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| Question: What is React Js? |
| **Answer:**  React is a JavaScript / User Interface (UI) library created by Facebook  React is a tool for building UI components. It is useful to build the complex websites. |
| Question: What is NPM in React Js? |
| **Answer:**  npm stands for node package manager. Npm is a package manager for JavaScript, included with Node.js.  As a package manager, npm makes it easy for developers to share and reuse code.  npm is installed with Node.js. npm can manage dependencies.  npm can (in one command line) install all the dependencies of a project. |
| Question: What is Role of Node Js in react Js? |
| Answer:  Node.js enables the creation of scalable and quick back-end RESTful APIs. On the other hand, React is a front-end library that creates interactive user interfaces. With both tools, you can fast build complex and scalable web apps.  Node is the most popular platform for hosting and running web servers for React apps. After all, using NPM (Node Package Manager), you can install any package with NPM command-line interface CLI. Moreover, Node utilizes Webpack and other modules to turn a React application into an easily compliable single file.  There are specific reasons to use the very good combination of Node.js and React for web app development. One should use the Combination of Node.js and React for Web App Development for the following reasons.  **1. Scalability**  The combination of Node and React allows developers to build dynamic, large, data-driven web apps that are responsive across multiple devices. It would help if you had scalability while working on large projects and maintaining your website’s performance.  **2. MERN Stack**  MERN Stack means MongoDB, Express, React, and Node.js. And no better combo than these frameworks can provide a unique dimension to a website. You can use Node.js with MERN Stack alongside React.js. Hence, you can use the Node and React combination for web app development.  **3. JSON APIs**  Creating JSON (JavaScript Object Notation) APIs for web development is competent due to the high code reusability and access to immediate code sharing in React.js. And Node.js can effectively allow this.  **4. Real-Time Data**  If your business app handles real-time data management or aims to build a data streaming app, you should use Node.js as your app requires an ongoing server connection.  **5. Fast Development**  When using the combination of React and Node for web app development, you can receive a high ROI and save your money and time. After all, these technologies work excellently to offer an effective platform for building rapid functioning and easy-to-maintain websites.  **6. SPAs (Single Page Applications)**  Does your business require a single-page app with asynchronous data loading? Then, you must select React with Node back-end as it allows building a lightweight back-end model through callback functions.  **7. Single Language for Front-end and Back-end**  With the combination of Node and React, developers don’t require learning complex back-end languages like Python or Ruby. They can use Node for server-side development and React for front-end code building without switching between frameworks and programming languages. And it saves resources, money, and time.  **8. High Server Load**  The combination of Node.js and React can balance the high server requests and load when developers work on web app development.  **9. Organized Process**  The deadly combination of React and Node create an organized web development process. After all, these technologies are scalable, effective, and fast. When working together, they can help you build high-functioning websites.  **10. Increased Use of JavaScript**  Node with React enables the use of the total strength of JavaScript for building front-end and back-end codes. It gives more freedom and convenience when building websites or web apps, as you can use one language for every aspect. |
| Question: What is CLI command In React Js? |
| **Answer:**  CLI stands for:  Command Line Interface.  Command Line Interpreter.  Command Line Input.  One of the common CLI command is to create a passable version of a react application using the command line. |
| Question: What is Components in React Js? |
| **Answer:**  React lets you create components, reusable UI elements for your app. In a React app, every piece of UI is a component. React components are regular JavaScript functions except: Their names always begin with a capital letter. They return JSX markup. |
| Question: What is Header and Content Components in React Js? |
| **Answer:**  In React Js header component contains website name, logo, menu / navigation bar and search bar. Sample header code looks likeL    In React Js content component contains different type of content (pages). These content pages may have text data, images, graphics, audio and video which represents information related to concern topic. |
| Question: How to install React Js on Windows, linux Operating System? |
