

MERN STACK



IT EDUCATION
CENTRE

MongoDB

Content

1. Introduction to No SQL DataBase
2. Advantages over RDBMS
3. MongoDB Data Types
4. Installation
5. MongoDB Data Modeling
6. MongoDB Operators
7. MongoDB Commands - Aggregation, Geospecial, Query & Write Operation, Query Catch Command, Authentication, User Management, Role Management, Replication, Session
8. Collection
9. Document
10. CRUD Operation
11. Schema Modelling
12. MongoDB Shell
13. MongoDB Tools - MongoDB Compass, MongoDB BI Connector



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Node.js & Express.js

1.Node.js

1. NodeJS Introduction
2. Installation
3. Node.js - Console, REPL, NPM, CL options, Globals, OS, Timer, Errors, DNS, Net, Crypto, TLS/SSL, Debugger, Process, Child Process, Buffers, Streams, File System, Callback, Events, Web Modules.
4. Node.js to execute script
5. Package Manager
6. HTTP Protocol
7. Building HTTP Server
8. Rendering response
9. Connecting to MongoDB Database
- 10.Performing CRUD operation

2.Express.js

1. Express Framework - Installation, Request, Response, Get, Post, Routing, Cookies, File Upload, Middleware, Scaffolding, Template, Handling Form Data, Error Handling, Creating and Consuming RESTful Services, Using Template, MVC pattern, Building Front end controller, Defining Routes, Creating Action, Project Activity.



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ReactJS

Content

1. ReactJS Introduction
2. React Version
3. Difference between ReactJS & React Native
4. Difference between ReactJS & AngularJS
5. React Installation
6. How to create React first application?
7. Features
8. React JSX
9. React Component, Life cycle & Component API, State, Props
10. React Props validation
11. React Constructor
12. React Form - Controlled & Uncontrolled
13. ReactJS - Events, Lists, Keys, Refs, Fragments, Router, CSS, Animation, Bootstrap, Map, Table, Context, Order Component.
14. React Hooks - Use, Rules, Installation, useState, useEffect, useContext, useRef, useReducer, useCallback, useMemo Custom Hooks, Built-in Hooks,
15. React Flux - Concept, Structure and Data Flow, Flux Vs MVC
16. React Redux - Introduction, Redux Vs React Context, Architecture, Installation, Redux Store in React, Redux with Class Based Component, Redux State, Adding state slices.
17. Demo project Development



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