

Web Development using JS Frameworks (Easy)

1. Which utility allows you to automatically restart a Node application when changes are detected?

- A. NodeLive
- B. NodeReload
- C. Nodemon
- D. AutoNode

ANSWER: C

2. How do you define a service in Angular?

- A. By using the @Injectable decorator and defining a class
- B. By extending the Service class
- C. By creating a component with a service flag
- D. By using a factory function

ANSWER: A

3. A record in MongoDB is equivalent to:

- A. Document
- B. Table
- C. Application
- D. None of the mentioned above

ANSWER: A

4. What is Node.js?

- A. A JavaScript runtime built on Chrome's V8 JavaScript engine
- B. A back-end framework
- C. A front-end framework
- D. A type of database

ANSWER: A

5. Which package manager is bundled with Node.js by default?

- A. npm
- B. bower
- C. yarn
- D. grunt

ANSWER: A

6. How can you initiate a project using npm?

- A. npm start
- B. npm init
- C. npm run
- D. npm create

ANSWER: B

7. Which method is used in Node.js to include modules?

- A. require()
- B. include()
- C. import
- D. fetch()

ANSWER: A

8. Which core module in Node.js provides asynchronous file operations?

- A. http
- B. url
- C. fs
- D. path

ANSWER: C

9. In Node.js, which is an in-built event emitter?

- A. EventEmitter
- B. EventsNew
- C. EventLoop
- D. EventYield

ANSWER: A

10. Which global object provides functionality to control the Node.js runtime process?

- A. Global
- B. Runtime
- C. Process
- D. NodeControl

ANSWER: C

11. To create a new instance of a server in Node.js, we use?

- A. `http.createServer()`
- B. `http.createInstance()`
- C. `http.newServer()`
- D. `http.createServerInstance()`

ANSWER: A

12. The core module for handling paths?

- A. `url`
- B. `dir`
- C. `path`
- D. `location`

ANSWER: C

13. Stream module in Node.js provides;

- A. Tools for creating WebSockets
- B. Utilities for handling HTTP operations
- C. A way to handle streaming data
- D. Functions for dealing with promises

ANSWER: C

14. Which is not a core module in Node.js?

- A. `fs`
- B. `http`
- C. `express`
- D. `url`

ANSWER: C

15. Which object stores all the environment variables in a Node.js application?

- A. `env`
- B. `process.env`
- C. `node.env`
- D. `app.env`

ANSWER: B

16. The data model available within MongoDB allows us to represent ____.

- A. Hierarchical relationships
- B. Able to handle complex structures
- C. Both A and B
- D. None of the mentioned above

ANSWER: B

17. How do you install a package locally using npm in a Node.js application?

- A. `npm install -l <package-name>`
- B. `npm local install <package-name>`
- C. `npm run install <package-name>`
- D. `npm install <package-name>`

ANSWER: D

18. What stands true for MongoDB?

- A. MongoDB is a cross-platform database
- B. Document oriented database
- C. High performance database
- D. All of the mentioned above

ANSWER: D

19. What does the `npm init` command do?

- A. Installs the dependencies listed in `package.json`
- B. Starts the Node.js application
- C. It creates a new Node.js application
- D. It initializes a new `package.json` file

ANSWER: D

20. Which of the following is used to import modules in Node.js?

- A. import { module } from 'module-name'
- B. #include 'module-name'
- C. require('module-name')
- D. using module-name

ANSWER: C

21. The npm command used to install the dependencies listed in package.json file is?

- A. npm init
- B. npm run
- C. npm start
- D. npm install

ANSWER: D

22. Which of these methods will handle HTTP POST requests in an Express app?

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

ANSWER: A

23. Which Node.js command is used to execute a JavaScript file, say "app.js"?

- A. node install app.js
- B. node run app.js
- C. node app.js
- D. npm app.js

ANSWER: C

24. What is the purpose of the --save flag in the npm install command?

- A. To globally install a package
- B. To save a backup of the current project
- C. To save the package version in the package-lock.json
- D. To save the package in the package.json dependencies

ANSWER: D

25. Which npm command can be used to list all globally installed packages?

- A. npm list -g
- B. npm global list
- C. npm show
- D. npm modules

ANSWER: A

26. Which of the following best describes MongoDB?

- A. Relational database
- B. Spreadsheet program
- C. Document-based NoSQL database
- D. Graph database

ANSWER: C

27. In MongoDB, a record is equivalent to a:

- A. Row
- B. Table
- C. Document
- D. Database

ANSWER: C

28. The default port for MongoDB is:

- A. 27017
- B. 8080
- C. 3306
- D. 3000

ANSWER: A

29. Which MongoDB command is used to display the database you are currently using?

- A. show currentDatabase
- B. show db
- C. use db
- D. db

ANSWER: D

30. To create or switch to a database in MongoDB, which command would you use?

- A. db.<database_name>
- B. createDatabase(name)
- C. switchDatabase(name)
- D. use <database_name>

ANSWER: D

31. Which of the following commands will show you all the collections in your current database, in the mongo shell?

- A. show collections
- B. list collections
- C. display collections
- D. db.collections()

ANSWER: A

32. Which of the following commands will show you all the collections in your current database, in node applications?

- A. show collections
- B. list collections
- C. db.listCollections()
- D. db.collections()

ANSWER: C

33. Which of the following commands deletes a MongoDB database?

- A. removeDatabase()
- B. destroyDatabase()
- C. db.dropDatabase()
- D. deleteDatabase()

ANSWER: C

34. Which MongoDB method can be used to remove one or more documents from a collection?

- A. db.<collection_name>.drop()
- B. db.<collection_name>.remove()
- C. db.<collection_name>.delete()
- D. db.<collection_name>.discard()

