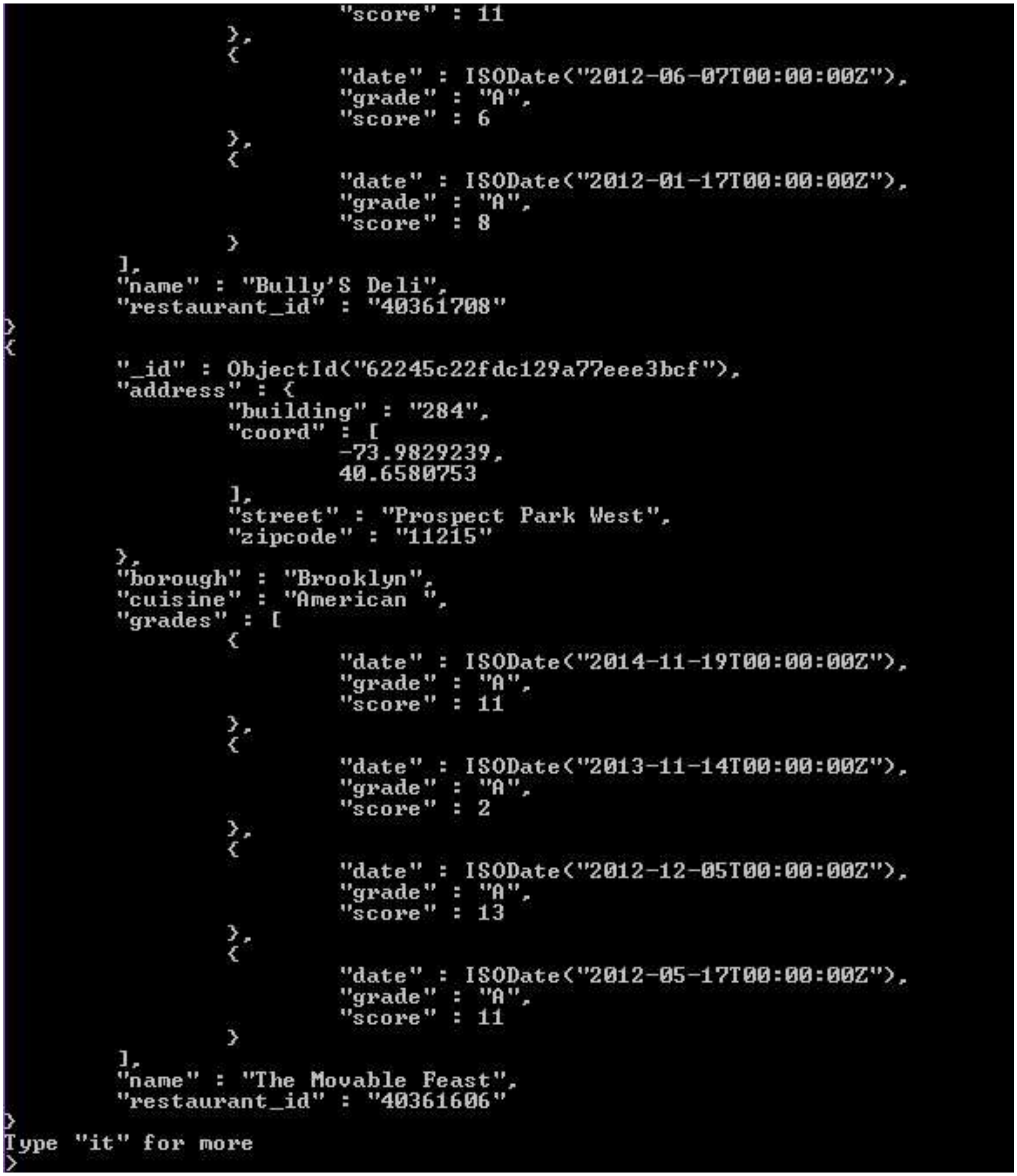
PRACTICAL-3

NoSQL

AIM: Performing queries based on AND, OR, Limit, Sort and Projection and apply some queries to get specified output.