| **Answer:**  Installing React Js on Windows. ****Downloading and Installing Node.js**** Node.js is the server that helps you run the ReactJS code on your system. Much like ReactJS, it is also open source. The Node.js installer includes NPM (Node Package Manager), which contains various node modules that developers use to host and publish their own modules in open-source communities. Thus, the Node works side by side with the NPM registry, which makes it easier to install any package using NPM CLI. The Node further wraps up the ReactJS application into a single using web packs for easy installation.  Here is the stepwise procedure to download and install Node.js:   1. To install Node.js go to <https://nodejs.org/en/>. 2. Depending upon your Windows OS version, you must pick a suitable installer. 3. The Node.js home page recommends an LTS version depending on your operating system. Clicking on it will automatically start the download. 4. You will find the installer in the downloads folder. Run the installer. 5. A setup wizard will appear on the screen, which will ask for the End-user License Agreement. Accept the terms and conditions to proceed with the installation. 6. Then the user must select a destination folder with the installer’s default path. Click on next to proceed. 7. The installer then shows the features that will be installed and also sets the environment path variables to the command prompt. Click next to begin the installation. 8. After the installation is complete, verify the Node.js in your system using the command prompt. 9. Type “node -v” in the command prompt to check the version of Node.js installed. 10. Type “npm -v” in the command prompt to verify the installation of npm as well.   **Installing React**  After installation of Node.js, we can install React JS on Windows using two techniques:   * **Using web pack and Babel**  1. **Creating Root Folder**   Before installing ReactJS, create a root folder with the name “reactFile” using the following commands in the command prompt.  *C:\Users\username\Desktop>mkdir reactFile*  *C:\Users\username\Desktop>cd reactFile*  After creating the directory, generate a package.json file using the following command in the command prompt. A package.json file helps to create modules.  *C:\Users\username\Desktop>reactFile> npm init*  The command prompt then asks for information regarding the module; skip it by selecting the “-y” option.  **2. Install React and react-dom**  Install React and react-dom packages using the following npm commands and add the packages to the package.json file using the “-save” command.  *C:\Users\username\Desktop>reactFile> npm install react –save*  *C:\Users\username\Desktop>reactFile> npm install react-dom –save*  **3. Install Webpack**  Install webpack, webpack-dev-server and webpack-cli using the following commands.  *C:\Users\username\Desktop>reactFile> npm install webpack webpack-dev-server webpack-cli –save*  **4. Install Babel**  Babel is a trans piler that converts JavaScript code into something that the browser understands. Thus, installing Babel and its following plugins, namely, babel-loader, babel-preset-env, babel-preset-react, and html-webpack-plugin, is very important.  Use the following command to install all the babel plugins at once.  C:\Users\username\Desktop\reactFile>npm install babel-core babel-loader babel-preset-env babel-preset-react html-webpack-plugin –save-dev  **5. Create ReactJS Files**  To finish the installation process, we must manually create certain files using the command prompt.  *C:\Users\username\Desktop\reactFile>type nul > index.html*  *C:\Users\username\Desktop\reactFile>type nul > App.js*  *C:\Users\username\Desktop\reactFile>type nul > main.js*  *C:\Users\username\Desktop\reactFile>type nul > webpack.config.js*  *C:\Users\username\Desktop\reactFile>type nul > .babelrc*  **6. Setup Compiler, Servers and Loaders**  Once these ReactJS files are created inside the “reactFile” folder, you can prepare the deployment server setting it up at port 8001 or any port you want in webpack.-config.js.  Use the following code in the webpack-config.js file,  *const path = require(‘path’);*  *const HtmlWebpackPlugin = require(‘html-webpack-plugin’);*  *module.exports = {*   *entry: ‘./main.js’,*   *output: {*   *path: path.join(\_\_dirname, ‘/bundle’),*   *filename: ‘index\_bundle.js’*   *},*  *devServer: {*  *inline: true,*  *port: 8001*  *},*  *module: {*  *rules: [*  *{*  *test: /\.jsx?$/,*  *exclude: /node\_modules/,*  *loader: ‘babel-loader’,*  *query: {*  *presets: [‘es2015’, ‘react’]*  *}*  *}*  *]*  *},*  *plugins:[*  *new HtmlWebpackPlugin({*  *template: ‘./index.html’*  *})*  *]*  *}*  **7. Setting up index.html**  Inside the index.html write a regular HTML code with div id=” app” as the root element and then further add the index\_bundle.js script in the HTML body.  **8. Setting up App.js and main.js**  Write the React component inside App.js to render a class or function. Insert the text that you wish to render inside the component, which will appear on the browser once compiled. Then import the component to our root App element inside the main.js so that results appear on the browser.  Create a file “.babelrc” and insert the following lines of code,  *{*  *“presets”:[“env”, “react”]*  *}*  **9. Displaying the Content on Webpage**  The setup is finally complete, and the server will be up and running once you type the following command in the command prompt.  *C:\Users\username\Desktop\reactFile>npm start*  As soon as you press enter, the browser will show you the message you rendered inside the component.   * **Using create-react-app command**  1. **Install create-react-app**   Open the command prompt and write the following code to install the create-react-app.  *C:\Users\username\Desktop>npx create-react-app my-app*  This command installs all required files and folders inside your desktop’s “my-app” folder. This one line of code finishes off the installation of React in your system in a few minutes.  **2. Run the Server**  Go to the command prompt and type  *C:\Users\username\Desktop>cd my-app*  *C:\Users\Tutorialspoint\Desktop>my-app> npm start* |
