Node Lectureflow

The below given flow should be followed by each faculty while taking lectures. If the faculty decides to change the flow - he/she will need to first take permission from the Training coordinator at the HO (Ahmedabad office)

Module 12) Node - Javascript Fundamental	**2**
• JavaScript Introduction, Difference between JavaScript and Java, Client Server Model, Objects in JavaScript • Arrow Function, Bind, Apply, Closure, Classes in JavaScript, JavaScript JSON • Practicals	
Module 13) Node - NodeJS - Introduction	**5**
• Node JS introduction, Chrome V8 engine, Core Modules, Local Modules, NPM Modules, module.exports, nodemon • Command line arguments, Process object, Args parsing with Yargs, Storing data with JSON, Filter VS Find, Reading and Writing notes • File Module example, Local Module example, Validator npm library example • Create TODO app in node js using command line arguments	
Module 14) Node - Web Development with Node	**8**
• Asynchronous Node JS , Making HTTP request • JSON Parsing, Geo-coding, Error Handling • Callback function, Callback chaining, De-structure Object • Create an app to fetch temperature of given city using geocoding and temperature API, • Web Server with Express, Install express, Create server • Serve data like HTML, JSON Object, JSON Array, Static Assets, Path Module • Template Engine, Dynamic Page, Passing data to .hbs file, Handlebars Particles, Error 404 Pages • Practical of - Returning html response, Returning json object, Returning json array, Display image from static assets • Use of CSS and JavaScript file from Assets folder, Create header, footer particles and use in different hbs files like index.hbs, about.hbs, help.hbs • Accessing API from browser, Query String, Call Weather and Geo Code API from browser • ES6 : Default Function Parameter, Default Value with De-structuring, Browser HTTP request with fetch() • Search Form with prevent form submission and fetch weather information for city input by user	
Module 15) Node - Node with Mongodb	**6**
• Mongodb vs MySQL, Installing MongoDB , Robo 3t GUI viewer, Connecting to Mongodb, Object ID, ES6 : Promises • Inserting Document, Insert Bulk Documents, Read one Document, Read all Documents • Count all Documents, Update One Document, Update Many Documents, Deleting Documents • • Create User Model with name (string) and age (int) field and save it. Create Task model with description (String) and completed (Boolean) fields and save it. • User Age is more 18 - Remove Space around name, Custom validator : age>0 - Custom validator : email validation • Add Password field to User with proper validation, Apply validation to Task model	
Module 16) Structuring REST API	**4**

- Request, Response, Resource Creation End Points, HTTP status, Resource Reading End Points, Promise chaining
- ES6 - Async/Await, Resource Updating End Points, Deleting End points, Separating Route files for user and task
- Create User & Task creation end point with success and error handling , Create User & Task update end point with success and error handling
- Create User & Task delete end point with success and error handling, Create User & Task reading end point with success and error handling
- RESTful principles, such as resource identification, statelessness, and uniform interfaces, is important for designing and consuming RESTful APIs. OpenWeatherMap API: This API provides weather data for various locations worldwide. You can retrieve current weather conditions, forecasts, and historical weather data. Google Maps Geocoding API: This API allows you to convert addresses into geographic coordinates (latitude and longitude) and vice versa. You can use it to retrieve location data, calculate dista

Module 17) - Node - [API Authentication & Security]	3

- Securely storing password, Comparing password when login, Mongoose Middleware, Unique email id in User model
- JSON Web Tokens, Verify Token and Set Expiry, Express Middleware, Logging out
- Login , Logout with token, Hiding private data, Encrypt password - Read Task for login user only
- Api authentication with token
- Image uploading in api
- Payment with node
- socket programming , like chat app
- SMs and email sending , for OTP verification
- OpenWeatherMap API: This API provides weather data for various locations worldwide. You can retrieve current weather conditions, forecasts, and historical weather data.
- Google Maps Geocoding API: This API allows you to convert addresses into geographic coordinates (latitude and longitude) and vice versa. You can use it to retrieve location data, calculate distances between points, and display maps.
- GitHub API: GitHub provides an API that enables you to interact with repositories, issues, pull requests, and more. You can perform actions like retrieving repository information, creating issues, and accessing user data.
- Twitter API: Twitter offers an API that allows you to integrate Twitter functionality into your applications. You can fetch tweets, post tweets, retrieve user information, and perform searches.
- REST Countries API: This API provides information about countries, including details like population, languages spoken, currencies, and more. You can retrieve country-specific data and use it for various applications.
- SendGrid provides an API for sending transactional and marketing emails. You can integrate it into your applications to send emails, manage templates, and track delivery statistics.
- Social authentication (For eg; Login with Google, Login with Facebook...etc)
- Email sending APIs (For eg; Mailchimp, Mailgun...etc)
- SMS sending APIs (For eg; Twilio)
- Normal payments (For eg; Paypal, Stripe)
- Google Maps API