**2. Which of the following is used to pass data to a component from outside in React?**

* A) setState
* B) render with arguments
* C) props
* D) PropTypes

**Answer**: C

**3. What is a key in React, and why is it important?**

* A) It is used to uniquely identify elements in a list
* B) It is used to bind data to elements
* C) It is used to encrypt data
* D) It is used to create a unique class

**Answer**: A

**4. What is the correct syntax to import a component in React?**

* A) import { ComponentName } from 'react'
* B) import { ComponentName }
* C) import ComponentName from './ComponentName'
* D) require('ComponentName')

**Answer**: C

**5. Which method in React is used to update the state of a component?**

* A) this.setState()
* B) this.updateState()
* C) this.modifyState()
* D) this.changeState()

**Answer**: A

**6. What is JSX in React?**

* A) A JavaScript syntax extension
* B) A new JavaScript framework
* C) A new version of JavaScript
* D) A database language

**Answer**: A

**7. How do you create a functional component in React?**

* A) function ComponentName() { return <div>Component</div>; }
* B) class ComponentName extends React.Component { render() { return <div>Component</div>; } }
* C) const ComponentName = () => <div>Component</div>;
* D) Both A and C

**Answer**: D

**8. What is the purpose of useState in React hooks?**

* A) To declare a state inside a functional component
* B) To create a side effect inside a component
* C) To update the DOM directly
* D) To optimize the performance of a component

**Answer**: A

**9. In which lifecycle method do you typically make API calls in React class components?**

* A) componentDidMount()
* B) componentWillUnmount()
* C) render()
* D) constructor()

**Answer**: A

**10. What is the virtual DOM in React?**

* A) A copy of the real DOM that is kept in memory and synced with the real DOM
* B) A version of DOM that runs on a server
* C) A lightweight version of the browser's DOM
* D) None of the above

**Answer**: A

Create a login form component with two inputs: "Username" and "Password." Validate that both fields are filled before allowing form submission.

**Requirements**:

* Use the useState hook.
* Display an error message if any of the fields are left empty when submitting

import React, { useState } from 'react';

function LoginForm() {

const [username, setUsername] = useState('');

const [password, setPassword] = useState('');

const [error, setError] = useState('');

const handleSubmit = (e) => {

e.preventDefault();

if (!username || !password) {

setError('Both fields are required!');

} else {

setError('');

alert('Form submitted');

}

};

return (

<form onSubmit={handleSubmit}>

<div>

<label>Username:</label>

<input

type="text"

value={username}

onChange={(e) => setUsername(e.target.value)}

/>

</div>

<div>

<label>Password:</label>

<input

type="password"

value={password}

onChange={(e) => setPassword(e.target.value)}

/>

</div>

<button type="submit">Login</button>

{error && <p style={{ color: 'red' }}>{error}</p>}

</form>

);

}

export default LoginForm;

**2. Which of the following is a built-in module in Node.js?**

* A) HTTP
* B) Express
* C) React
* D) Vue

**Answer**: A

**3. What does the fs module in Node.js allow you to do?**

* A) Interact with the file system
* B) Create HTTP servers
* C) Perform database operations
* D) Handle routes in Express.js

**Answer**: A

**4. Which method is used to read a file asynchronously in Node.js?**

* A) fs.readFileSync()
* B) fs.readFile()
* C) fs.read()
* D) fs.readAsync()

**Answer**: B

**5. What does npm stand for in Node.js?**

* A) Node Private Manager
* B) Node Program Manager
* C) Node Package Manager
* D) Network Package Manager

**Answer**: C

**6. How do you install a package globally in Node.js using npm?**

* A) npm install package-name
* B) npm install -g package-name
* C) npm install --global package-name
* D) Both B and C

**Answer**: D

**7. Which of the following is NOT true about Node.js?**

* A) Node.js is single-threaded.
* B) Node.js is event-driven.
* C) Node.js uses a non-blocking I/O model.
* D) Node.js is multi-threaded by default.

**Answer**: D

**8. How do you create a simple HTTP server in Node.js?**

* A) By using the express module
* B) By using the http module
* C) By using the net module
* D) By using the url module

**Answer**: B

**9. In Node.js, which method is used to create a server that listens on a specified port?**

* A) http.listen()
* B) server.create()
* C) server.listen()
* D) app.listen()

**Answer**: C

**10. What is callback in Node.js?**

* A) A function that gets executed after another function completes
* B) A variable in Node.js
* C) A package for handling errors
* D) A special data structure in Node.js

**Answer**: A

**11. Which of the following is true about Node.js event loop?**

* A) It is used to handle synchronous operations
* B) It allows Node.js to perform non-blocking I/O operations
* C) It blocks the main thread when executing I/O operations
* D) It creates a new thread for each client request

**Answer**: B

**12. Which command is used to initialize a new Node.js project and generate a package.json file?**

* A) npm new
* B) npm create
* C) npm init
* D) npm start

**Answer**: C

**13. How do you export a function from a module in Node.js?**

* A) module.export = functionName
* B) export default functionName
* C) module.exports = functionName
* D) require functionName

**Answer**: C

**14. What does the require() function do in Node.js?**

* A) It loads a built-in module
* B) It loads an external or custom module
* C) It defines a new module
* D) Both A and B

**Answer**: D

**15. Which Node.js module is used to work with the stream of data?**

* A) net
* B) fs
* C) stream
* D) buffer

**Answer**: C

**16. Which of the following is a key feature of Node.js?**

* A) Node.js is based on an asynchronous event-driven architecture.
* B) Node.js has blocking I/O.
* C) Node.js has built-in support for Python.
* D) Node.js does not support modules.

**Answer**: A