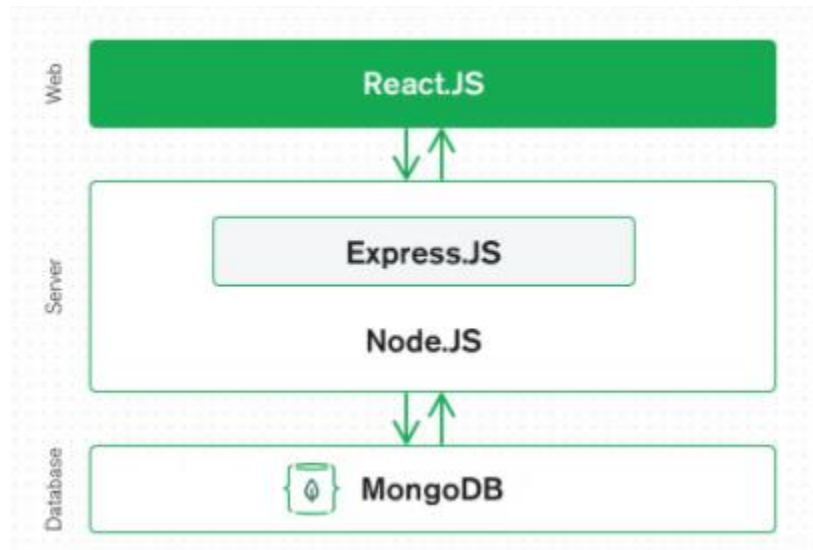# MERN - Challenge

Assignment – 01

1. The MERN architecture allows us to easily construct a 3-tier architecture (frontend, backend, database) entirely using JavaScript and JSON.

MERN stands for MongoDB, Express, React, Node, after the four key technologies that make up the stack.

- MongoDB - document database
- Express(.js) - Node.js web framework
- React(.js) - a client-side JavaScript framework
- Node(.js) - the premier JavaScript web server

2. React is declarative, efficient, flexible, and open source javascript library from facebook for front end development to build user interfaces like angular and vue. It is generally thought of as the view layer to an application.
It designs simple views for each state in your application and react will efficiently update and render just the right component when your data changes. The declarative view makes your code more predictable and easier to debug.

A React application is made of multiple components, each responsible for rendering a small, reusable piece of HTML. Components can be nested within other components to allow complex applications to be built out of simple building blocks. A component may also maintain an internal state.

3.
  I. Speed = Different developers can write individual parts and all changes made won't cause the logic of the application,
  II. Flexibility = React code is easier to maintain and is flexible due to its modular structure. This flexibility, in turn, saves huge amount of time and cost to businesses,
  III. Performance = React JS was designed to provide high performance in mind. The core of the framework offers a virtual DOM program and server-side rendering, which makes complex apps run extremely fast,
  IV. Usability = Deploying React is easy to accomplish if you have some basic knowledge of JavaScript.,
  V. Reusability = potential to reuse components and not affect other parts of the application,
  VI. Easy to learn,
  VII. It helps to build rich user interfaces,
  VIII. Strong community support,
  IX. used by many fortune 500 companies.

4. MongoDB is a scalable, flexible and NoSQL document database platform.
  I. Ad-hoc queries for optimized, real-time analytics,
  II. Indexing appropriately for better query executions,
  III. Replication for better data availability and stability,
  IV. Sharding,
  V. Load balancing.

5. The primary difference between AngularJS and ReactJS lies in the state of its management. AngularJS has data binding bundled in by default, whereas React is generally augmented by Redux to give unidirectional data flow and work with immutable data.