ANSWER: B

35. What is the BSON in MongoDB?

- A. A database engine
- B. A query language
- C. A backup tool
- D. Binary representation of JSON

ANSWER: D

36. REST stands for;

- A. Representational State Transform
- B. Representational State Transfer
- C. Represent State Transform
- D. Represent State Transfer

ANSWER: B

37. What is the protocol used in REST?

- A. FTP
- B. HTTP
- C. JMX
- D. SOAP

ANSWER: B

38. What is the HTTP Code Related to Internal Server Error?

- A. 500
- B. 501
- C. 504
- D. 502

ANSWER: A

39. What does HTTP Code 200 indicate?

- A. Error
- B. Completed
- C. Success
- D. Warning

ANSWER: C

40. The HTTP method used to make an HTTP request to create new resource?

- A. POST
- B. PUT
- C. GET
- D. CREATE

ANSWER: A

41. Which HTTP method do we use to make an HTTP request to update existing resource?

- A. POST
- B. PUT
- C. UPDATE
- D. DELETE

ANSWER: B

42. What does the HTTP status code 201 indicate?

- A. OK
- B. Created
- C. Accepted
- D. No Content

ANSWER: B

43. Which MongoDB command returns statistics about the database?

- A. db.stats()
- B. db.info()
- C. db.data()
- D. db.details()

ANSWER: A

44. What format does MongoDB use for its queries?

- A. SQL
- B. XML
- C. BSON
- D. XQuery

ANSWER: D

45. To update a document in a collection, which method is appropriate?

- A. db.<collection_name>.modify()
- B. db.<collection_name>.edit()
- C. db.<collection_name>.revise()
- D. db.<collection_name>.update()

ANSWER: D

46. Which of the following operations provides a sorted list of the documents in a collection?

- A. db.<collection_name>.sort()
- B. db.<collection_name>.arrange()
- C. db.<collection_name>.listSorted()
- D. db.<collection_name>.orderBy()

ANSWER: A

47. How can you backup your MongoDB database?

- A. mongodump
- B. mongobackup
- C. mongosave
- D. mongoarchive

ANSWER: A

48. Which tool can be used to import content from a BSON file into a MongoDB database?

- A. mongoimport
- B. mongorestore
- C. mongoload
- D. mongofetch

ANSWER: B

49. Which of the following commands lists all available MongoDB databases?

- A. show dbs
- B. list dbs
- C. show databases
- D. db.list()

ANSWER: A

50. Which MongoDB function is used to limit the number of results returned?

- A. db.<collection_name>.count()
- B. db.<collection_name>.skip()
- C. db.<collection_name>.limit()
- D. db.<collection_name>.restrict()

ANSWER: C

51. In which language is MongoDB written?

- A. Python
- B. Java
- C. C++
- D. Go

ANSWER: C

52. If you wish to retrieve only the specified fields of a document, which method would you use?

- A. project()
- B. show()
- C. select()
- D. find()

ANSWER: D

53. Which method sends a JSON response in Express.js?

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

ANSWER: A

54. If you want to join collections in MongoDB, which operator would you use?

- A. \$join
- B. \$link
- C. \$lookup
- D. \$merge

ANSWER: C

55. What type of index in MongoDB allows you to search text fields?

- A. Text index
- B. Compound index
- C. Unique index
- D. Sparse index

ANSWER: A

56. Which MongoDB command provides execution statistics about query performance?

- A. db.<collection_name>.stats()
- B. db.<collection_name>.explain()
- C. db.<collection_name>.details()
- D. db.<collection_name>.analyze()

ANSWER: B

57. How do you create a unique index on a field in MongoDB?

- A. { uniqueKey: 1 }
- B. { index: "unique" }
- C. { type: "unique" }
- D. { unique: true }

ANSWER: D

58. In Express.js, how do you redirect a user to another page?

- A. `res.send('/new-url')`
- B. `res.redirect('/new-url')`
- C. `res.goto('/new-url')`
- D. `app.redirect('/new-url')`

ANSWER: B

59. Which command is used to terminate a long-running operation in MongoDB?

- A. `db.killOp()`
- B. `db.stopOp()`
- C. `db.terminate()`
- D. `db.endOp()`

ANSWER: A

60. What is Express.js?

- A. A database
- B. A frontend framework
- C. A web server framework for Node.js
- D. An operating system

ANSWER: C

61. Which of the following is NOT a valid logical operator in MongoDB?

- A. `$and`
- B. `$or`
- C. `$nor`
- D. `$between`

ANSWER: D

62. How do you capture query parameters in Express routes?

- A. `req.data`
- B. `req.params`
- C. `req.query`
- D. `req.body`

ANSWER: C

63. Which MongoDB shell method is used to rename a collection?

- A. `db.<collection_name>.rename()`
- B. `db.<collection_name>.renameCollection()`
- C. `db.<collection_name>.changeName()`
- D. `db.<collection_name>.alter()`

ANSWER: B

64. What's the primary use of middleware in Express?

- A. Data storage
- B. Error handling
- C. Execution of functions in the request-response cycle
- D. Frontend rendering

ANSWER: C

65. What does the `mongos` command do?

- A. Starts the MongoDB server.
- B. Starts a shard server.
- C. Starts the MongoDB routing service.
- D. Dumps the MongoDB database.

