

1. **What is Express.js?**

- A) A database management system
- B) A web server framework for Node.js
- C) A front-end library
- D) A CSS framework

Answer: B) A web server framework for Node.js

2. **Which method is used to serve static files in Express.js?**

- A) `app.get()`
- B) `app.use()`
- C) `app.static()`
- D) `app.serve()`

Answer: B) `app.use()`

3. **How do you include the middleware for serving static files in Express.js?**

- A) `app.static('/public', 'public')`
- B) `app.use(express.static('public'))`
- C) `app.get('/public', express.static('public'))`
- D) `app.middleware('/public', 'public')`

Answer: B) `app.use(express.static('public'))`

4. **Which method is used to handle routing in Express.js?**

- A) `app.route()`
- B) `app.handle()`
- C) `app.use()`
- D) `app.get()`

Answer: A) `app.route()`

5. **What is a route parameter in Express.js?**

- A) A variable included in the URL path
- B) A query parameter in the URL
- C) An environment variable
- D) A static file path

Answer: A) A variable included in the URL path

6. **Which of the following is NOT a routing method in Express.js?**

- A) `app.get()`
- B) `app.post()`

- C) `app.put()`
- D) `app.delete()`
- E) `app.patch()`
- F) `app.create()`

Answer: F) `app.create()`

7. What does `app.route('/users/:id')` represent?

- A) A static file path
- B) A route with a dynamic parameter `id`
- C) A route for serving static files
- D) A database query

Answer: B) A route with a dynamic parameter `id`

8. What is a route handler in Express.js?

- A) A middleware function that handles requests for a specific route
- B) A function that serves static files
- C) A method to handle database connections
- D) A function to parse request bodies

Answer: A) A middleware function that handles requests for a specific route

9. What is the purpose of `res.send()` in Express.js?

- A) To send a response to the client
- B) To parse the request body
- C) To set headers
- D) To handle errors

Answer: A) To send a response to the client

10. Which method is used to send JSON responses in Express.js?

- A) `res.send()`
- B) `res.json()`
- C) `res.sendFile()`
- D) `res.render()`

Answer: B) `res.json()`

11. What is middleware in Express.js?

- A) A tool for managing databases
- B) Functions that execute during the request-response cycle
- C) A framework for handling static files
- D) A method for error logging

Answer: B) Functions that execute during the request-response cycle

12. What is application-level middleware?

- A) Middleware applied to a specific router
- B) Middleware applied globally to all routes in the app
- C) Middleware that handles errors only
- D) Middleware used for serving static files

Answer: B) Middleware applied globally to all routes in the app

13. What is router-level middleware in Express.js?

- A) Middleware that applies to the entire application
- B) Middleware that applies to a specific router or route
- C) Middleware that handles request logging
- D) Middleware that serves static files

Answer: B) Middleware that applies to a specific router or route

14. How is error-handling middleware defined in Express.js?

- A) By using `app.use()`
- B) By defining a function with four arguments: `err, req, res, next`
- C) By using `app.error()`
- D) By calling `next(err)`

Answer: B) By defining a function with four arguments: `err, req, res, next`

15. Which of the following is an example of third-party middleware?

- A) `express.json()`
- B) `body-parser`
- C) `express.static()`
- D) `express.Router()`

Answer: B) `body-parser`

16. What does `next()` do in middleware functions?

- A) Ends the request-response cycle
- B) Passes control to the next middleware function
- C) Parses the request body
- D) Sends a response to the client

Answer: B) Passes control to the next middleware function

17. What is the lifecycle of middleware in Express.js?

- A) Middleware runs after the response is sent

- B) Middleware runs before the route handler is called
- C) Middleware runs during the response handling only
- D) Middleware is executed only once per application

Answer: B) Middleware runs before the route handler is called

18. Which middleware function is used to parse incoming JSON payloads in Express.js?

- A) `express.urlencoded()`
- B) `body-parser.json()`
- C) `express.json()`
- D) `body-parser.urlencoded()`