1. Write a MongoDB query to display all the documents in the collection restaurants.

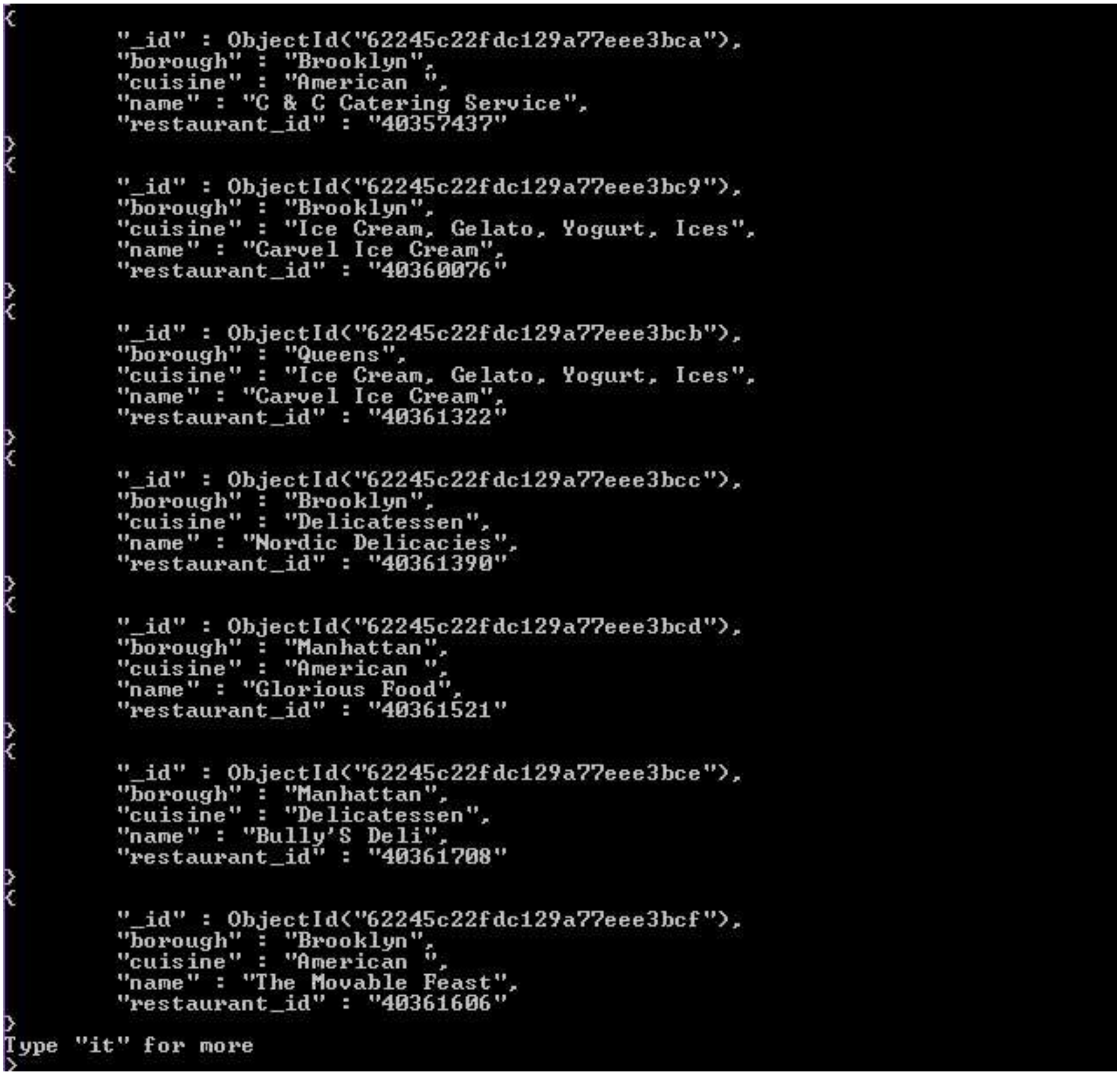
```
db.restaurants.find().pretty()
```



```
                        "score" : 11
                },
                {
                        "date" : ISODate("2012-06-07T00:00:00Z"),
                        "grade" : "A",
                        "score" : 6
                },
                {
                        "date" : ISODate("2012-01-17T00:00:00Z"),
                        "grade" : "A",
                        "score" : 8
                }
        ],
        "name" : "Bully'S Deli",
        "restaurant_id" : "40361708"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bcf"),
        "address" : {
                "building" : "284",
                "coord" : [
                        -73.9829239,
                        40.6580753
                ],
                "street" : "Prospect Park West",
                "zipcode" : "11215"
        },
        "borough" : "Brooklyn",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : ISODate("2014-11-19T00:00:00Z"),
                        "grade" : "A",
                        "score" : 11
                },
                {
                        "date" : ISODate("2013-11-14T00:00:00Z"),
                        "grade" : "A",
                        "score" : 2
                },
                {
                        "date" : ISODate("2012-12-05T00:00:00Z"),
                        "grade" : "A",
                        "score" : 13
                },
                {
                        "date" : ISODate("2012-05-17T00:00:00Z"),
                        "grade" : "A",
                        "score" : 11
                }
        ],
        "name" : "The Movable Feast",
        "restaurant_id" : "40361606"
}
Type "it" for more
>
```

2. Write a MongoDB query to display the fields restaurant_id, name, borough and cuisine for all the documents in the collection restaurant.