ANSWER: C

66. How do you send a status of 404 and a message 'Not Found' in Express?

- A. `res.status(404).message('Not Found')`
- B. `res.status(404).send('Not Found')`
- C. `res.send(404, 'Not Found')`
- D. `res.sendStatus(404, 'Not Found')`

ANSWER: B

67. How do you capture data sent in the body of a POST request in Express?

- A. `req.params`
- B. `req.body`
- C. `req.data`
- D. `req.query`

ANSWER: B

68. To use req.body, what middleware must be used with Express?

- A. express.urlencoded()
- B. express.query()
- C. express.static()
- D. express.getbody()

ANSWER: A

69. Which middleware in Express.js helps in handling JSON data from POST requests?

- A. express.json()
- B. express.urlencoded()
- C. express.parse()
- D. express.data()

ANSWER: A

70. Which of the following methods is used to render a view in Express.js?

- A. res.view()
- B. res.page()
- C. res.sendView()
- D. res.render()

ANSWER: D

71. If you want to set a cookie in Express.js, which method would you use?

- A. res.setCookie()
- B. res.cookie()
- C. res.saveCookie()
- D. res.putCookie()

ANSWER: B

72. What will next() function do in Express middleware?

- A. It will end the response cycle.
- B. It will pass control to the next middleware function.
- C. It will restart the request-response cycle.
- D. It will throw an error.

ANSWER: B

73. To serve static files in Express, which built-in middleware would you use?

- A. express.static()
- B. express.file()
- C. express.serve()
- D. express.folder()

ANSWER: A

74. What does app.all() method do in Express.js?

- A. It handles all HTTP methods.
- B. It handles only POST and GET methods.
- C. It restarts the app.
- D. It closes all open routes.

ANSWER: A

75. Which function in Express.js wraps an asynchronous function to catch all the errors?

- A. catchAsync()
- B. asyncWrapper()
- C. wrapAsync()
- D. handleAsync()

ANSWER: C

76. If you want to set several properties on a response at once in Express.js, which method would you use?

- A. res.set()
- B. res.properties()
- C. res.headerSet()
- D. res.multiSet()

ANSWER: A

77. How can you access the query string parameters in Express.js?

- A. req.params
- B. req.data
- C. req.body
- D. req.query

ANSWER: D

78. What is the primary purpose of the Express 'Router'?
- A. To route different files in the file system.
 - B. To divide the application into modular, mountable route handlers.
 - C. To connect to different databases.
 - D. To parse incoming requests.

ANSWER: B

79. How do you get the HTTP method (like GET, POST) of a client's request in Express?
- A. req.methodType()
 - B. req.httpMethod
 - C. req.type()
 - D. req.method

ANSWER: D

80. How do you retrieve the value of a specific cookie sent in a request in Express.js?
- A. req.cookie.value
 - B. req.cookies[cookieName]
 - C. req.get('cookieName')
 - D. req.values.cookieName

ANSWER: B

81. What does JSON stand for?
- A. JavaScript Oriented Notation
 - B. JavaScript Object Notation
 - C. Java Ordered Notation
 - D. Java Object Notation

ANSWER: B

82. What is the file extension commonly used for JSON files?
- A. .xml
 - B. .js
 - C. .json
 - D. .html

ANSWER: C

83. How do you represent data in JSON?
- A. Key-Value pairs
 - B. Metadata
 - C. Binary Data
 - D. Key-Object pairs

ANSWER: A

84. Is JSON case-sensitive?
- A. Yes
 - B. No

ANSWER: A

85. Which symbol is used to enclose JSON objects?
- A. []
 - B. ()
 - C. {}
 - D. ""

ANSWER: C

86. In JSON, keys must always be of which data type?
- A. String
 - B. Number
 - C. Boolean
 - D. Object

ANSWER: A

87. Which method is used to define a route that responds to POST requests in Express.js?
- A. app.post()
 - B. app.route()
 - C. app.add()
 - D. app.handle()

ANSWER: A

88. How do you include middleware in an Express.js application?

- A. `app.use(middlewareFunction)`
- B. `app.add(middlewareFunction)`
- C. `app.middleware(middlewareFunction)`
- D. `app.include(middlewareFunction)`

ANSWER: A

89. What is the purpose of Angular's Router module?

- A. To manage navigation and routing in a single-page application
- B. To handle form submissions
- C. To manage component data binding
- D. To perform server-side rendering

ANSWER: A

90. Which of the following is used to handle errors in Express.js?

- A. Error-handling middleware
- B. Catch blocks
- C. Try blocks
- D. Validation middleware

ANSWER: A

91. How can you set a static directory in Express.js?

- A. `app.use(express.static('public'))`
- B. `app.static('public')`
- C. `app.directory('public')`
- D. `app.useStatic('public')`

ANSWER: A

92. Which module is used to handle HTTP requests in Express.js?

- A. `http`
- B. `request`
- C. `express`
- D. `axios`

ANSWER: C

93. Which of the following is a method to query documents in MongoDB?

- A. `find()`
- B. `select()`
- C. `query()`
- D. `get()`

ANSWER: A

94. How do you delete a document in MongoDB?

- A. `db.collection.remove(query)`
- B. `db.collection.delete(query)`
- C. `db.collection.drop(query)`
- D. `db.collection.erase(query)`

ANSWER: A

95. What is the purpose of the `aggregate()` function in MongoDB?

- A. To perform complex data transformations
- B. To perform simple queries
- C. To insert new documents
- D. To update existing documents

ANSWER: A

96. What is a BSON file in MongoDB?

- A. Binary JSON file format
- B. Binary Object Storage Network
- C. Basic Storage Object Node
- D. Binary Serialized Object Node

