



Node JS

RESTful API

Agenda

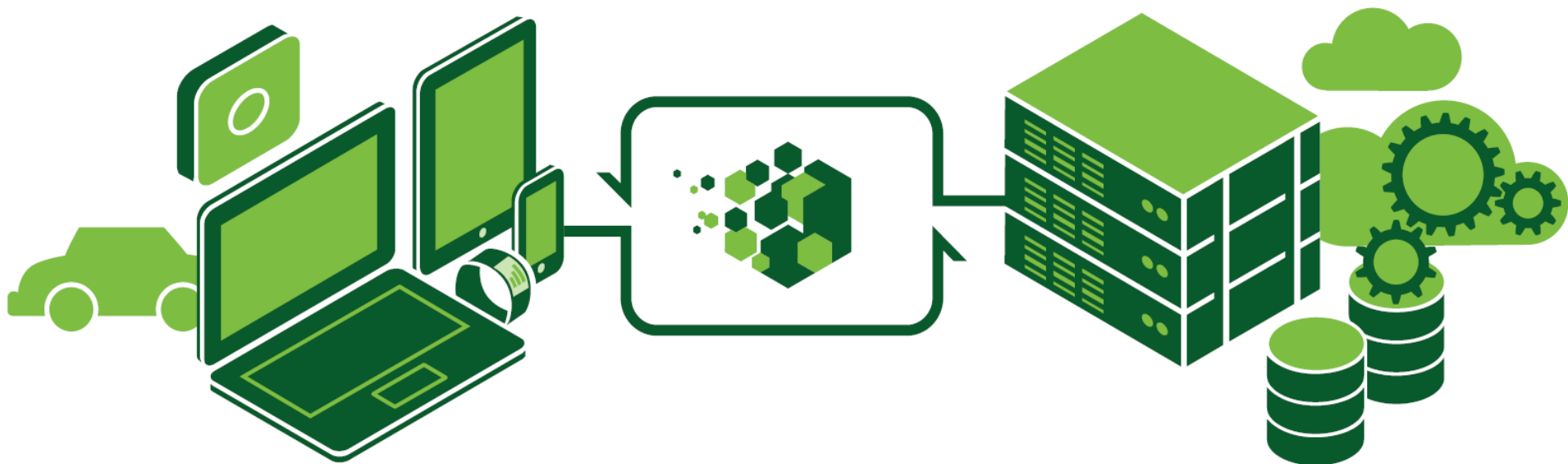
REST API

Restful Web Services

Implementation Example

Testing

REST Architecture



Architecture

JS Object Notation
Data exchange format



S. N.	URI	HTTP Method	POST body	Result
1	listUsers	GET	empty	Show list of all the users.
2	addUser	POST	JSON String	Add details of new user.
3	deleteUser	DELETE	JSON String	Delete an existing user.
4	:id	GET	empty	Show details of a user.

Implementation Details

Using Express
Filesystem Database

Server – 5 LOC!

```
var express = require('express');  
var app = express();  
  
var server = app.listen(8081, function () {  
  var host = server.address().address  
  var port = server.address().port  
  console.log("Example app listening at  
http://%s:%s", host, port)  
})
```

GET API

```
app.get('/listUsers', function (req, res) {  
  fs.readFile( __dirname + "/" + "users.json",  
    'utf8', function (err, data) {  
      console.log( data );  
      res.end( data );  
    });  
})
```