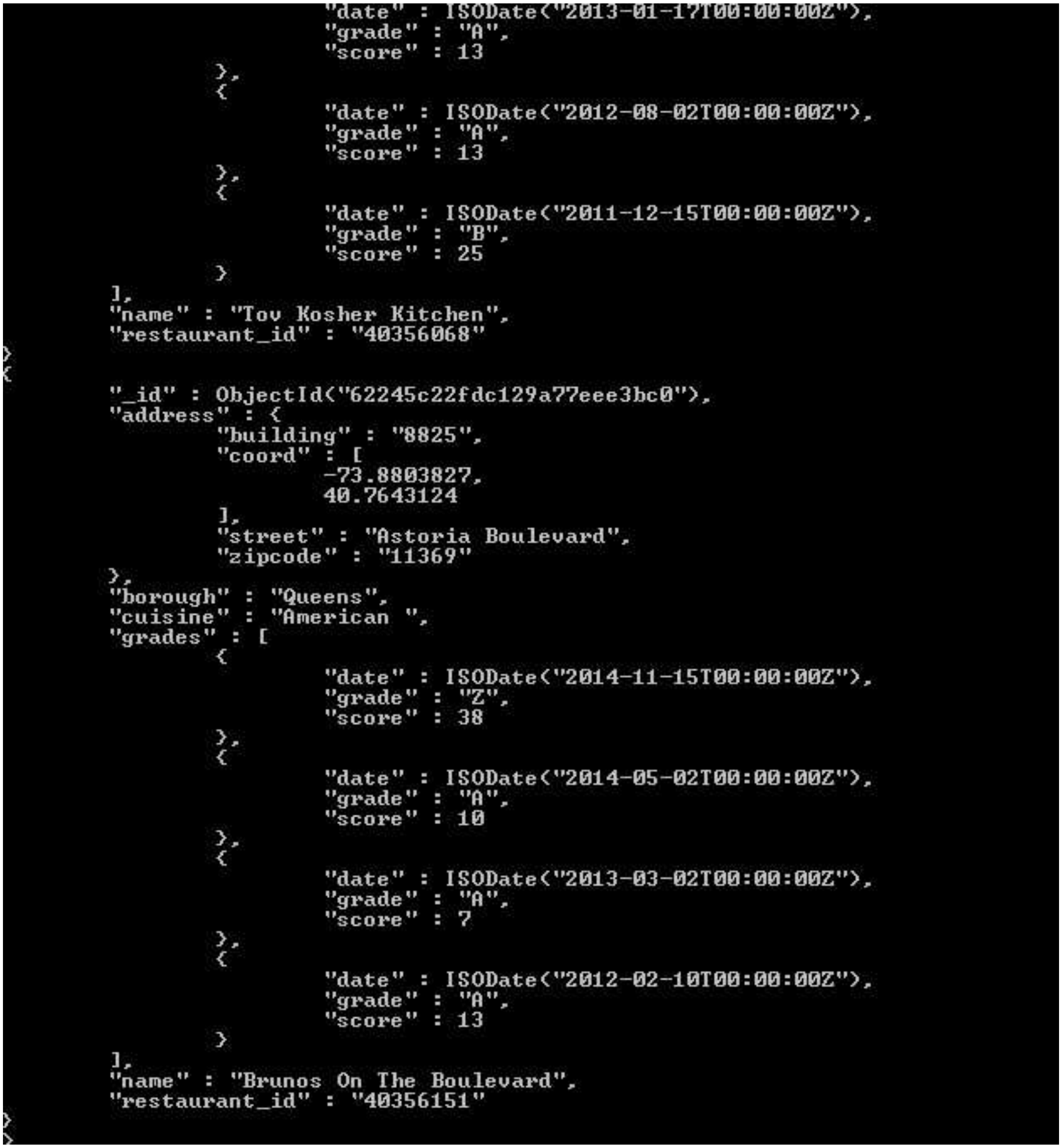
db. restaurants.find({},{"restaurant_id" : 1,"name" :1,"borough":1,"cuisine" :1}).pretty()



```
{
        "_id" : ObjectId("62245c22fdc129a77eee3bca"),
        "borough" : "Brooklyn",
        "cuisine" : "American ",
        "name" : "C & C Catering Service",
        "restaurant_id" : "40357437"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bc9"),
        "borough" : "Brooklyn",
        "cuisine" : "Ice Cream, Gelato, Yogurt, Ices",
        "name" : "Carvel Ice Cream",
        "restaurant_id" : "40360076"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bcb"),
        "borough" : "Queens",
        "cuisine" : "Ice Cream, Gelato, Yogurt, Ices",
        "name" : "Carvel Ice Cream",
        "restaurant_id" : "40361322"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bcc"),
        "borough" : "Brooklyn",
        "cuisine" : "Delicatessen",
        "name" : "Nordic Delicacies",
        "restaurant_id" : "40361390"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bcd"),
        "borough" : "Manhattan",
        "cuisine" : "American ",
        "name" : "Glorious Food",
        "restaurant_id" : "40361521"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bce"),
        "borough" : "Manhattan",
        "cuisine" : "Delicatessen",
        "name" : "Bully'S Deli",
        "restaurant_id" : "40361708"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bcf"),
        "borough" : "Brooklyn",
        "cuisine" : "American ",
        "name" : "The Movable Feast",
        "restaurant_id" : "40361606"
}
Type "it" for more
>
```

3. Write a MongoDB query to display the fields restaurant_id, name, borough and zip code, but exclude the field _id for all the documents in the collection restaurant. (USING PROJECTION)