ANSWER: A

97. How can you index a field in a MongoDB collection?

- A. `db.collection.createIndex({ field: 1 })`
- B. `db.collection.index({ field: 1 })`
- C. `db.collection.addIndex({ field: 1 })`
- D. `db.collection.indexField({ field: 1 })`

ANSWER: A

98. Which Angular module is required to use forms?

- A. FormsModule
- B. ReactiveFormsModule
- C. HttpClientModule
- D. RouterModule

ANSWER: A

99. What is Angular's default rendering engine?

- A. Server-side rendering
- B. Client-side rendering
- C. Static site generation
- D. Hybrid rendering

ANSWER: B

100. How do you create a new Angular component using Angular CLI?

- A. ng generate component componentName
- B. ng create component componentName
- C. ng add component componentName
- D. ng make component componentName

ANSWER: A

101. Which decorator is used to define an Angular component?

- A. @Component
- B. @Directive
- C. @Module
- D. @Service

ANSWER: A

102. What is the purpose of the Angular ngOnInit lifecycle hook?

- A. To perform initialization logic after the component is constructed
- B. To perform cleanup logic before the component is destroyed
- C. To perform data binding
- D. To manage component dependencies

ANSWER: A

103. Which function is used to read a file asynchronously in Node.js?

- A. fs.readFile()
- B. fs.open()
- C. fs.read()
- D. fs.fetch()

ANSWER: A

104. What is the purpose of the process.env object in Node.js?

- A. To access environment variables
- B. To handle file streams
- C. To manage HTTP requests
- D. To manage database connections

ANSWER: A

105. How do you handle errors in asynchronous functions using Promises in Node.js?

- A. .catch()
- B. .error()
- C. .fail()
- D. .throw()

ANSWER: A

106. Which module is used to handle HTTP requests and responses in Node.js?

- A. http
- B. fs
- C. url
- D. path

ANSWER: A

107. What is the purpose of the require() function in Node.js?

- A. To include external modules or files
- B. To perform HTTP requests
- C. To read environment variables
- D. To manage asynchronous operations

ANSWER: A

108. What does the readonly modifier do in TypeScript?
- A. Makes a property immutable after initialization
 - B. Restricts a property to be used only in read operations
 - C. Makes a property optional
 - D. Ensures a property can only be written to

ANSWER: A

109. How do you specify a function's return type in TypeScript?
- A. function name(): type { }
 - B. function name(type): { }
 - C. function name(type): return { }
 - D. function name() -> type { }

ANSWER: A

110. How do you define a tuple in TypeScript?
- A. let tuple: [number, string]
 - B. let tuple: (number, string)
 - C. let tuple: [number | string]
 - D. let tuple: [number; string]

ANSWER: A

111. What does the npm install command do?
- A. Installs the dependencies defined in package.json
 - B. Updates npm to the latest version
 - C. Uninstalls a package
 - D. Creates a new npm project

ANSWER: A

112. Which technology in the MEAN stack is used for building user interfaces?
- A. Angular
 - B. Express
 - C. MongoDB
 - D. Node.js

ANSWER: A

113. How can you globally install a package using npm?
- A. npm install -g packageName
 - B. npm global install packageName
 - C. npm add -g packageName
 - D. npm install --global packageName

ANSWER: A

114. Which npm command is used to uninstall a package?
- A. npm uninstall packageName
 - B. npm remove packageName
 - C. npm delete packageName
 - D. npm drop packageName

ANSWER: A

115. How do you update all packages to their latest versions using npm?
- A. npm update
 - B. npm upgrade
 - C. npm refresh
 - D. npm latest

ANSWER: A

116. What is the default port for MySQL server?
- A. 3306
 - B. 3307
 - C. 3308
 - D. 3309

ANSWER: A

117. Which SQL command is used to modify existing data in a table?
- A. UPDATE
 - B. ALTER
 - C. INSERT
 - D. SELECT

ANSWER: A

118. What does the JOIN clause do in SQL?

- A. Combines rows from two or more tables
- B. Deletes rows from a table
- C. Updates a table schema
- D. Creates a new table

ANSWER: A

119. How do you create a new table in MySQL?

- A. CREATE TABLE tableName (column definitions);
- B. NEW TABLE tableName (column definitions);
- C. ADD TABLE tableName (column definitions);
- D. BUILD TABLE tableName (column definitions);

ANSWER: A

120. Which SQL statement is used to retrieve data from a database?

- A. SELECT
- B. GET
- C. FETCH
- D. RETRIEVE

ANSWER: A

121. What is the primary purpose of Node.js?

- A. To build scalable network applications
- B. To manage SQL databases
- C. To handle client-side rendering
- D. To create static web pages

ANSWER: A

122. How do you define a variable with a specific type in TypeScript?

- A. let variableName: type
- B. let variableName = type
- C. var variableName: type
- D. const variableName: type

ANSWER: A

123. In Express.js, what is the purpose of the next() function?

- A. To pass control to the next middleware function
- B. To end the response
- C. To redirect the client to a different route
- D. To handle HTTP errors

ANSWER: A

124. What is the purpose of MongoDB Atlas?

- A. To provide a cloud-based MongoDB service
- B. To manage MySQL databases
- C. To build Angular applications
- D. To serve static files

ANSWER: A

125. Which module is used in Node.js to work with the file system?

- A. fs
- B. http
- C. path
- D. os

ANSWER: A

126. What does the npm run command do?

- A. Executes a script defined in package.json
- B. Starts a new npm project
- C. Updates all npm packages
- D. Installs a package globally

ANSWER: A

127. How do you specify a method as private in TypeScript?

- A. private methodName()
- B. protected methodName()
- C. public methodName()
- D. hidden methodName()

