

server.js

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var express = require('express');
var app = express();
var request = require('request');
var path = require('path');

var MongoClient = require('mongodb').MongoClient;
var mongoDBURL = process.env.MONGODB_URI;
var COLLECTION = "history"

var FIXER_API_URL = "https://api.fixer.io/latest?base=USD"

// Server config
app.set('port', process.env.PORT || 5000);
app.set('host', process.env.HOST || '0.0.0.0');

app.use(express.static('static'))

// Home page - angularjs client
app.get('/', (req, res) =>{
  res.sendFile(path.join(__dirname, './home/index.html'));
});

app.get('/getAll', (req, res) =>{
  MongoClient.connect(mongoDBURL).then(db =>{
    var collection = db.collection(COLLECTION);
    collection.find().toArray((err, allRecords) =>{
      res.contentType('application/json');
      res.write(JSON.stringify(allRecords));
      res.end();
    });
  });
});

app.get('/add', (req, res) =>{
  var fromAmount = parseFloat(req.query.fromAmount);
  var toCurrency = req.query.toCurrency;
  request(FIXER_API_URL, (error, response, body) =>{
    var rates = JSON.parse(body).rates;
    var conversion = parseFloat(rates[toCurrency]);
    var toAmount = fromAmount * conversion;

    MongoClient.connect(mongoDBURL).then(db =>{
      var collection = db.collection(COLLECTION);
      var mostRecent = collection.find().sort({"index": -
1}).limit(1).toArray((err, latest) =>{
        if (latest.length == 0){
          index = 0;
        }
      })
    });
  });
});
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        else{
            index = latest[0].index + 1;
        }

        newRecord = {}
        newRecord.index = index;
        newRecord.fromAmount = fromAmount;
        newRecord.toCurrency = toCurrency;
        newRecord.toAmount = toAmount;
        collection.insert(newRecord);
        res.contentType('application/json');
        res.write(JSON.stringify(newRecord));
        res.end();
    });
});
});
});

app.get('/update', (req, res) =>{
    var index = parseInt(req.query.index);
    var fromAmount = parseFloat(req.query.fromAmount);
    var toCurrency = req.query.toCurrency;
    request(FIXER_API_URL, (error, response, body)=>{
        var rates = JSON.parse(body).rates;
        var conversion = parseFloat(rates[toCurrency]);
        var toAmount = fromAmount * conversion;

        MongoClient.connect(mongoDBURL).then(db=>{
            var collection = db.collection(COLLECTION);
            search = {}
            search.index = index;

            newRecord = {}
            newRecord.index = index;
            newRecord.fromAmount = fromAmount;
            newRecord.toCurrency = toCurrency;
            newRecord.toAmount = toAmount;

            collection.updateOne(search, newRecord, (err, result) =>{
                res.contentType('application/json');
                res.write(JSON.stringify(result));
                res.end();
            });
        });
    });
});

app.get('/delete', (req, res) =>{
    var index = parseInt(req.query.index);

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MongoClient.connect(mongoDBURL).then(db=>{
  var collection = db.collection(COLLECTION);
  search = {}
  search.index = index;

  collection.deleteOne(search, (err, result) =>{
    db.close()
    res.contentType('application/json');
    res.write(JSON.stringify(result));
    res.end();
  });
});

});

app.listen(app.get('port'), function() {
  console.log('Node app is running on port', app.get('port'));
});

```

app.js

```

var app = angular.module('currApp', []);

app.controller('currCont', function($scope, $http){
  $scope.records
  $scope.refresh = refresh;
  $scope.add = add;
  $scope.update = update;
  $scope.del = del;

  refresh();
  function refresh(){
    $http.get("/getAll").then(res=>{
      var d = res.data;
      var records = []
      var record = {}
      for(i = 0; i < d.length; i++) {
        record.index = d[i].index;
        record.fromAmount = d[i].fromAmount;
        record.toCurrency = d[i].toCurrency;
        record.toAmount = d[i].toAmount;
        records.push(record);
        record = {};
      }
      $scope.records = records;
    })
  }

  function add(index){

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$http.get("/add?fromAmount="+$scope.addFromAmount+"&toCurrency="+$scope.addToCurrency).then(res=>{
    refresh();
});

function update(){
    $http.get("/update?index="+$scope.upIndex+"&fromAmount="+$scope.upFromAmount+"&toCurrency="+$scope.upToCurrency).then(res=>{
        refresh();
    });
}

function del(){
    $http.get("/delete?index="+$scope.delIndex).then(res=>{
        refresh();
    });
}
});

```

index.html

