MODULE 3 NODE WEB DEVELOPMENT WITH NODE

Q.1 WHAT IS EXPRESS JS?

ANS. Express.js, commonly referred to as Express, is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications. It is designed for building web applications and APIs, simplifying the process of writing server-side code. Here are some key features and aspects of Express.js:

1. **Minimal and Unopinionated**: Express is lightweight and unopinionated, meaning it doesn't impose any strict structure on how you should organize your application. This gives developers the freedom to structure their applications as they see fit.
2. **Middleware Support**: Express heavily relies on middleware, which are functions that have access to the request object (req), the response object (res), and the next middleware function in the application’s request-response cycle. Middleware can execute code, modify the request and response objects, end the request-response cycle, and call the next middleware function.
3. **Routing**: Express provides a robust routing system that helps handle different HTTP requests (GET, POST, PUT, DELETE, etc.) and define how an application responds to a client request to a particular endpoint.
4. **Template Engines**: Express supports various template engines like Pug (formerly Jade), EJS, and Handlebars, which allow you to generate HTML markup with dynamic data.
5. **HTTP Utility Methods**: Express offers a variety of HTTP utility methods that simplify the job of handling HTTP requests and responses. For instance, it provides methods to handle redirects, cache control, and more.
6. **Static File Serving**: Express can serve static files such as images, CSS files, and JavaScript files, making it easy to deliver these assets to the client.
7. **Integration with Databases**: While Express itself does not include database integration, it easily integrates with various databases such as MongoDB, MySQL, PostgreSQL, and others through external modules.
8. **Community and Ecosystem**: Express has a large and active community, which means there are numerous middleware modules available that can be used to extend its functionality. This ecosystem provides solutions for authentication, validation, session management, and more.