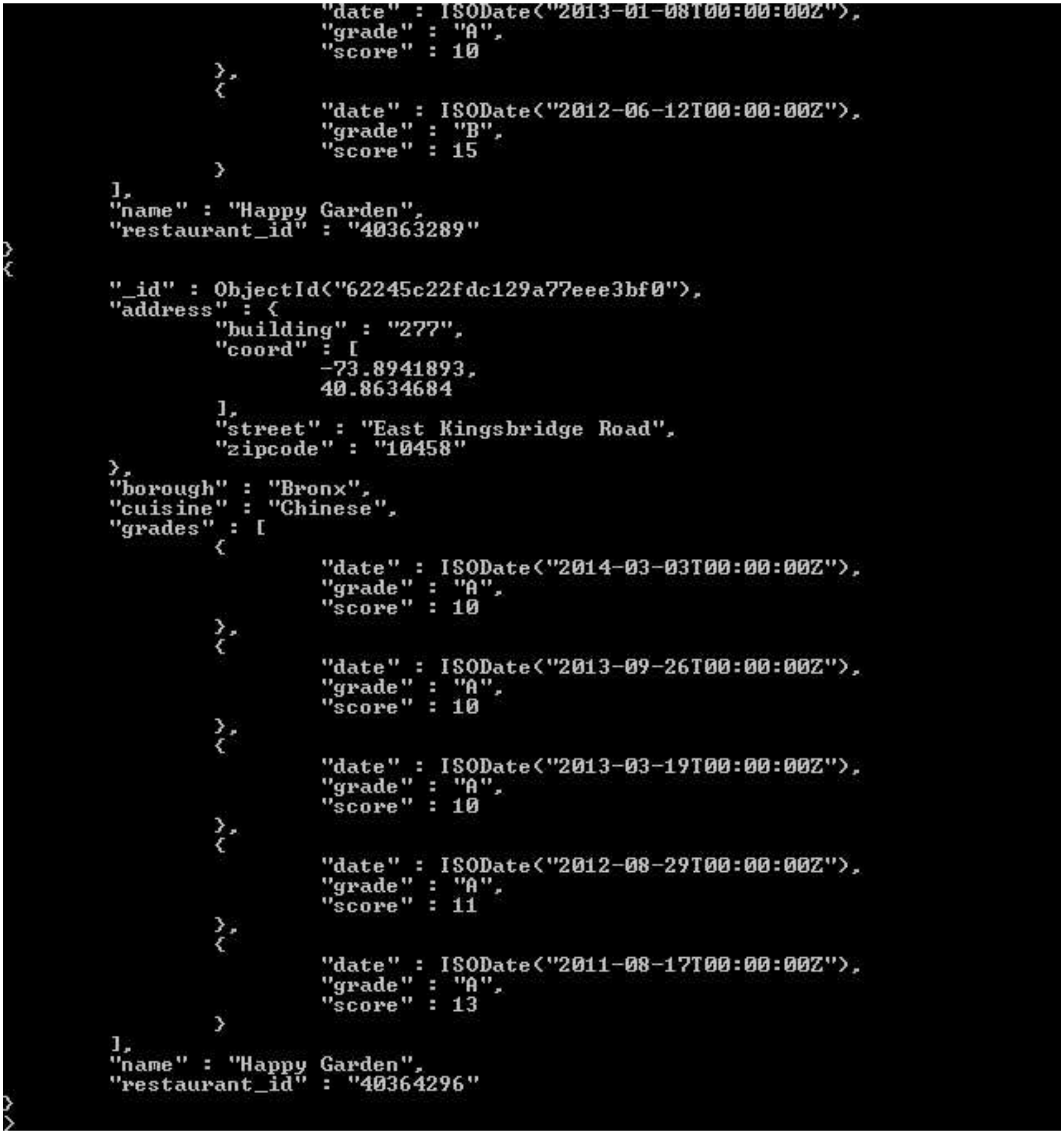
db. restaurants.find().pretty().limit(5)



```
                        "date" : ISODate("2013-01-17T00:00:00Z"),
                        "grade" : "A",
                        "score" : 13
                },
                {
                        "date" : ISODate("2012-08-02T00:00:00Z"),
                        "grade" : "A",
                        "score" : 13
                },
                {
                        "date" : ISODate("2011-12-15T00:00:00Z"),
                        "grade" : "B",
                        "score" : 25
                }
        ],
        "name" : "Tov Kosher Kitchen",
        "restaurant_id" : "40356068"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3bc0"),
        "address" : {
                "building" : "8825",
                "coord" : [
                        -73.8803827,
                        40.7643124
                ],
                "street" : "Astoria Boulevard",
                "zipcode" : "11369"
        },
        "borough" : "Queens",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : ISODate("2014-11-15T00:00:00Z"),
                        "grade" : "Z",
                        "score" : 38
                },
                {
                        "date" : ISODate("2014-05-02T00:00:00Z"),
                        "grade" : "A",
                        "score" : 10
                },
                {
                        "date" : ISODate("2013-03-02T00:00:00Z"),
                        "grade" : "A",
                        "score" : 7
                },
                {
                        "date" : ISODate("2012-02-10T00:00:00Z"),
                        "grade" : "A",
                        "score" : 13
                }
        ],
        "name" : "Brunos On The Boulevard",
        "restaurant_id" : "40356151"
}
>
```

