

Tutorial - 2

The Technology stack that we as a group have decided to use is the “**MERN**” stack: M – MongoDB, E – Express, R - React.js, N - Node.js.

1. Frontend - React.js:

- **Flexible:** React code is easier to maintain, and it has modular structure which makes it flexible.
- **Performance:** React offers virtual Dom program and server-side rendering which provides us high performance.
- **Usability:**
 - It is easier to learn and allows us to write custom components.
 - React has better code stability and is used widely across the globe for many projects.
 - It provides native tools which allows the developer to test and debug the code easily compared to other front-end frameworks.
- **Faster to adapt:** It is easier to adapt to react when compared to Angular because it uses JavaScript unlike Angular which requires us to know TypeScript.
- **Responsive:** It is easier to create responsive web app using React framework.

2. Backend - Express + Node.js:

- **Express:**
 - It is a lightweight web framework for Node.js.
 - It can also help in quickly creating APIs.
 - It is easy to use and configure.
 - It offers support to I/Q request handling and able to handle higher level of request efficiently.
- **Node.js:**
 - It is a JavaScript based back-end runtime environment.
 - It is open-source and it also supports cross-platform (E.g., can run on OSX, Linux or Windows).
 - It was designed with asynchronous events in mind and has a non-blocking I/O which means that multiple input requests can be carried out parallelly.

3. Database -MongoDB:

- It a NoSQL database which is a schema less document database. We don't need to write complex queries to fetch or store data in the database.
- In MongoDB, the structure of single object is clear and well defined.
- It is extremely easy to use and faster than RDBMS.
- Able to process large, big data.
- It is quite easy to install and provides JavaScript client for services.
- Easy horizontal scale out is possible. When we handle large data, we can distribute it to many machines.

REFERENCES

- [1] D. Tyagi. “Why choose MERN stack?”, Jul. 5, 2020. [Online]. Available: <https://medium.com/aeologic/why-choose-mern-stack-323b4d95e4ea>. [Accessed: Jan. 22, 2021]