```

<html>
  <head>
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/css/bootstrap.min.css" integrity="sha384-rwoIResjU2yc3z8GV/NPeZWAv56rSmLldC3R/AZzGRnGxQQKnKkoFVhFQhNUwEyJ" crossorigin="anonymous">
    <script src="https://code.jquery.com/jquery-3.1.1.slim.min.js" integrity="sha384-A7FZj7v+d/sdmMqp/nOQwliLlvUsJfDHW+k90mg/a/EheAdgtzNs3hpfag6Ed950n" crossorigin="anonymous"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/tether/1.4.0/js/tether.min.js" integrity="sha384-DztdAPBWPRXSA/3eYEEUWrWCy7G5KFbe8fFjk5JAIxUYHKkDx6Qin1DkWx51bBrb" crossorigin="anonymous"></script>
    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-alpha.6/js/bootstrap.min.js" integrity="sha384-vBWwzlZJ8ea9aCX4pEW3rVHjgjt7zpkNpZk+02D9phzyeVKE+jo0ieGizqPLForn" crossorigin="anonymous"></script>

    <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.6.6/angular.min.js"></script>
  </head>
  <body ng-app="currApp" ng-controller="currCont">
    <div class="container">
      <br>
      <h2>Welcome to Noah's Lab 9</h2>
      <label>Saved Currency Conversions (From USD)</label>

      <div class="input-group" style="padding:5px">

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        <input style="width:1% " class="form-control " value = "Index" type="text"
disabled/>
        <input style="width:15% " class="form-control " value = "Convert (USD)"
type="text" disabled/>
        <input style="width:15% " class="form-control " value = "To Currency"
type="text" disabled/>
        <input style="width:15% " class="form-control " value = "Result" type="text"
disabled/>
    </div>

    <div class="input-group" ng-repeat="record in records" style="padding:5px">
        <input style="width:1% " class="form-control " value = "{{record.index}}"
type="text" disabled/>
        <input style="width:15% " class="form-control " value =
"{{record.fromAmount}}" type="text" disabled/>
        <input style="width:15% " class="form-control " value =
"{{record.toCurrency}}" type="text" disabled/>
        <input style="width:15% " class="form-control " value = "{{record.toAmount}}"
type="text" disabled/>
    </div>
    <hr>
    <b>Add a new a record</b>
    <div class="input-group" style="padding:5px">
        <input style="width:15% " class="form-control" ng-model="addFromAmount"
placeholder="Amount in USD" type="text" />
        <input style="width:15% " class="form-control" ng-model="addToCurrency"
placeholder="To Currency" type="text" />
        <span style="width:1%" ></span>
        <button type= "button" class = "btn btn-primary" style="width:15%" ng-
click="add()">Save and Add</button>
    </div>
    <hr>
    <b>Update a record</b>
    <div class="input-group" style="padding:5px">
        <input style="width:1% " class="form-control" ng-model="upIndex"
placeholder="Index" type="text"/>
        <input style="width:15% " class="form-control" ng-model="upFromAmount"
placeholder="Amount in USD" type="text" />
        <input style="width:15% " class="form-control" ng-model="upToCurrency"
placeholder="To Currency" type="text" />
        <span style="width:1%" ></span>
        <button type= "button" class = "btn btn-primary" style="width:15%" ng-
click="update()" >Update Existing</button>
    </div>
    <hr>
    <b>Delete a record</b>
    <div class="input-group" style="padding:5px">
        <input style="width:1% " class="form-control "ng-model="delIndex"
placeholder="Index" type="text"/>
        <span style="width:1%" ></span>

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        <button type= "button" class = "btn btn-primary" style="width:15%" ng-
click="del()" >Delete</button>
    </div>
</div>

    <script src="./app.js"></script>
</body>

</html>
```