| Install React on Linux React:   1. [Install npm](https://kinsta.com/knowledgebase/install-react/#linux-1) 2. [Install create-react-app utility](https://kinsta.com/knowledgebase/install-react/#linux-2) 3. [Create and launch your first React application](https://kinsta.com/knowledgebase/install-react/#linux-3)  Step 1: Install npm Login to your server as a sudo user and run the following command:  sudo apt install npm  Once the installation is complete, verify the version of npm installed using the command:  npm --version  The installation of npm also installs Node.js. Confirm the version of Node installed using the command:  node --version Step 2: Install create-react-app Utility create-react-app is a utility that allows you to set up all the tools required for a React application.  It saves time and effort by setting everything up from scratch, giving you a head start.  To install the tool, run the following npm command:  sudo npm -g install create-react-app  Once installed, confirm the version of create-react-app by running:  create-react-app --version Step 3: Create and Launch Your First React Application Creating a React application is simple and straightforward. We will create a React app called my-app as follows:  create-react-app my-app  This process takes about 5 minutes to install all the packages, libraries, and tools needed by the application. Patience is key.  If the application was created successfully, you’ll receive a notification with the basic commands you can run to start managing the application.  To run the application, navigate into the app directory:  cd my-app  Then run the command:  npm start  You’ll see an output showing you how to access the application in the browser.  Open your browser and navigate to your server’s IP address:  http://server-ip:3000  You should see the React logo in your browser: |
| Question: How to install NPM and How to check version of NPM? |
| **Answer:** How to Install NPM on Windows?  1. Download the Package Manager from the official website. 2. Running the downloaded file on your system 3. Install NPM Windows through Wizard 4. Accepting the Terms and Conditions 5. Defining the Path 6. Defining the core features to be installed 7. Allowing Automatic Tool Installation (Optional) 8. Install Node JS Windows 9. Installation in Progress 10. NPM and Node JS are installed 11. Installing Additional Tool  Step 1: Download the Package Manager from the official website. To install Node JS on the system, the first step is to download its package manager, the NPM.  You can search the official website on Google or click on this link to navigate: <https://nodejs.org/en/download/> for the node install process.  For Windows, you have to select the **Windows Installer (.msi)**according to the architecture of your installed operating system. Both 32-bit and 64-bit versions are available, and you can download them just by clicking on them.  node js download Step 2: Running the downloaded file on your system After Downloading the installation package, locate it on your system and double-click on it.  After that, a dialogue box will appear, seeking permission to run the NPM. Click on **Run** to start the installation process.  openfile security Step 3: Install NPM Windows through Wizard After hitting the **Run**button, a new dialogue box will be displayed.  Click on **Next**to continue with the process.  node js setup next Step 4: Accepting the Terms and Conditions Further, select the check box to agree with the terms and conditions to use the Node JS on your computer system. Then, select **Next**to move ahead.  node js installation end user license Step 5: Defining the Path You have to define the location where you want to install the Node JS on your machine. By default, the destination for the file is set to the Program Files folder available in Local Disk C.  You can modify the file destination through the Change button.  In addition, all the core files and future updates are available in this location only. So, ample storage space must be available to allow Node JS to function efficiently.  destination folder Step 6: Defining the core features to be installed Once you’ve determined the path, you will proceed to select Custom Setup. Here, you need to choose the features you want to install.  A total of 143MB of free storage is required to install the main components as listed below:   * js runtime * Corepack manager * Npm package manager * Online documentation shortcuts   You can check the details of each feature by clicking on it, and its information will be displayed in the right panel.  node js runtime custom setup Step 7: Allowing Automatic Tool Installation (Optional) This step is optional; you can ignore it if you don’t need to install any additional tools with Node.js.  And if you require any extra tools, you can select the check box and move further by clicking on the Next button.  After successfully configuring Node.js, it will download the appropriate package to install these tools.  tools for native modules next Step 8: Install Node JS Windows Click on the **Install**button to start the process and wait for it to complete. Also, you can go back if you want to modify any setting.  ready to install node js Step 9: Installation in Progress You will see a progress bar providing the current status when the Node JS installation is in-between.  installing node js Step 10: NPM and Node JS are installed After configuring the relevant settings and performing core operations, the system will install all the files on your computer, and you will be ready to commence using them.  node js setup completed Step 11: Installing Additional Tool If you have selected the check box to have additional tools, then CMD will open after Node JS has been installed, and you have to follow the provided instructions.  installing additional tool nodejs Let’s Check Whether Node JS and NPM are installed Successfully or Not To verify the Node JS and NPM installation, we will open the CMD from the startup menu and type the following commands:   * For Node JS -> **node -v (To check node version)** * For NPM -> **npm -v (To check npm version)**   npm v |
| Question: How to check version of React Js? |
| Answer:On the command prompt type “npm view react version“ |
| Question: How to change ? in components of React Js? |
| **Answer:** |