Answer: C) `express.json()`

19. What is the primary purpose of `express.urlencoded()` middleware?

- A) To parse JSON bodies
- B) To parse URL-encoded bodies
- C) To handle file uploads
- D) To serve static files

Answer: B) To parse URL-encoded bodies

20. What is the difference between blocking and non-blocking code?

- A) Blocking code pauses execution until a task is complete, while non-blocking code continues execution
- B) Non-blocking code pauses execution until a task is complete, while blocking code continues execution
- C) Blocking code is always synchronous, while non-blocking code is always asynchronous
- D) Blocking code cannot handle asynchronous operations

Answer: A) Blocking code pauses execution until a task is complete, while non-blocking code continues execution

21. How does a request travel through Express.js?

- A) It directly accesses the database
- B) It goes through middleware functions and route handlers
- C) It goes through static file servers
- D) It is parsed directly by the client

Answer: B) It goes through middleware functions and route handlers

22. Which module is commonly used to parse request bodies in Express.js applications?

- A) `express-body-parser`
- B) `body-parser`
- C) `express-request`
- D) `request-body-parser`

Answer: B) `body-parser`

23. What does the `body-parser` middleware do?

- A) Handles static files
- B) `Parses incoming request bodies`
- C) Manages routing
- D) Handles cookie parsing

Answer: B) `Parses incoming request bodies`

24. Which method would you use to parse a form submission with `application/x-www-form-urlencoded` content type?

- A) `bodyParser.json()`
- B) `bodyParser.urlencoded({ extended: true })`
- C) `bodyParser.text()`
- D) `bodyParser.raw()`

Answer: B) `bodyParser.urlencoded({ extended: true })`

25. What is the effect of using `res.sendFile()`?

- A) Sends a JSON response to the client
- B) `Sends a file as a response to the client`
- C) Sends HTML content to the client
- D) Sends an error response to the client

Answer: B) `Sends a file as a response to the client`

26. Which of the following is a method for sending a response with a specific status code in Express.js?

- A) `res.status(code).send()`
- B) `res.set(code).send()`
- C) `res.code(code).send()`
- D) `res.send(code)`

Answer: A) `res.status(code).send()`

27. What does `res.redirect()` do in Express.js?

- A) `Redirects the client to a different URL`

- B) Sends a file to the client
- C) Sets a cookie
- D) Parses the incoming request body

Answer: A) Redirects the client to a different URL

28. Which middleware function is typically used to handle JSON payloads in requests?

- A) `express.json()`
- B) `express.urlencoded()`
- C) `express.raw()`
- D) `express.text()`

Answer: A) `express.json()`

29. What does `res.render()` do?

- A) Sends a file to the client
- B) Sends HTML content to the client after processing a template
- C) Redirects the client to a new URL
- D) Sends a JSON response

Answer: B) Sends HTML content to the client after processing a template

30. Which method is used to set HTTP headers in the response?

- A) `res.set()`
- B) `res.header()`
- C) `res.headers()`
- D) `res.headers.set()`

Answer: A) `res.set()`

31. What does `app.get('/users/:userId')` signify in routing?

- A) A route with a dynamic parameter `userId`
- B) A static file route
- C) A route that returns a JSON response
- D) A middleware function

Answer: A) A route with a dynamic parameter `userId`

32. Which method would you use to handle HTTP POST requests?

- A) `app.get()`
- B) `app.post()`
- C) `app.put()`

- D) `app.delete()`

Answer: B) `app.post()`

33. How do you handle multiple HTTP methods for the same route?

- A) By using `app.route()` and chaining methods
- B) By creating separate routes for each method
- C) By using `app.all()`
- D) By combining methods in one function

Answer: A) By using `app.route()` and chaining methods

34. What is the purpose of `req.params` in Express.js?

- A) To access URL parameters
- B) To parse request bodies
- C) To access query parameters
- D) To set headers

Answer: A) To access URL parameters

35. What does `app.param('id', callback)` do?

- A) It sets a middleware to handle route parameters
- B) It parses the request body
- C) It handles error responses
- D) It sends a file to the client