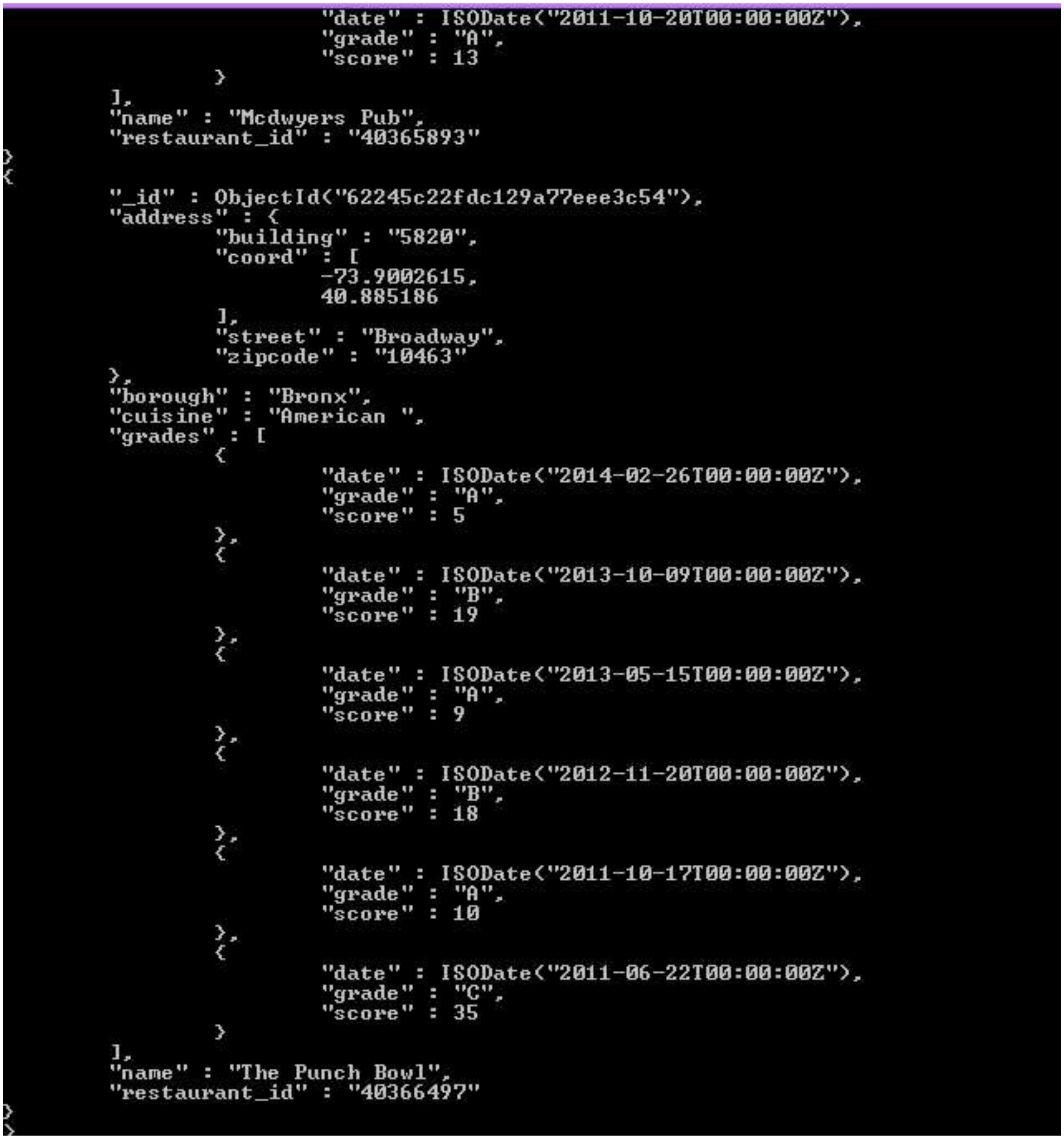
4. Write a MongoDB query to display the first 5 restaurant which is in the borough Bronx. (USING LIMIT)

db. restaurants.find({borough:"Bronx"}).pretty().limit(5)



```
                                "date" : ISODate("2013-01-08T00:00:00Z"),
                                "grade" : "A",
                                "score" : 10
                        },
                        {
                                "date" : ISODate("2012-06-12T00:00:00Z"),
                                "grade" : "B",
                                "score" : 15
                        }
                ],
                "name" : "Happy Garden",
                "restaurant_id" : "40363289"
}
{
                "_id" : ObjectId("62245c22fdc129a77eee3bf0"),
                "address" : {
                        "building" : "277",
                        "coord" : [
                                -73.8941893,
                                40.8634684
                        ],
                        "street" : "East Kingsbridge Road",
                        "zipcode" : "10458"
                },
                "borough" : "Bronx",
                "cuisine" : "Chinese",
                "grades" : [
                        {
                                "date" : ISODate("2014-03-03T00:00:00Z"),
                                "grade" : "A",
                                "score" : 10
                        },
                        {
                                "date" : ISODate("2013-09-26T00:00:00Z"),
                                "grade" : "A",
                                "score" : 10
                        },
                        {
                                "date" : ISODate("2013-03-19T00:00:00Z"),
                                "grade" : "A",
                                "score" : 10
                        },
                        {
                                "date" : ISODate("2012-08-29T00:00:00Z"),
                                "grade" : "A",
                                "score" : 11
                        },
                        {
                                "date" : ISODate("2011-08-17T00:00:00Z"),
                                "grade" : "A",
                                "score" : 13
                        }
                ],
                "name" : "Happy Garden",
                "restaurant_id" : "40364296"
}
>
```

5. Write a MongoDB query to display the next 5 restaurants after skipping first 5 which are in the borough Bronx. (USING SKIP) db. restaurants.find({borough:"Bronx"}).pretty().limit(5).skip(5)