ANSWER: A

128. Which component of the MEAN stack is a NoSQL database?

- A. MongoDB
- B. MySQL
- C. PostgreSQL
- D. SQLite

ANSWER: A

129. Which component of the MEAN stack runs JavaScript on the server-side?

- A. Node.js
- B. Angular
- C. MongoDB
- D. Express

ANSWER: A

130. What role does Node.js play in the MEAN stack?

- A. Server-side runtime environment
- B. Client-side framework
- C. Database management
- D. Web server

ANSWER: A

131. How does Angular communicate with the server in a MEAN stack application?

- A. HTTP requests
- B. WebSockets
- C. File uploads
- D. Direct database connections

ANSWER: A

132. What is the primary function of Express in the MEAN stack?

- A. To handle HTTP requests and responses
- B. To render client-side templates
- C. To manage database connections
- D. To build user interfaces

ANSWER: A

133. Which component of the MEAN stack is responsible for data storage?

- A. MongoDB
- B. Node.js
- C. Angular
- D. Express

ANSWER: A



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134. What is a major advantage of using the MEAN stack?
- A. Unified JavaScript development across the stack
 - B. Use of multiple languages for different layers
 - C. Exclusive use of SQL databases
 - D. Server-side rendering

ANSWER: A

135. Which of the following is a benefit of using Angular in the MEAN stack?
- A. Two-way data binding
 - B. Direct database access
 - C. Built-in HTTP server
 - D. Non-JavaScript syntax

ANSWER: A

136. What advantage does Node.js offer in the MEAN stack?
- A. Non-blocking I/O and high scalability
 - B. SQL database management
 - C. Client-side templating
 - D. Static site generation

ANSWER: A

137. How does Express benefit developers in the MEAN stack?
- A. Simplifies routing and middleware management
 - B. Manages front-end components
 - C. Handles database queries
 - D. Provides data visualization

ANSWER: A

138. What is a common security concern for Express applications?
- A. Cross-Site Scripting (XSS)
 - B. SQL Injection
 - C. Cross-Site Request Forgery (CSRF)
 - D. Man-in-the-Middle attacks

ANSWER: A

139. How can you mitigate Cross-Site Request Forgery (CSRF) attacks in Express?
- A. Use the csrf middleware
 - B. Implement secure HTTP headers
 - C. Sanitize user inputs
 - D. Encrypt data at rest

ANSWER: A

140. Which method is used to hash passwords in Node.js applications?
- A. bcrypt
 - B. md5
 - C. sha1
 - D. base64

ANSWER: A

141. What is the purpose of HTTPS in securing web applications?
- A. To encrypt data transmitted between client and server
 - B. To manage user sessions
 - C. To handle server-side rendering
 - D. To cache static files

ANSWER: A

142. Which of the following is a recommended practice for securing MongoDB?

- A. Enable authentication and authorization
- B. Store data in plain text
- C. Disable SSL/TLS
- D. Use default configurations

ANSWER: A

143. Which Angular feature helps in handling user inputs and validations?

- A. Reactive Forms
- B. Angular Router
- C. Angular Service
- D. Angular Module

ANSWER: A

144. How do you implement lazy loading in Angular?

- A. Using Angular Router with loadChildren
- B. Using ngIf directives
- C. Using Angular services
- D. Using ngFor loops

ANSWER: A

145. What is Angular's mechanism for communication between components?

- A. Input and Output decorators
- B. Angular Router
- C. Angular Directives
- D. Angular Services

ANSWER: A

146. How does Angular handle state management?

- A. Using services and observables
- B. Using localStorage
- C. Using sessionStorage
- D. Using global variables

ANSWER: A

147. What is Angular's ngOnInit lifecycle hook used for?

- A. To perform initialization logic after Angular sets up data-bound properties
- B. To clean up resources before the component is destroyed
- C. To bind data to the template
- D. To perform HTTP requests

ANSWER: A

148. When was AngularJS first released?

- A. 2010
- B. 2012
- C. 2014
- D. 2016

ANSWER: A

149. Which version of Angular introduced the Angular CLI?

- A. Angular 2
- B. Angular 4
- C. Angular 5
- D. Angular 6

ANSWER: A

150. In what year did Node.js become officially supported by the Node.js Foundation?

- A. 2010
- B. 2014
- C. 2018
- D. 2016

ANSWER: B

151. What is the role of services in Angular's architecture?

- A. To share data and logic across components
- B. To handle HTTP requests
- C. To define routing rules
- D. To manage component state

ANSWER: A

152. What major feature was introduced in Angular 2?

- A. A complete rewrite of AngularJS
- B. Directives only
- C. The use of jQuery
- D. Improved two-way data binding

ANSWER: A

153. What is the main architectural pattern used by Angular?

- A. Component-based architecture
- B. Model-View-Controller (MVC)
- C. Service-oriented architecture (SOA)
- D. Microservices architecture

ANSWER: A

154. In the MEAN stack, what architecture pattern is commonly used for building applications?

- A. RESTful API architecture
- B. Monolithic architecture
- C. Service-oriented architecture (SOA)
- D. Microservices architecture

ANSWER: A

155. When was MongoDB first released?

- A. 2007
- B. 2009
- C. 2010
- D. 2012

ANSWER: B

156. What is the purpose of Express middleware in the architecture?

- A. To handle request and response transformations
- B. To manage database connections
- C. To render HTML templates
- D. To create Angular components

ANSWER: A

157. In Angular, how are events handled in a component template?

- A. Using event binding with parentheses
- B. Using property binding with square brackets
- C. Using directives
- D. Using services