Answer: A) It sets a middleware to handle route parameters

36. How can you specify a route that matches any path within a certain pattern?

- A) By using wildcards in route paths, such as `/users/*`
- B) By using regular expressions in route paths
- C) By using `app.use()` with a specific pattern
- D) By setting default routes

Answer: B) By using regular expressions in route paths

37. What is the purpose of `app.all()` in Express.js?

- A) To define a middleware function for all HTTP methods
- B) To handle specific HTTP methods
- C) To set global middleware
- D) To define a catch-all route

Answer: A) To define a middleware function for all HTTP methods

38. How do you define a route with multiple handlers in Express.js?

- A) By chaining methods in `app.route()`
- B) By using `app.use()` with an array of handlers
- C) By defining multiple `app.get()` for the same route
- D) By defining a function that calls other functions

Answer: A) By chaining methods in `app.route()`

39. Which method would you use to update a resource?

- A) `app.post()`
- B) `app.get()`
- C) `app.put()`
- D) `app.delete()`

Answer: C) `app.put()`

40. How do you handle form submissions in Express.js?

- A) By using `express.urlencoded()` middleware
- B) By using `express.json()` middleware
- C) By using `express.raw()` middleware
- D) By using `express.text()` middleware

Answer: A) By using `express.urlencoded()` middleware

41. What does error-handling middleware typically look like?

- A) `function (err, req, res, next) { /* error handling logic */ }`
- B) `function (req, res, next) { /* error handling logic */ }`
- C) `function (err, req, res) { /* error handling logic */ }`
- D) `function (req, res) { /* error handling logic */ }`

Answer: A) `function (err, req, res, next) { /* error handling logic */ }`

42. What is the role of third-party middleware in Express.js?

- A) To provide additional functionality not included in Express.js core
- B) To handle static files
- C) To manage internal application logic
- D) To define route handlers

Answer: A) To provide additional functionality not included in Express.js core

43. What is the primary use of `express.Router()`?

- A) To create modular route handlers

- B) To handle middleware functions
- C) To parse request bodies
- D) To serve static files

Answer: A) To create modular route handlers

44. How does middleware affect the request-response cycle in Express.js?

- A) Middleware runs before the request is processed by the route handler
- B) Middleware runs only after the response is sent
- C) Middleware runs after the route handler
- D) Middleware handles static file requests

Answer: A) Middleware runs before the request is processed by the route handler

45. Which of the following is true about the `next()` function in Express.js middleware?

- A) It must be called to pass control to the next middleware or route handler
- B) It ends the request-response cycle
- C) It is used to send responses to the client
- D) It is used to set HTTP headers

Answer: A) It must be called to pass control to the next middleware or route handler

46. How do you create a middleware function in Express.js?

- A) By defining a function that takes `req`, `res`, and `next` as parameters
- B) By defining a function that takes `req` and `res` as parameters
- C) By using `app.use()` without parameters
- D) By using `app.use()` with a callback function

Answer: A) By defining a function that takes `req`, `res`, and `next` as parameters

47. What does `app.use()` do in Express.js?

- A) Registers middleware functions
- B) Defines route handlers
- C) Sends responses to the client
- D) Parses request bodies

Answer: A) Registers middleware functions

48. When would you use `app.use()` with a specific path?

- A) To apply middleware to a subset of routes
- B) To define a global middleware
- C) To handle error responses
- D) To parse URL parameters

Answer: A) To apply middleware to a subset of routes

49. How do you define a middleware function that only applies to routes under `/api`?

- A) `app.use('/api', apiMiddleware)`
- B) `app.use(apiMiddleware, '/api')`
- C) `app.use('/api', function(req, res, next) { /* middleware logic */ })`
- D) `app.use(function(req, res, next) { /* middleware logic */ }, '/api')`

Answer: A) `app.use('/api', apiMiddleware)`

50. What is the difference between application-level and router-level middleware?

- A) Application-level middleware applies globally, while router-level middleware applies to specific routers
- B) Router-level middleware is only used for error handling
- C) Application-level middleware is used to parse request bodies
- D) Router-level middleware is used to serve static files

