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#Name : Team4(Myat Oo,Zijian Zhang,Mohammad Islam
#Title: queries.txt
#Date : March 1, 2017
#Assignment: Assignment_1
#Purpose : In this Project, we need to work with MongoDB importing
Json file.
```

Write queries the question asked in MongoDB
as well as in Pymongo. In this Project, we have 3 members.

```
Query (A):
db.zipcodes.distinct("city").length
```

```
Query (B):
db.zipcodes.aggregate([{$group: {_id: {state: "$state", city:
"$city", pop: "$pop", z: "_id" } }}, {$group: {_id: {state:
"$_id.state", city: "$_id.city", pop: "$_id.pop" } } }])
```

```
Query(C):
db.zipcodes.distinct("city",{ state: "MA", pop:{ $gte:1000, $lte:
2000}});
```

```
Query (D):
var mapFunction1 = function() {
key = {state: this.state};
val = {Cities: 1, Population: this.pop};
emit(key, val);
};

var reduceFunction1 = function(key, val) {
Cities = 0;
Population = 0;
for(i in val){
Cities = Cities + val[i].Cities;
Population = Population + val[i].Population;}
return {Cities, Population}
};

db.zipcodes.mapReduce(
mapFunction1,
reduceFunction1,
{ out: "map_reduce_Done" }
).find()
```

```
Query (E)
var mapFunction1 = function() {
    emit(this.state, this.pop);
};
```

```
var reduceFunction1 = function(k, v) {  
    return Array.avg(v);  
};  
  
db.zipcodes.mapReduce(  
    mapFunction1,  
    reduceFunction1,  
    { out: "avg_pop" }  
).find()
```

Query (F)

```
var mapFunction1 = function() {  
    emit(this.state, this.pop);  
};  
  
var reduceFunction1 = function(k, value) {  
    return Array.sum(value);  
};  
  
db.zipcodes.mapReduce(  
    mapFunction1,  
    reduceFunction1,  
    { out: "map_reduce_Done" }  
).find().sort({value: 1}).limit(1)
```