ANSWER: A

158. What is the EventEmitter class used for in Angular?

- A. To create custom events and communicate between components
- B. To manage HTTP requests
- C. To handle form validations
- D. To perform routing

ANSWER: A

159. How does Node.js handle events?

- A. Through an event loop and event-driven architecture
- B. Through multi-threading
- C. By using synchronous operations
- D. By using callback functions only

ANSWER: A

160. What is the purpose of the on method in Node.js EventEmitter?

- A. To listen for specific events
- B. To emit events
- C. To remove event listeners
- D. To trigger error events

ANSWER: A

161. How can you handle click events in Angular templates?

- A. By using (click)="method()" syntax
- B. By using {{click()}} syntax
- C. By using ng-click="method()" syntax
- D. By using onClick="method()" syntax

ANSWER: A

162. What feature of Angular allows for the creation of reusable UI components?

- A. Component-based architecture
- B. Directives
- C. Services
- D. Pipes

ANSWER: A

163. What feature of Node.js contributes to its high scalability?

- A. Non-blocking, event-driven I/O
- B. Multi-threaded execution
- C. Synchronous I/O operations
- D. Default caching

ANSWER: A

164. Which Angular feature helps with filtering and transforming data in templates?

- A. Pipes
- B. Directives
- C. Services
- D. Guards

ANSWER: A

165. How do you define an interface in TypeScript?

- A. `interface InterfaceName {}`
- B. `type InterfaceName = {}`
- C. `class InterfaceName {}`
- D. `object InterfaceName {}`

ANSWER: A

166. Can TypeScript interfaces extend other interfaces?

- A. Yes, using the `extends` keyword
- B. No, interfaces cannot extend other interfaces
- C. Yes, using the `implements` keyword
- D. Yes, using the `inherits` keyword

ANSWER: A

167. What is the default visibility of properties in an interface?

- A. Public
- B. Private
- C. Protected
- D. Static

ANSWER: A

168. How can you implement an interface in a class?

- A. `class ClassName implements InterfaceName {}`
- B. `class ClassName extends InterfaceName {}`
- C. `class ClassName with InterfaceName {}`
- D. `class ClassName includes InterfaceName {}`

ANSWER: A

169. Can an interface define methods in TypeScript?

- A. Yes, interfaces can define methods that implementing classes must provide
- B. No, interfaces can only define properties
- C. Yes, but only static methods
- D. Yes, but only private methods

ANSWER: A

170. How do you create a child component in Angular?

- A. By using Angular CLI with `ng generate component component-name`
- B. By manually creating files and adding them to `app.module.ts`
- C. By modifying the `index.html` file
- D. By creating a new module

ANSWER: A

171. How does a parent component pass data to a child component in Angular?

- A. Using `@Input` decorator
- B. Using `@Output` decorator
- C. Using Angular services
- D. Using local storage

ANSWER: A

172. How can a child component communicate with its parent component?

- A. Using @Output and EventEmitter
- B. Using @Input
- C. Using local storage
- D. Using HTTP services

ANSWER: A

173. What is the purpose of Angular's ng-content directive?

- A. To project content from a parent component into a child component
- B. To bind data from a parent to a child component
- C. To define routing rules
- D. To handle form validation

ANSWER: A

174. How do you access a child component's method from a parent component in Angular?

- A. Using ViewChild decorator
- B. Using @Input
- C. Using @Output
- D. Using Angular services

ANSWER: A

175. What is one-way data binding in Angular?

- A. Binding data from the component to the view
- B. Binding data from the view to the component
- C. Binding data between two components
- D. Binding data between two services

ANSWER: A

176. How do you achieve two-way data binding in Angular?

- A. Using [(ngModel)] syntax
- B. Using {{ }} interpolation
- C. Using [property] binding
- D. Using (event) binding

ANSWER: A

177. What is the purpose of ngModel in Angular?

- A. To enable two-way data binding between a form element and a component property
- B. To handle HTTP requests
- C. To define routing rules
- D. To manage lifecycle hooks

ANSWER: A

178. How do you bind a class dynamically in Angular?

- A. Using [ngClass] directive
- B. Using [class] binding
- C. Using ngStyle directive
- D. Using class attribute

ANSWER: A

179. What is property binding in Angular?

- A. Binding the value of a component property to an element property
- B. Binding an event handler to an element
- C. Binding two component properties together
- D. Binding data to a service

ANSWER: A

180. Which method is used to query documents in MongoDB?

- A. query()
- B. get()
- C. select()
- D. find()

ANSWER: D

181. How do you apply a pipe to a data binding expression in Angular?

- A. Using the | character followed by the pipe name
- B. Using square brackets []
- C. Using parentheses ()
- D. Using curly braces {}

ANSWER: A

182. Which MongoDB command is used to list all databases?

- A. show dbs
- B. list databases
- C. db.show()
- D. get databases

ANSWER: A

183. How do you create a custom pipe in Angular?

- A. By implementing the PipeTransform interface and decorating with @Pipe
- B. By extending the Pipe class
- C. By using @Directive
- D. By creating a service

ANSWER: A

184. What is the difference between a pipe and a filter in Angular?

- A. Pipes transform data in templates, while filters are not used in Angular 2+
- B. Filters are used to handle HTTP requests
- C. Pipes handle routing, while filters handle component state
- D. Filters are used for data transformation in Angular 1.x

ANSWER: A

185. How do you define a route in Angular?

- A. By configuring routes in the RouterModule
- B. By using the ngRoute module
- C. By defining paths in the app.component.ts
- D. By using ngFor directive

