Application Programing Interface (API)

ABOUT WEB DEV

- CLIENT – SERVER
- HTTP
- MODEL – CONTROLLER - ROUTER
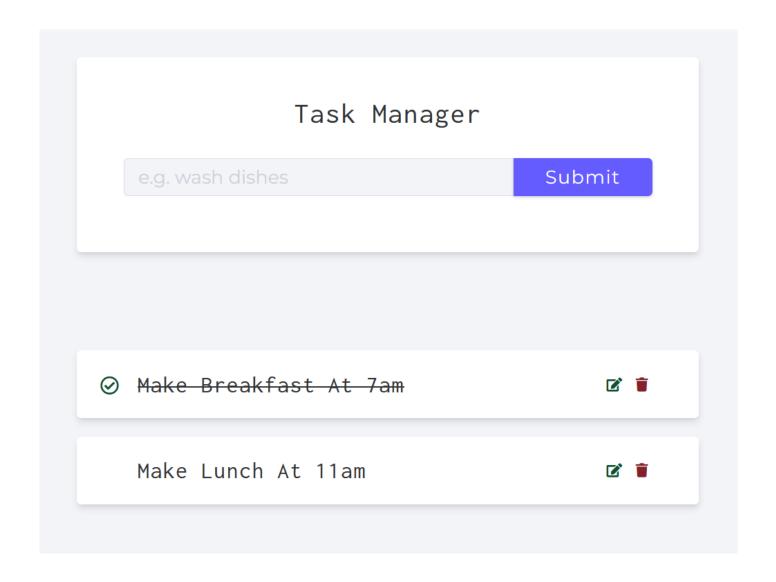
CLIENT - SERVER

FRONT-END | BACK-END
API

BUILD YOUR FIRST API – Steps to do

- Choose back-end language
- Set-it-up in the localhost
- Connect to the Database
- Routing
- Test your API

TUTORIAL

Use Node.js to create a REST API

PAGE DESCRIPTION

Task Manager

e.g. wash dishes | Submit

✓ ~~Make Breakfast At 7am~~

Make Lunch At 11am

INSTALLATION

- Node.js
- MongoDB
- IDE

LOCALHOST SERVER

```
var express = require('express');
var app = express();

app.get('/', function(req, res) {
  res.send('Hello World!');
});

app.listen(9001);
```

Don't forget:

```
$ npm install express
```

CONNECT AND CREATE Database

```javascript
const mongoose = require("mongoose");

mongoose.connect('mongodb://localhost/test')
```

```javascript
const mongoose = require("mongoose");

const TaskSchema = new mongoose.Schema({
  name: {
    type: String,
    required: [true, "must hav name"],
    trim: true,
    maxlength: [20, "not more than 20 char"],
  },
  completed: {
    type: Boolean,
    default: false,
  },
});

module.exports = mongoose.model("Task", TaskSchema);
```

ROUTES to your API

```javascript
const express = require('express')
const router = express.Router();
const {getAllTasks,createTask,getTask,updateTask,deleteTask} = require('../controllers/tasks')


router.route('/').get(getAllTasks).post(createTask)
router.route('/:id').get(getTask).patch(updateTask).delete(deleteTask)


module.exports = router
```

TEST your API

```
###
Send Request
GET http://localhost:9001/

###
Send Request
POST http://localhost:9001/
Content-Type: application/json

{
    "name": "Make breakfast at 7am",
    "compledted": true
}
```

```
1   HTTP/1.1 200 OK
2   X-Powered-By: Express
3   Content-Type: application/json; charset=utf-8
4   Content-Length: 191
5   ETag: W/"bf-/xbetk5f9BD0Odcfw7nVaiDEq/c"
6   Date: Mon, 14 Mar 2022 01:49:31 GMT
7   Connection: close
8
9 ∨ {
10 ∨    "tasks": [
11 ∨        {
12              "completed": true,
13              "_id": "622e9efa4b73330a7cafb5a4",
14              "name": "Make breakfast at 7am",
15              "__v": 0
16          },
17 ∨        {
18              "completed": false,
19              "_id": "622e9f284b73330a7cafb5a8",
20              "name": "Make lunch at 11am",
21              "__v": 0
22          }
23      ]
24  }
```

GO FURTHER

- https://nodejs.org/en/docs/
- https://mongoosejs.com/docs/api.html