## Lab 10

a-)Considering the following `restaurants` collection that has information about all restaurants in the USA. Import the data into a local/cloud DB server.


```
{
"address": { "building": "1007",
               "coord": [ -73.856077, 40.848447 ],
               "street": "Morris Park Ave",
               "zipcode": "10462" },
"district": "Bronx",
"cuisine": "Bakery",
    "grades": [ {"date": {"$date": 1393804800000}, "grade": "A", "score": 2},
                {"date": {"$date": 1378857600000}, "grade": "A", "score": 6},
                {"date": {"$date": 1358985600000}, "grade": "A", "score": 10},
                {"date": {"$date": 1322006400000}, "grade": "A", "score": 9},
                {"date": {"$date": 1299715200000}, "grade": "B", "score": 14}],
    "name": "Morris Park Bake Shop",
    "restaurant_id": "30075445"
}
```


1- Add at least 5 restaurants to your collection to test your queries.
2- Write a MongoDB query to find the restaurants that does not prepare any `cuisine` of `"American"` and their grade `score` more than `70`
3- Write a MongoDB query to find the `restaurant_id`, `name`, `district` and `cuisine` for those restaurants which contains `'Wil'` as first three letters for its `name`.
4- Write a MongoDB query to find the `restaurant_id`, `name`, `district` and `cuisine` for those restaurants which contains `'Reg'` as three letters somewhere in its `name`
5- Write a MongoDB query to find the restaurants which belongs to the `district "Bronx"` and prepared either `American` or `Chinese` dish.
6- Write a MongoDB query to find the `restaurant_id`, `name`, `district` and `cuisine` for those restaurants which belongs to the `district "Staten Island"` or `"Queens"` or `"Bronx"` or `"Brooklyn"`.
7- Write a MongoDB query to find the `restaurant_id`, `name`, `district` and `cuisine` for those restaurants which are not belonging to the `district "Staten Island"` or `"Queens"` or `"Bronx"` or `"Brooklyn"`.
8- Write a MongoDB query to find the `restaurant_id`, `name`, `district` and `cuisine` for those restaurants which achieved a `score` which is not more than `10`.

b-) Create an Express application that implements a Restful Stateless API for an entity called `students` as following:

```
const students = [{id: 1, name: "Asaad Saad", course: "CS572",grade: 95}]
```

- Write routes for the following CRUD operations and use the proper HTTP verbs (`GET` one and all, `POST`, and `DELETE`).
- Log all requests to a file `access.log` using `morgan` middleware.
- For your `POST` route, assign a custom middleware to verify if a user passes a `JSON` object that contains `id`, `name`, `course` and `grade`, otherwise send back an error.