ANSWER: A

186. What is the purpose of route guards in Angular?

- A. To define routing paths
- B. To control access to routes based on certain conditions
- C. To manage component lifecycle
- D. To handle HTTP requests

ANSWER: B

187. How do you pass parameters to a route in Angular?

- A. By binding parameters to service methods
- B. By defining route parameters in the route configuration and accessing them via ActivatedRoute
- C. By using query parameters in HTTP requests
- D. By using localStorage

ANSWER: B

188. Which Angular directive is used to conditionally include or exclude an element from the DOM?

- A. *ngSwitch
- B. *ngIf
- C. *ngFor
- D. *ngClass

ANSWER: B

189. What is the purpose of Angular services?

- A. To share data and logic across multiple components
- B. To define component templates
- C. To perform data binding
- D. To manage routing

ANSWER: A

190. How do you inject a service into an Angular component?
- A. By using the `ngOnInit` lifecycle hook
 - B. By defining the service in the component's metadata
 - C. By using the constructor and `@Injectable` decorator
 - D. By using `ngFor` directive

ANSWER: C

191. Which Angular service is commonly used to perform HTTP requests?
- A. `HttpModule`
 - B. `HttpClient`
 - C. `HttpService`
 - D. `HttpRequest`

ANSWER: B

192. What is the purpose of Angular's `ngOnInit` lifecycle hook?
- A. To bind data to a template
 - B. To destroy a component
 - C. To initialize data for a component
 - D. To handle HTTP requests

ANSWER: C

193. Which directive is used to create a loop in Angular templates?
- A. `*ngIf`
 - B. `*ngClass`
 - C. `*ngSwitch`
 - D. `*ngFor`

ANSWER: D

194. How do you define a module in Angular?
- A. By using `@Service` decorator
 - B. By using `@NgModule` decorator
 - C. By using `@Component` decorator
 - D. By using `@Directive` decorator

ANSWER: B

195. What is data binding in Angular?
- A. The process of synchronizing data between the model and the view
 - B. The process of handling HTTP requests
 - C. The process of defining routes
 - D. The process of creating components

ANSWER: A

196. What is Node.js primarily used for?
- A. Building mobile applications
 - B. Designing UI components
 - C. Writing SQL queries
 - D. Server-side JavaScript execution

ANSWER: D

197. What is the default port number for a Node.js HTTP server?
- A. 5000
 - B. 3000
 - C. 8080
 - D. 80

ANSWER: B

198. How do you read a file asynchronously in Node.js?
- A. `fs.readFileSync`
 - B. `fs.open`
 - C. `fs.read`
 - D. `fs.readFile`

ANSWER: D

199. Which function is used to create a new HTTP server in Node.js?
- A. `http.createServer()`
 - B. `http.listen()`
 - C. `http.createServer()`
 - D. `http.startServer()`

ANSWER: C

200. What is the TypeScript keyword for defining a constant variable?

- A. static
- B. let
- C. var
- D. const

ANSWER: D

201. What is TypeScript's type for a floating-point number?

- A. double
- B. int
- C. number
- D. float

ANSWER: C

202. What is the purpose of the any type in TypeScript?

- A. To restrict a variable to a specific type
- B. To create an interface
- C. To allow a variable to be of any type
- D. To define a custom type

ANSWER: C

203. How do you define a method in a TypeScript class?

- A. `def methodName() {}`
- B. `function methodName() {}`
- C. `method methodName() {}`
- D. `methodName() {}`

ANSWER: D

204. What is the purpose of TypeScript's interface keyword?

- A. To define a contract for objects and classes
- B. To define global variables
- C. To manage module imports
- D. To create new instances

ANSWER: A

205. How do you install the Express.js package?

- A. `npm get express`
- B. `npm install express`
- C. `npm include express`
- D. `npm add express`

ANSWER: B

206. What is the purpose of pipes in Angular?

- A. To transform data in templates
- B. To handle HTTP responses
- C. To define routing paths
- D. To manage component state

ANSWER: A

207. In Angular, which decorator is used to define a component?

- A. `@Component`
- B. `@Directive`
- C. `@Injectable`
- D. `@Pipe`

ANSWER: A

208. How do you create a new database in MySQL?

- A. `MAKE DATABASE database_name;`
- B. `ADD DATABASE database_name;`
- C. `NEW DATABASE database_name;`
- D. `CREATE DATABASE database_name;`

ANSWER: D

209. What command is used to list all tables in a MySQL database?

- A. `LIST TABLES;`
- B. `SHOW TABLES;`
- C. `SHOW ALL;`
- D. `GET TABLES;`

ANSWER: B

210. How do you add a new column to an existing table in MySQL?
- A. `MODIFY TABLE table_name ADD column_name datatype;`
 - B. `ALTER TABLE table_name NEW column_name datatype;`
 - C. `UPDATE TABLE table_name ADD column_name datatype;`
 - D. `ALTER TABLE table_name ADD column_name datatype;`

ANSWER: D

211. In Angular, which file is typically used to define the application's routes?
- A. `app.component.ts`
 - B. `routes.ts`
 - C. `app.routing.ts`
 - D. `app.module.ts`

ANSWER: C

212. What is the default change detection strategy in Angular?
- A. `OnPush`
 - B. `Default`
 - C. `Manual`
 - D. `Automatic`

ANSWER: B

213. What is the purpose of the `__dirname` variable in Node.js?
- A. To store the directory name of the current script
 - B. To define a new directory
 - C. To import a module
 - D. To handle file paths

ANSWER: A

214. Which of the following is a middleware framework for Node.js?
- A. Express
 - B. Angular
 - C. React
 - D. Vue

ANSWER: A

215. How do you insert a new document into a collection in MongoDB?
- A. `db.collection.add()`
 - B. `db.collection.save()`
 - C. `db.collection.insertOne()`
 - D. `db.collection.put()`