Answer: A) Application-level middleware applies globally, while router-level middleware applies to specific routers

51. Which type of code allows other operations to continue while waiting for a task to complete?

- A) Blocking code
- B) Non-blocking code
- C) Synchronous code
- D) Sequential code

Answer: B) Non-blocking code

52. Which type of code halts execution until the current operation finishes?

- A) Non-blocking code
- B) Blocking code
- C) Asynchronous code
- D) Concurrent code

Answer: B) Blocking code

53. What is a common example of non-blocking code in Node.js?

- A) Synchronous file reading
- B) Asynchronous file reading using `fs.readFile()`
- C) Synchronous HTTP requests
- D) Sequential execution of functions

Answer: B) Asynchronous file reading using `fs.readFile()`

54. Why is non-blocking code advantageous in a web server environment?

- A) It allows handling multiple requests concurrently without waiting for each to finish
- B) It ensures that operations are executed in sequence
- C) It simplifies code management
- D) It automatically handles errors

Answer: A) It allows handling multiple requests concurrently without waiting for each to finish

55. How can you perform asynchronous operations in Node.js?

- A) By using callbacks
- B) By using promises
- C) By using `async/await` syntax
- D) All of the above

Answer: D) All of the above

56. What is a callback in Node.js?

- A) A function passed as an argument to be executed after an operation completes
- B) A function that handles HTTP requests
- C) A method for serving static files
- D) A way to parse incoming request bodies

Answer: A) A function passed as an argument to be executed after an operation completes

57. What does the `fs.readFile()` function do in Node.js?

- A) Reads a file synchronously
- B) Reads a file asynchronously
- C) Writes data to a file
- D) Deletes a file

Answer: B) Reads a file asynchronously

58. Which of the following is an advantage of asynchronous code?

- A) It reduces the need for multiple threads
- B) It increases the complexity of code
- C) It makes the code easier to understand
- D) It halts execution until a task is complete

Answer: A) It reduces the need for multiple threads

59. How can you handle asynchronous code using promises?

- A) By chaining `.then()` and `.catch()` methods
- B) By using `async` and `await` keywords
- C) By using callbacks
- D) By using synchronous methods

Answer: A) By chaining `.then()` and `.catch()` methods

60. What is the purpose of `async` and `await` keywords in JavaScript?

- A) To handle asynchronous operations more easily
- B) To perform synchronous operations
- C) To manage static file serving
- D) To handle routing in Express.js

Answer: A) To handle asynchronous operations more easily

61. Which of the following is NOT a core feature of Express.js?

- A) Routing
- B) Middleware support
- C) Database management
- D) Static file serving

Answer: C) Database management

62. What is the role of `express.Router()` in creating modular route handlers?

- A) It helps organize routes and middleware into separate modules
- B) It parses request bodies
- C) It handles error responses
- D) It manages HTTP headers

Answer: A) It helps organize routes and middleware into separate modules

63. Which method allows you to serve an HTML file as a response in Express.js?

- A) `res.sendFile()`
- B) `res.send()`
- C) `res.render()`
- D) `res.json()`

Answer: A) `res.sendFile()`

64. How do you use middleware to handle errors in Express.js?

- A) By defining a middleware function with four arguments: `err`, `req`, `res`, `next`
- B) By using `app.use()` without arguments
- C) By calling `next(err)` in route handlers

- D) By using `app.get()` for error handling

Answer: A) By defining a middleware function with four arguments: `err`, `req`, `res`, `next`

65. What is the purpose of the `req.body` object in Express.js?

- A) To access the parsed body of a request
- B) To handle routing parameters
- C) To manage static files
- D) To set response headers

Answer: A) To access the parsed body of a request

66. What does `app.all()` do when used without a path argument?

- A) Applies middleware to all HTTP methods for all paths
- B) Defines a catch-all route for all HTTP methods
- C) Handles only GET requests
- D) Handles error responses

Answer: A) Applies middleware to all HTTP methods for all paths

67. Which middleware function parses incoming requests with JSON payloads?

- A) `express.urlencoded()`
- B) `express.json()`
- C) `body-parser.urlencoded()`
- D) `body-parser.json()`