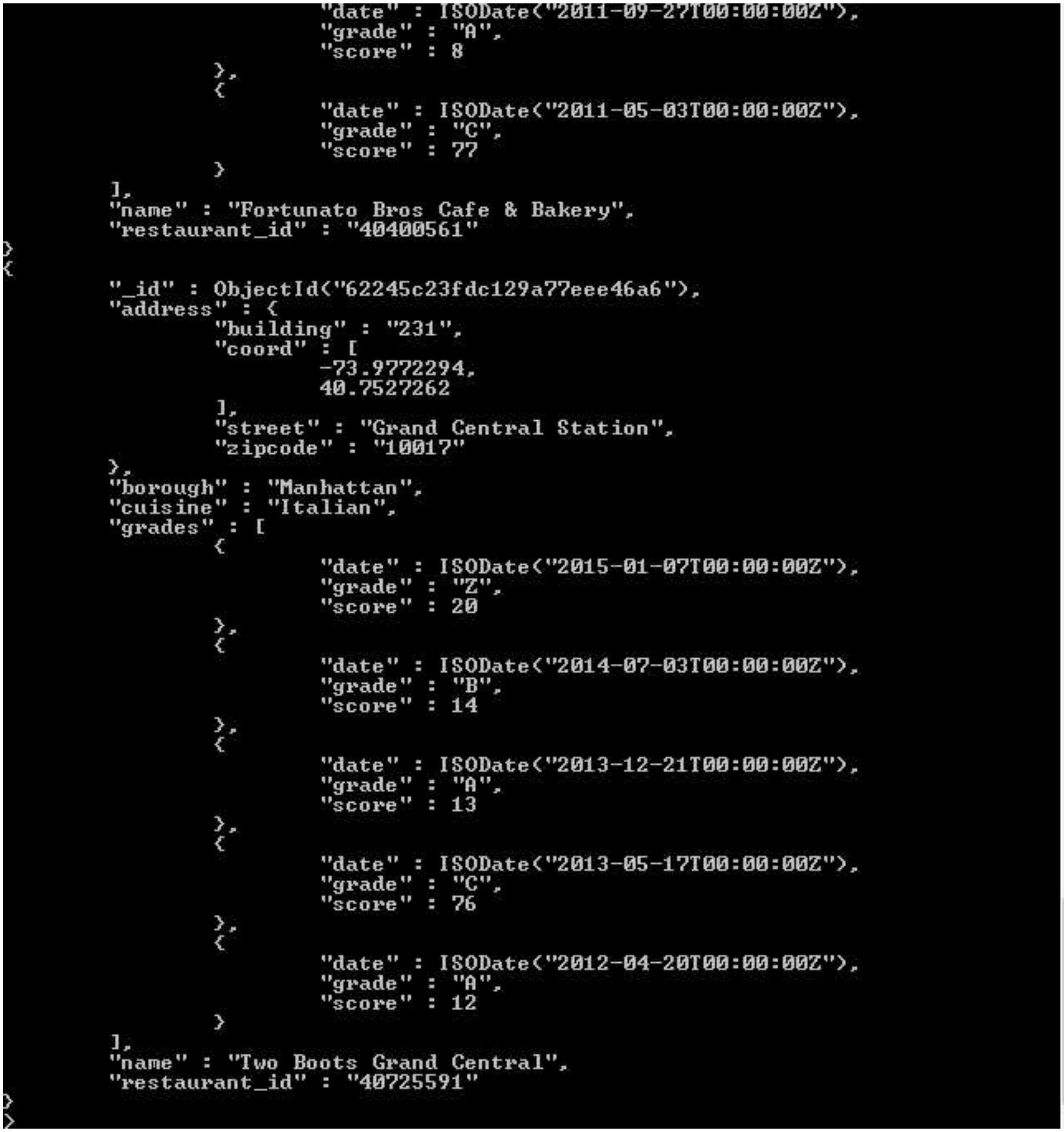


```
                        "date" : ISODate("2011-10-20T00:00:00Z"),
                        "grade" : "A",
                        "score" : 13
                }
        ],
        "name" : "Mcdwyers Pub",
        "restaurant_id" : "40365893"
}
{

        "_id" : ObjectId("62245c22fdc129a77eee3c54"),
        "address" : {
                "building" : "5820",
                "coord" : [
                        -73.9002615,
                        40.885186
                ],
                "street" : "Broadway",
                "zipcode" : "10463"
        },
        "borough" : "Bronx",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : ISODate("2014-02-26T00:00:00Z"),
                        "grade" : "A",
                        "score" : 5
                },
                {
                        "date" : ISODate("2013-10-09T00:00:00Z"),
                        "grade" : "B",
                        "score" : 19
                },
                {
                        "date" : ISODate("2013-05-15T00:00:00Z"),
                        "grade" : "A",
                        "score" : 9
                },
                {
                        "date" : ISODate("2012-11-20T00:00:00Z"),
                        "grade" : "B",
                        "score" : 18
                },
                {
                        "date" : ISODate("2011-10-17T00:00:00Z"),
                        "grade" : "A",
                        "score" : 10
                },
                {
                        "date" : ISODate("2011-06-22T00:00:00Z"),
                        "grade" : "C",
                        "score" : 35
                }
        ],
        "name" : "The Punch Bowl",
        "restaurant_id" : "40366497"
}
>
```

6. Write a MongoDB query to find the restaurants that do not prepare any cuisine of 'American' and their grade score more than 70 and latitude less than -65.754168. (USING AND)

