OLCADEMY COMMUNITY

Technology Stack Documentation

Introduction and Workflow

1.1 INTRODUCTION

The Major technology used and are planned to be used are summarized below

- **NodeJS**: Node.js is a server side JavaScript execution environment. It's a platform built on Google Chrome's V8 JavaScript runtime. It helps in building highly scalable and concurrent applications rapidly.
- **Express**: Express is lightweight framework used to build web applications in Node. It provides a number of robust features for building single and multi page web application. Express is inspired by the popular Ruby framework, Sinatra.
- **MongoDB** : MongoDB is a schema less NoSQL database system. MongoDB saves data in binary JSON format which makes it easier to pass data between client and server.
- **Angular 10**: Angular is an application design framework and development platform for creating efficient and sophisticated single-page apps.
- **SCSS:** "SCSS" (for "Sassy CSS"), and is a superset of CSS3's syntax. This means that every valid CSS3 stylesheet is valid SCSS as well. SCSS files use the extension .scss.

1.2 PREREQUISITE

Before getting started, we need to install the various MEAN software packages. Begin by installing Node.js from the download page and make sure to download and install git https://git-scm.com/download/win

Clone the olcademy community GitLab repository

- For Frontend
  git clone –b frontend <Repo HTTP URL>
  npm install

- For backend
  git clone –b backend <Repo HTTP URL>
  npm install

How to push your code?

```
git add .
git commit –m "commit-message"
git push origin <branchname>
```

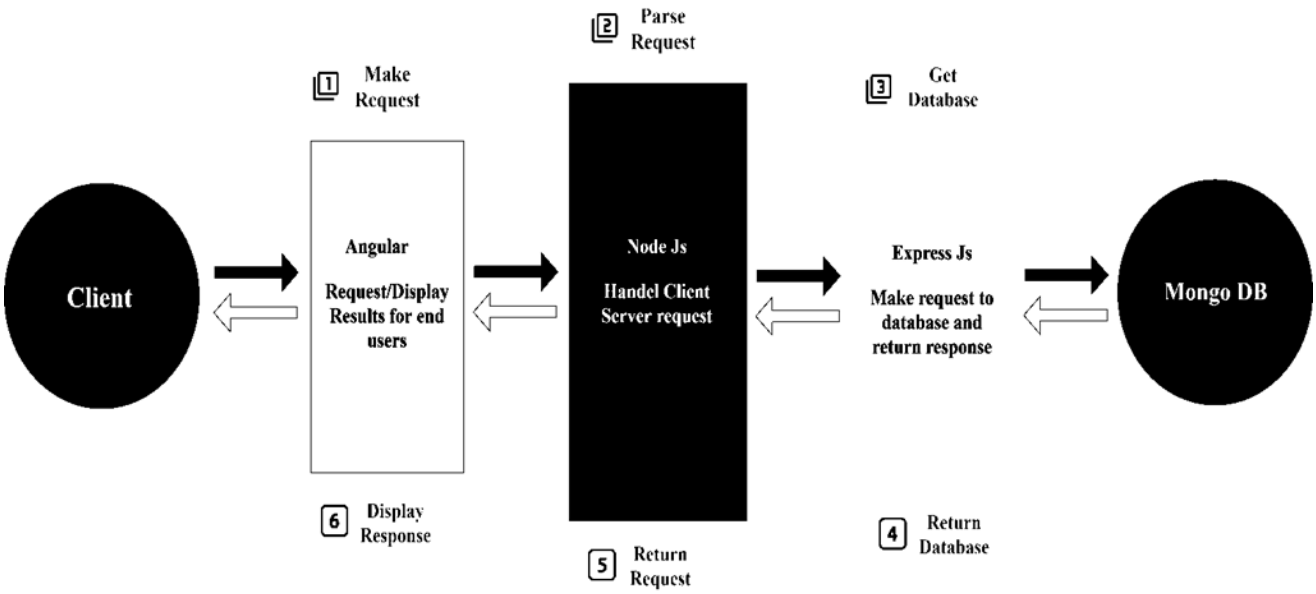
How to pull changes from the repository?

Commit your changes first using above commands
Then run : git pull origin <branchname>
Resolve conflicts if any, then push your code

1.3 Features of MEAN Stack

- One of the most important benefits of all is that it lets the developer write the entire code in JavaScript; from client to server. This is like a blessing for the JavaScript developers who have invested their time and money in learning JavaScript for the client-side tasks.
- It supports the MVC (Model View Controller) architecture.
- The MEAN components are open source; in other words, the stack gets updated regularly. In addition to this, it is easy to use, flexible to understand and moreover assists the developers to customize as per the requirements.
- A massive module library of node.js and the use of JSON to transfer the data are a few other features of MEAN.

1.5 MEAN Stack Architecture



1. When the client makes any request it is firstly processed by the Angular. Angular is a client-side framework.
2. After that, the request enters phase 2 which is NodeJS. NodeJS is a server-side framework.
3. In phase 3, which is ExpressJS makes the request to the database.
4. MongoDB retrieves the data & returns the response back to the ExpressJS.
5. Then ExpressJS sends a response back to the NodeJS and then NodeJS forwards it to the Angular to display the result.

1.6 Technology

- **MEAN Stack** (MEAN Stack developers):
- **UI**: Angular 10, Bootstrap, Material Angular, HTML 5, SCSS, JS
- **Server Side:** Express JS, Node JS, RESTAPI
- **Database:** Mongo DB
- **Front-End:** Angular 10
- **Text Editor:** VS Code
- **Version Control:** Git/GitLab