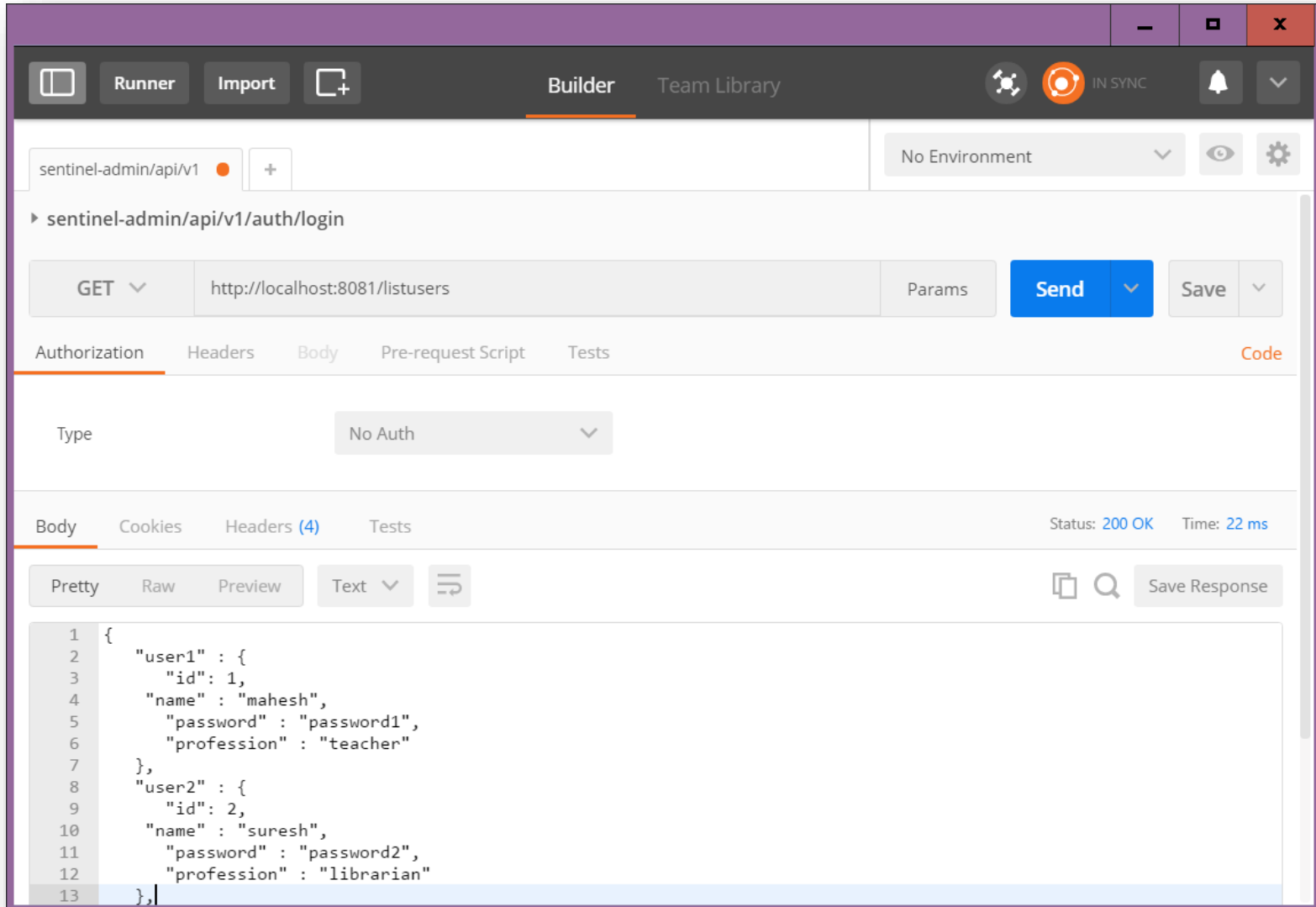

POST API

```
app.post('/addUser', function (req, res) {  
  fs.readFile( __dirname + "/" + "users.json",  
    'utf8', function (err, data) {  
      data = JSON.parse( data );  
      data["user4"] = user["user4"];  
      console.log( data );  
      res.end( JSON.stringify(data));  
    });  
})
```

DELETE API

```
app.delete('/deleteUser', function (req, res) {  
  fs.readFile( __dirname + "/" + "users.json",  
    'utf8', function (err, data) {  
      data = JSON.parse( data );  
      delete data["user" + 2];  
  
      console.log( data );  
      res.end( JSON.stringify(data));  
    });  
})
```

TESTING



The screenshot displays the Postman API client interface. At the top, there's a navigation bar with tabs for Runner, Import, Builder (selected), and Team Library. The main workspace shows a REST client request for the endpoint `sentinel-admin/api/v1/auth/login` using the `GET` method. The URL is `http://localhost:8081/listusers`. The request is configured with "No Auth" for authorization. The response is shown in the "Body" tab, displaying a JSON array of two user objects. The status is `200 OK` and the time taken is `22 ms`.

Request Details:

- Endpoint: `sentinel-admin/api/v1/auth/login`
- Method: `GET`
- URL: `http://localhost:8081/listusers`
- Authorization: No Auth

Response Body (JSON):

```

1 {
2   "user1" : {
3     "id": 1,
4     "name" : "mahesh",
5     "password" : "password1",
6     "profession" : "teacher"
7   },
8   "user2" : {
9     "id": 2,
10    "name" : "suresh",
11    "password" : "password2",
12    "profession" : "librarian"
13  },

```

Thank You!

