1. JavaScript Refresher (Optional)
   1. Javascript in Nutshell
   2. Refreshing Core Syntax
   3. let vs const
   4. Arrow functions
   5. Working with Objects and properties
   6. Arrays and Array methods
   7. Reference vs Premitive types
   8. Understanding spread operator
   9. Destructuring
   10. Async code and promises
2. NodeJs Basics
   1. How the webworks
   2. Creating a simple node server
   3. Node lifecycle event loop
   4. Understanding requests
   5. Sending responses
   6. Routing requests
   7. Redirecting requests
   8. Parsing Request Bodies
   9. Understanding event driven code
   10. Blocking and non blocking code
   11. Using node module system
3. Improved Development Workflow and Debugging
   1. Understanding npm script
   2. Installing 3rd party packages
   3. Using Nodemon for auto restart
   4. Understanding different error types
   5. Finding fixing syntax errors
   6. Dealing with runtime errors
   7. Logical Errors
   8. Using the debugger
   9. Restarting the debugger automatically after editing our application
   10. Changing variables in the debug console
4. Using Express.js
   1. What is Express
   2. Installing express
   3. Adding middleware
   4. How middlewares work
   5. Handling different routes
   6. Parsing incoming requests
   7. Limiting middleware execution to POST requests
   8. Using express router
   9. Adding a 404 error page
   10. Filtering Paths
   11. Creating HTML Pages
   12. Serving HTML pages
   13. Returning a 404 html page
   14. Using a helper function for navigation
   15. Styling our pages
   16. Serving static files
5. Template Engines
   1. Sharing data across requests
   2. Template engine an overview
   3. Output dynamic content
   4. Working with EJS
   5. Working on layout with partial
6. Model View Controller
   1. What is MVC
   2. Adding controllers
   3. Finishing the controller
   4. Adding a product model
   5. Storing data in file via the model
   6. Fetching data from files
   7. Refactoring the file storage code
   8. Creating shop structure
   9. Working on the navigation
   10. Registering the routes
   11. Storing product data
   12. Editing Deleting product
   13. Adding another item
7. Advanced Routes and Models
   1. Preparations
   2. Adding the product id in path
   3. Extracting dynamic params
   4. Loading product detail data
   5. Rendering the product detail view
   6. Passing data with POST requests
   7. Adding a cart model
   8. Using query params
   9. Pre-populating the edit product page
   10. Linking to the edit page
   11. Editing the product data
   12. Adding the product data
   13. Deleting cart items
   14. Displaying cart items on the cart page
8. Node + MongoDb
9. Using Mongoose
   1. What is mongoose
   2. Connecting to database server using mongoose
   3. Creating the product schema
   4. Saving data through mongoose
   5. Fetching all products
   6. Fetching a single product
   7. Updating products
   8. Deleting products
   9. Adding and using a user model
   10. Using relations in mongoose
   11. One important thing about fetching relations
   12. Working on the shopping cart
   13. Loading the cart
   14. Deleting the cart items
   15. Creating Getting Orders
   16. Storing all orders related data
   17. Clearing the cart after storing an order
   18. Getting Displaying Orders
10. Session and Cookies
    1. What is cookie
    2. The current project status
    3. Creating the login form
    4. Adding request driven login solution
    5. Setting a cookie
    6. Manuplating a cookie
    7. Configuring a cookie
    8. What is session
    9. Initializing the session middleware
    10. Using the session middleware
    11. Using mongodb to store sessions
    12. Session cookies
    13. Deleting a cookie
11. Authentication
    1. What is uthentication
    2. How is authentication implemented
    3. Implementing an authentication flow
    4. Encrypting password
    5. Adding signing in functionality
    6. Working on route protection
    7. Using middleware to protect routes
    8. Understanding the CSRF attacks
    9. using a CSRF token
    10. Adding a CSRF protection
    11. Fixing the order Button
    12. Providing user feedback
    13. Optional styling error messages
    14. Finishing the flash messages
    15. Adding additional flash messages
12. Sending Emails
    1. How does sending emial works
    2. using send grid
    3. Using nodemailer to send an email
    4. Potential limitation for large scale apps
13. Authentication Deep Dive
    1. Resetting password
    2. Implementing the token logic
    3. Creating the token
    4. Creating the reset password form
