

Using MapReduce to Retrieve Our News Feed

Databases Three

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Last time

- We saw how to use MapReduce to perform complex queries.
- We supply a *map* function that gets data from documents.
- We supply a *reduce* function that aggregates the map results.
- We supply additional options as required.

Retrieving our feed

Map stage

- Iterate over the users followed by a given user.
- *Emit* the splatts for each user in the list.

Map code

```
var map = function() {  
  if(this.splatts) {  
    emit("feed", {"list": this.splatts})  
  }  
}
```

Retrieving our feed

Reduce stage

- Merge our lists of splatts together.
- At this stage, we leave them unsorted.

Reduce code

```
var reduce = function(key, values) {  
  var myfeed = {"list": []};  
  values.forEach(function(v) {  
    myfeed.list = myfeed.list.concat(v.list);  
  });  
  return myfeed;  
}
```

Retrieving our feed

Additional options

- Output
- Query
- Finalisation

Output

```
output:  {inline: 1}
```


Query

```
query: {_id: {$in: db.users.findOne(
  {_id: ObjectId("5416717562696259b8000000"))}.follow_ids }
}
```

Finalisation

```
var finalise = function(key, val) {  
  var mylist = val.list;  
  if(mylist) {  
    mylist.sort(function(a, b) {  
return b.created_at - a.created_at});  
    }  
  return {"list": mylist};  
}
```

Putting it all together

```
db.users.mapReduce(map, reduce,
  {
    out: {inline: 1},
    finalize: finalise,
    query: {_id: {$in: db.users.findOne(
      {_id: ObjectId("5416717562696259b8000000"))}.follow_ids }
    }
  })
```