* **What is Node.js? Write a short note on features of Node.js.**
* Node.js is an open-source, cross-platform JavaScript runtime environment that allows developers to execute JavaScript code server-side.
* It is built on the V8 JavaScript runtime engine, which is the same engine that powers Google Chrome. Node.js enables developers to use JavaScript for server-side scripting, allowing them to build scalable network applications quickly.
* Some of the features of Node.js are:
* **Asynchronous and Event driven:** One of the most significant features of Node.js is its asynchronous, non-blocking I/O model. This allows Node.js to handle many simultaneous connections without the need for multi-threading.
* **Single Programming Language:** Node.js enables developers to use JavaScript for both client-side and server-side development. This unification of programming languages helps streamline the development process, making it more cohesive and efficient.
* **Fast Execution:** Node.js is built on the V8 JavaScript engine, which compiles JavaScript directly to machine code. This results in fast execution times, making Node.js suitable for building high-performance applications.
* **Real-time Capabilities:** Node.js is well-suited for building real-time applications such as chat applications, online gaming, and collaborative tools. Its event-driven architecture makes it capable of handling multiple simultaneous connections and responding in real-time.
* **Cross-Platform:** Node.js is a cross-platform and can run on various operating systems, including Windows, macOS, and Linux. This ensures that developers can build and deploy applications consistently across different environments.

**These features make it a popular choice for building modern web applications and server-side solutions.**