    5. Adding logic to update password
    6. Why we need authorization
    7. Adding authorization
    8. Adding protection to post action
14. User input validation
    1. Why should we use validation
    2. How to validate inputs
    3. Setup basic validation
    4. Using Validation error messages
    5. Built-in custom validators
    6. More validators
    7. Checking for field equality
    8. Adding async validation
    9. Keeping user input
    10. Adding conditional css classes
    11. Adding validation to login
    12. Sanitizing data
    13. Validating product addition
    14. Validating product editing
15. Error handling
    1. Types of errors
    2. Analyzing the errors
    3. Errors some theory
    4. Throwing errors in code
    5. Returning error pages
    6. Using the express.js error handling
    7. Updating the app
    8. Updating the error handling middleware
    9. Status codes
16. File download & upload
    1. Adding a file picker to frontend
    2. Handling multi part form data
    3. Handling file upload with multer
    4. Configuring multer to adjust filename filepath
    5. Filtering files by Mimetypes
    6. Storing file data in dtabase
    7. Serving images statically
    8. Downloading file with authentication
    9. Setting file type header
    10. Restricting file access
    11. Streaming data vs preloading data
    12. using pdfkit for pdf generation
    13. generating pdf files with order data
    14. Deleting files
17. Pagination
    1. Adding pagination links
    2. Retereiving Data in chunks
    3. Preparing pagination data on server
    4. Adding dynamic paginations button
    5. Using Pagination logic control
18. Async Requests
    1. What are async requests
    2. Adding client side js code
    3. Sending handling background requests
    4. Manipulating DOM
19. Handling Payments
    1. How payments work
    2. Adding checkout page
    3. Using stripe in your app
20. REST API Basics
    1. What are REST APIs and why do we use them
    2. Accessing data with REST APIs
    3. Understanding Routing Http methods
    4. Core principles
    5. Creating REST api project
    6. Sending request and response and work with postman
    7. REST APIs Clients CORS errors
    8. Sending POST request
21. Advanced REST API Features
    1. Planning API
    2. Fetching List of Posts
    3. Adding a create post endpoint
    4. Adding Server Side validations
    5. Setting up a post model
    6. storing posts in database
    7. static images error handling
    8. Fetching a single post
    9. Uploading images
    10. Updating posts
    11. Deleting post
    12. Adding Pagination
    13. Adding a user model
    14. Adding User signup validation
    15. Singing users
    16. How does authentication works
    17. Starting with user login
    18. Logging in Creating JSON Web Token
    19. Using validating token
    20. Adding Auth middleware to all routes
    21. Connecting posts users
    22. Adding authorization check
    23. Clearing post-user relation
22. using async await
    1. What is async await alla about
    2. Transforming Then Catch to Async Awai
23. Websocket & Socket.io
    1. What are web sockets and why would you use them
    2. Websockets solutions
    3. Setting up socket.io on the server
    4. Establishing a connection from the client
    5. Identifying realtime potential
    6. Sharing the IO instance across files
    7. Synchronizing POST Additions
    8. Updating post on all connected clients
    9. Sorting correctly
    10. Deleting post across clients
24. GraphQL
    1. What is GraphQL
    2. Understanding the setup writing our first query
    3. Defining a mutation schema
    4. Adding a mutation resolver
    5. Adding input validation
    6. Handling errors
    7. Connecting frontend to the GraphQL
    8. Adding a login query resolver
    9. Adding a login functionality
    10. Adding a create post mutation
    11. Extracting user data from the auth token
    12. Sending the create post query
    13. Adding a GET POST query resolver
    14. Sending Create Post and Get Post Queries
    15. Adding pagination
    16. Uploading images
    17. Viewing a single post
    18. Updating post
    19. Deleting post
    20. Managing the user status
    21. Using variables
25. Deployment
    1. Deploying different kinds of applications
    2. Deployment preparation
    3. Using environment variables
    4. Using Production API keys
    5. Setting secure response headers with Helmet
    6. Compressing assets
    7. Setting up request logging
    8. Setting up a SSL Server
    9. Using a hosting provider
    10. Deploying APIs