Name>Harrison Ford</Name>
    <DoB>12/05/1974</DoB>
    <Address>Nan Jing</Address>
    <Telephone>62489038</Telephone>
    <Total></Total>
  </Stars>
</root>
```