Answer: B) `express.json()`

68. What is the purpose of the `req.query` object in Express.js?

- A) To access query string parameters in the URL
- B) To access URL path parameters
- C) To handle form submissions
- D) To manage request headers

Answer: A) To access query string parameters in the URL

69. Which of the following methods is used to set a cookie in Express.js?

- A) `res.setCookie()`
- B) `res.cookie()`
- C) `res.set()`
- D) `res.cookieSet()`

Answer: B) `res.cookie()`

70. How do you handle file uploads in Express.js?

- A) By using third-party middleware like `multer`
- B) By using built-in Express.js functions
- C) By using `body-parser`
- D) By using `express.static()`

Answer: A) By using third-party middleware like `multer`

71. What does `app.use(express.json())` do in an Express.js application?

- A) It parses incoming JSON requests and puts the parsed data in `req.body`
- B) It handles static file requests
- C) It sets global headers for all responses
- D) It manages routing

Answer: A) It parses incoming JSON requests and puts the parsed data in `req.body`

72. Which method is used to respond with HTML content in Express.js?

- A) `res.send()`
- B) `res.json()`
- C) `res.redirect()`
- D) `res.render()`

Answer: A) `res.send()`

73. What does `app.use()` with a path argument do?

- A) It applies middleware only to routes that match the specified path
- B) It handles errors globally
- C) It sets up a route for handling requests
- D) It defines static file paths

Answer: A) It applies middleware only to routes that match the specified path

74. How can you debug middleware functions in Express.js?

- A) By adding `console.log()` statements in the middleware functions
- B) By using `app.debug()`
- C) By inspecting `req` and `res` objects in route handlers
- D) By using `res.send()` to check middleware execution

Answer: A) By adding `console.log()` statements in the middleware functions

75. What is a common use case for `app.use()` with a path argument in Express.js?

- A) To apply middleware only to routes under a specific path, such as `/api`
- B) To define static file serving

- C) To set global request headers
- D) To manage routing for specific HTTP methods

Answer: A) To apply middleware only to routes under a specific path, such as `/api`

76. What is the function of `req.method` in an Express.js route handler?

- A) It provides the HTTP method of the request (e.g., GET, POST)
- B) It returns the URL of the request
- C) It parses query parameters
- D) It sets the request headers

Answer: A) It provides the HTTP method of the request (e.g., GET, POST)

77. What does `res.status(404).send('Not Found')` do?

- A) Sends a 404 status code with a 'Not Found' message
- B) Redirects the client to a 404 page
- C) Sets a 404 status code without sending a response
- D) Sets a 'Not Found' error in the request object

Answer: A) Sends a 404 status code with a 'Not Found' message

78. How do you ensure that middleware runs only for specific routes in Express.js?

- A) By specifying the route path in `app.use()` or `router.use()`
- B) By using global middleware functions
- C) By defining middleware functions in route handlers
- D) By using `app.all()` with specific paths

Answer: A) By specifying the route path in `app.use()` or `router.use()`

79. Which method is used to respond with a file download in Express.js?

- A) `res.download()`
- B) `res.file()`
- C) `res.sendFile()`
- D) `res.attachment()`

Answer: A) `res.download()`

80. What does `res.redirect('/home')` do in an Express.js route handler?

- A) It sends a redirect response to the client, directing it to `/home`
- B) It serves the `/home` file from the file system
- C) It renders the `/home` template
- D) It sets up a new route for `/home`

Answer: A) It sends a redirect response to the client, directing it to `/home`

Additional Questions

1. What does `express()` do in an Express.js application?

- A) It creates a new middleware function
- B) It initializes an Express application
- C) It starts the server
- D) It serves static files

Answer: B) It initializes an Express application

2. Which method is used to start an Express server and listen on a specified port?

- A) `app.listen()`
- B) `app.start()`
- C) `app.init()`
- D) `app.run()`

Answer: A) `app.listen()`

3. How do you set a port for an Express application to listen on?

- A) `app.listen(port)`
- B) `app.set('port', port)`
- C) `app.port(port)`
- D) `app.use(port)`