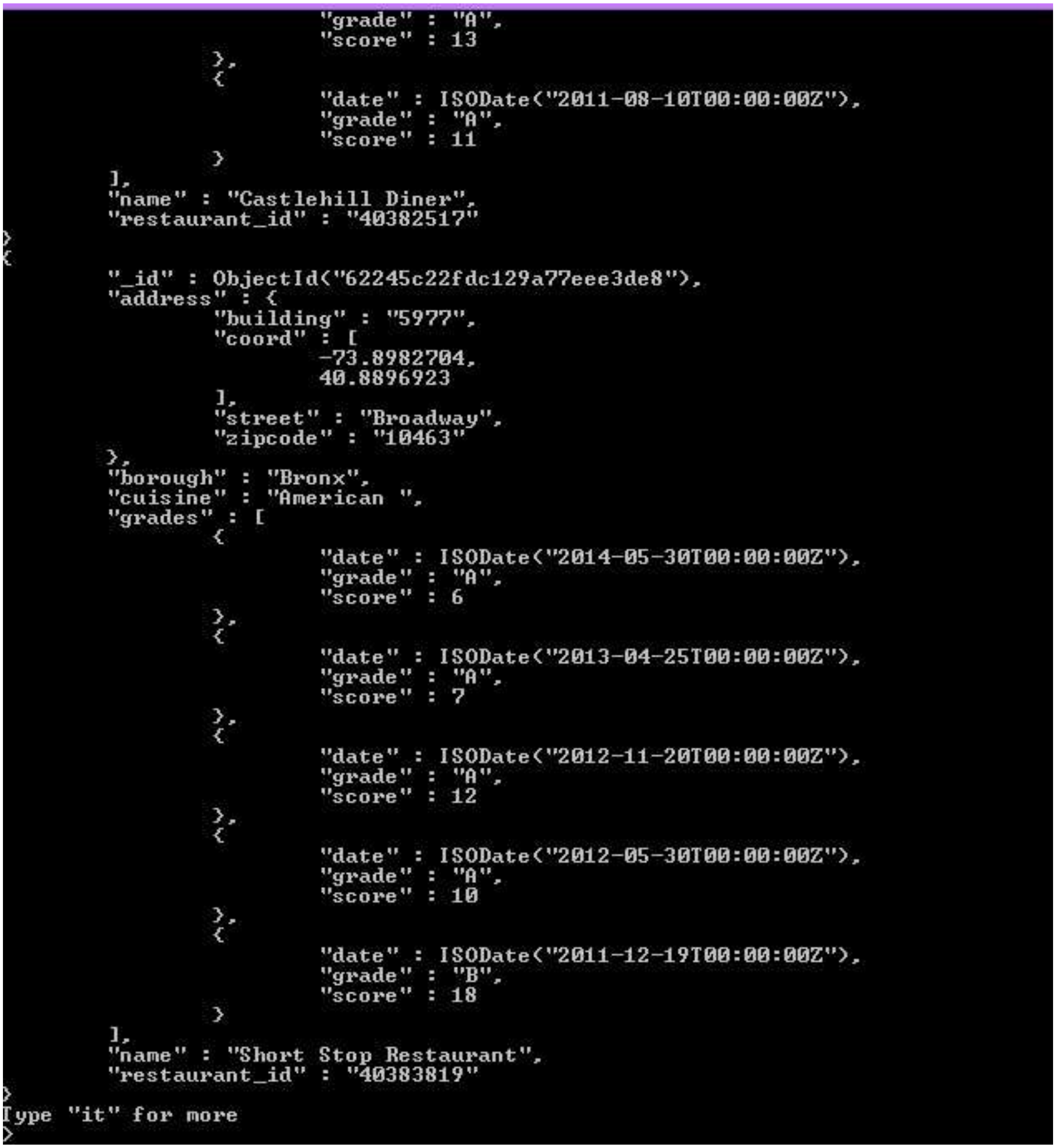
db. restaurants.find({$and:[{"cuisine":{$ne:"American "}},{"grades.score":{$gt:70}},{"address.coord":{$lt:-65.754168}}]}).pretty()



```
                                "date" : ISODate("2011-09-27T00:00:00Z"),
                                "grade" : "A",
                                "score" : 8
                        },
                        {
                                "date" : ISODate("2011-05-03T00:00:00Z"),
                                "grade" : "C",
                                "score" : 77
                        }
                ],
                "name" : "Fortunato Bros Cafe & Bakery",
                "restaurant_id" : "40400561"
}
{
                "_id" : ObjectId("62245c23fdc129a77eee46a6"),
                "address" : {
                        "building" : "231",
                        "coord" : [
                                -73.9772294,
                                40.7527262
                        ],
                        "street" : "Grand Central Station",
                        "zipcode" : "10017"
                },
                "borough" : "Manhattan",
                "cuisine" : "Italian",
                "grades" : [
                        {
                                "date" : ISODate("2015-01-07T00:00:00Z"),
                                "grade" : "Z",
                                "score" : 20
                        },
                        {
                                "date" : ISODate("2014-07-03T00:00:00Z"),
                                "grade" : "B",
                                "score" : 14
                        },
                        {
                                "date" : ISODate("2013-12-21T00:00:00Z"),
                                "grade" : "A",
                                "score" : 13
                        },
                        {
                                "date" : ISODate("2013-05-17T00:00:00Z"),
                                "grade" : "C",
                                "score" : 76
                        },
                        {
                                "date" : ISODate("2012-04-20T00:00:00Z"),
                                "grade" : "A",
                                "score" : 12
                        }
                ],
                "name" : "Two Boots Grand Central",
                "restaurant_id" : "40725591"
}
>
```

7. Write a MongoDB query to find the restaurants which belong to the borough Bronx and prepared either American or Chinese dish. (USING OR)

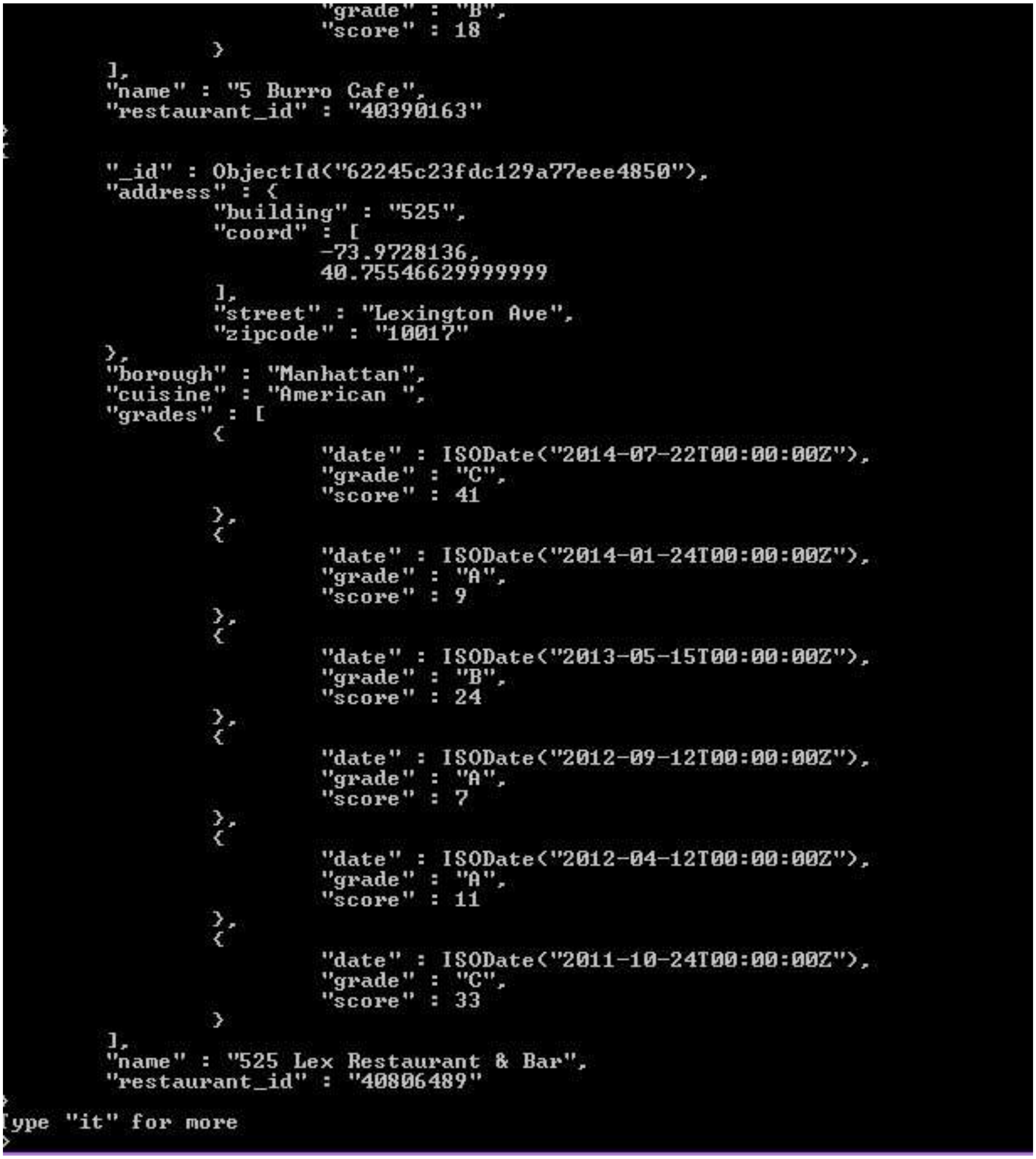
db. restaurants.find({"borough": "Bronx" ,$or:[{"cuisine":"American "},{"cuisine":"Chinese"}]}).pretty()



```
                        "grade" : "A",
                        "score" : 13
                },
                {
                        "date" : ISODate("2011-08-10T00:00:00Z"),
                        "grade" : "A",
                        "score" : 11
                }
        ],
        "name" : "Castlehill Diner",
        "restaurant_id" : "40382517"
}
{
        "_id" : ObjectId("62245c22fdc129a77eee3de8"),
        "address" : {
                "building" : "5977",
                "coord" : [
                        -73.8982704,
                        40.8896923
                ],
                "street" : "Broadway",
                "zipcode" : "10463"
        },
        "borough" : "Bronx",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : ISODate("2014-05-30T00:00:00Z"),
                        "grade" : "A",
                        "score" : 6
                },
                {
                        "date" : ISODate("2013-04-25T00:00:00Z"),
                        "grade" : "A",
                        "score" : 7
                },
                {
                        "date" : ISODate("2012-11-20T00:00:00Z"),
                        "grade" : "A",
                        "score" : 12
                },
                {
                        "date" : ISODate("2012-05-30T00:00:00Z"),
                        "grade" : "A",
                        "score" : 10
                },
                {
                        "date" : ISODate("2011-12-19T00:00:00Z"),
                        "grade" : "B",
                        "score" : 18
                }
        ],
        "name" : "Short Stop Restaurant",
        "restaurant_id" : "40383819"
}
Type "it" for more
>
```

8. Write a MongoDB query to arrange the name of the restaurants in ascending / descending order along with all the columns. (USING SORT)

db. restaurants.find().pretty().sort({"name":1});



```
                        "grade" : "B",
                        "score" : 18
                }
        ],
        "name" : "5 Burro Cafe",
        "restaurant_id" : "40390163"
}
{
        "_id" : ObjectId("62245c23fdc129a77eee4850"),
        "address" : {
                "building" : "525",
                "coord" : [
                        -73.9728136,
                        40.75546629999999
                ],
                "street" : "Lexington Ave",
                "zipcode" : "10017"
        },
        "borough" : "Manhattan",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : ISODate("2014-07-22T00:00:00Z"),
                        "grade" : "C",
                        "score" : 41
                },
                {
                        "date" : ISODate("2014-01-24T00:00:00Z"),
                        "grade" : "A",
                        "score" : 9
                },
                {
                        "date" : ISODate("2013-05-15T00:00:00Z"),
                        "grade" : "B",
                        "score" : 24
                },
                {
                        "date" : ISODate("2012-09-12T00:00:00Z"),
                        "grade" : "A",
                        "score" : 7
                },
                {
                        "date" : ISODate("2012-04-12T00:00:00Z"),
                        "grade" : "A",
                        "score" : 11
                },
                {
                        "date" : ISODate("2011-10-24T00:00:00Z"),
                        "grade" : "C",
                        "score" : 33
                }
        ],
        "name" : "525 Lex Restaurant & Bar",
        "restaurant_id" : "40806489"
}
ype "it" for more
>
```