Answer: A) `app.listen(port)`

4. What middleware function parses incoming request bodies in Express.js?

- A) `express.bodyParser()`
- B) `express.json()`
- C) `express.urlencoded()`
- D) `express.parser()`

Answer: B) `express.json()`

5. Which Express method is used to handle HTTP POST requests?

- A) `app.post()`
- B) `app.get()`
- C) `app.put()`
- D) `app.delete()`

Answer: A) `app.post()`

6. How do you serve static files from a directory named 'public' in an Express.js application?

- A) `app.use(express.static('public'))`
- B) `app.static('public')`
- C) `app.serve('public')`
- D) `app.use('/public', express.static('public'))`

Answer: A) `app.use(express.static('public'))`

7. Which method sends a file as an HTTP response in Express.js?

- A) `res.sendFile()`
- B) `res.file()`
- C) `res.download()`
- D) `res.serveFile()`

Answer: A) `res.sendFile()`

8. To serve static files under the '/assets' route, which code snippet should you use?

- A) `app.use('/assets', express.static('assets'))`
- B) `app.use(express.static('/assets'))`
- C) `app.static('/assets', 'assets')`
- D) `app.use('/assets', express.static('public'))`

Answer: A) `app.use('/assets', express.static('assets'))`

9. What happens if a static file and a route handler match the same URL?

- A) The static file is served, and the route handler is ignored.
- B) `The route handler is executed, and the static file is ignored.`
- C) Both the static file and route handler are executed.
- D) An error is thrown.

Answer: B) The route handler is executed, and the static file is ignored.

10. Which of the following is NOT a valid static file type served by Express?

- A) HTML files
- B) CSS files
- C) JavaScript files
- D) `Database queries`

Answer: D) Database queries

11. Which method is used to handle GET requests to a specific path in Express.js?

- A) `app.post()`

- B) `app.get()`
- C) `app.put()`
- D) `app.all()`

Answer: B) `app.get()`

12. How do you define a route that will handle all HTTP methods at a specific path?

- A) `app.route()`
- B) `app.all()`
- C) `app.use()`
- D) `app.method()`

Answer: B) `app.all()`

13. Which Express method allows defining multiple routes at once for different HTTP methods?

- A) `app.method()`
- B) `app.route()`
- C) `app.all()`
- D) `app.use()`

Answer: B) `app.route()`

14. How do you define a route handler for POST requests to the '/login' path?

- A) `app.post('/login', handler)`
- B) `app.get('/login', handler)`
- C) `app.use('/login', handler)`
- D) `app.all('/login', handler)`

Answer: A) `app.post('/login', handler)`

15. Which method is used to handle DELETE requests in Express.js?

- A) `app.get()`
- B) `app.put()`
- C) `app.delete()`
- D) `app.post()`

Answer: C) `app.delete()`

16. What is the purpose of a wildcard route parameter in Express.js?

- A) To match a specific URL path
- B) To match any route path segment

- C) To specify a query string
- D) To define static file paths

Answer: B) To match any route path segment

17. How do you define a route with an optional parameter?

- A) `/path/:param?`
- B) `/path/:param*`
- C) `/path/:param+`
- D) `/path/:param/`

Answer: A) `/path/:param?`

18. Which Express.js feature allows matching routes with multiple path segments?

- A) `*` (Wildcard)
- B) `?` (Optional)
- C) `+` (One or more)
- D) `:` (Dynamic parameters)

Answer: A) `*` (Wildcard)

19. How can you define a route that accepts multiple parameters in Express.js?

- A) `/route/:param1/:param2`
- B) `/route/:param1?/:param2?`
- C) `/route/:param1/*`
- D) `/route/*`

Answer: A) `/route/:param1/:param2`

20. What will `req.params.id` contain if the route is `/item/:id` and the URL is `/item/456`?

- A) `456`
- B) `/item/456`
- C) `undefined`
- D) `null`

Answer: A) `456`