ANSWER: C

216. What is the purpose of the `ngOnInit` lifecycle hook in Angular?
- A. To define a new route
 - B. To handle data binding
 - C. To initialize component data
 - D. To destroy a component

ANSWER: C

217. In Angular, which service is used to make HTTP requests?
- A. `HttpService`
 - B. `HttpClient`
 - C. `WebClient`
 - D. `RequestService`

ANSWER: B

218. What is the primary building block of an Angular application?
- A. Modules
 - B. Directives
 - C. Components
 - D. Pipes

ANSWER: C

219. How can you redirect a user to a different URL in Express?

- A. Using the res.redirect() method
- B. Using the res.send() method with a redirect status code
- C. Using the res.location() method
- D. Using the res.render() method with a redirect template

ANSWER: A

220. In Angular, which directive is used to loop through an array of items?

- A. *ngIf
- B. *ngFor
- C. *ngSwitch
- D. *ngLoop

ANSWER: B

221. What is the purpose of the Angular CLI?

- A. To compile TypeScript to JavaScript
- B. To facilitate Angular development
- C. To write Angular tests
- D. To provide Angular documentation

ANSWER: B

222. In Angular, what does the @Input decorator do?

- A. Defines a component's output
- B. Marks a property as an input property
- C. Creates a new component
- D. Binds an event to a method

ANSWER: B

223. In Node.js, which object provides information about the current process?

- A. process
- B. console
- C. system
- D. app

ANSWER: A

224. What does the fs module in Node.js handle?

- A. File system operations
- B. Network requests
- C. Database connections
- D. HTTP responses

ANSWER: A

225. Which command is used to create a new Angular project?

- A. ng create
- B. ng init
- C. ng start
- D. ng new

ANSWER: D

226. Which method in Node.js is used to read the contents of a file?

- A. readFile()
- B. getFile()
- C. loadFile()
- D. fetchFile()

ANSWER: A

227. Which method is used to create a server in Node.js?

- A. http.createServer()
- B. server.create()
- C. net.createServer()
- D. createServer()

ANSWER: A

228. What is the default package manager for Node.js?

- A. npm
- B. yarn
- C. pip
- D. bower

ANSWER: A

229. Which of the following is used to import a module in Node.js?

- A. import
- B. require
- C. include
- D. load

ANSWER: B

230. In Node.js, which event is emitted when there is an error in a stream?

- A. data
- B. error
- C. end
- D. close

ANSWER: B

231. In Node.js, what is the purpose of the package.json file?

- A. To store application data
- B. To list project dependencies and metadata
- C. To configure the Node.js runtime
- D. To define environment variables

ANSWER: B

232. Which of the following is used to handle HTTP requests in Node.js?

- A. fs module
- B. http module
- C. net module
- D. os module

ANSWER: B

233. Which method is used to create a new Express application?

- A. express.create()
- B. express.init()
- C. express()
- D. new express()

ANSWER: C

234. In Express, which method is used to define a route that handles GET requests?

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

ANSWER: A

235. What is the default port used by an Express application?

- A. 80
- B. 3000
- C. 8080
- D. 5000

ANSWER: B

236. In Express, what does req represent in a route handler?

- A. Request object
- B. Response object
- C. Route object
- D. Middleware object

ANSWER: A

237. Which middleware is used to parse JSON bodies in Express?

- A. bodyParser.json()
- B. express.json()
- C. json()
- D. app.json()

ANSWER: B

238. In Express, which method is used to handle 404 errors?

- A. app.notFound()
- B. app.error()
- C. app.use() with a function
- D. app.handle404()

ANSWER: C

239. Which of the following is a templating engine supported by Express?

- A. EJS
- B. Pug
- C. Handlebars
- D. All of the above

ANSWER: D

240. How do you make a middleware function available in all routes in an Express application?

- A. Use app.all()
- B. Use app.use()
- C. Use app.route()
- D. Use app.middleware()

ANSWER: B

241. Which of the following is true about Express middleware?

- A. Middleware functions have access to the req and res objects.
- B. Middleware functions can modify the request and response objects.
- C. Middleware functions can end the request-response cycle.
- D. All of the above

ANSWER: D

242. In MySQL, which function is used to calculate the total number of rows in a table?

- A. SUM()
- B. COUNT()
- C. TOTAL()
- D. ROWS()

ANSWER: B

243. Which method is used to serve static files in an Express application?

- A. express.static()
- B. app.serve()
- C. app.static()
- D. express.serve()

ANSWER: A

244. What does res.json() do in an Express route handler?

- A. Sends a JSON response
- B. Sends a file as a response
- C. Sends an HTML response
- D. Redirects to another URL

ANSWER: A

245. How do you define a route that handles all HTTP methods in Express?

- A. app.all()
- B. app.any()
- C. app.route()
- D. app.methods()

ANSWER: A

246. Which keyword is used to remove data from a table in MySQL?

- A. DELETE
- B. REMOVE
- C. DROP
- D. TRUNCATE

ANSWER: A

247. Which command is used to create a new database in MySQL?

- A. CREATE DATABASE
- B. NEW DATABASE
- C. ADD DATABASE
- D. MAKE DATABASE

ANSWER: A

248. In Express, what does res.send() do?

- A. Sends a JSON response
- B. Sends an HTTP response
- C. Sends a file to the client
- D. Redirects the request

ANSWER: B

249. Which SQL statement is used to add a new column to an existing table in MySQL?

- A. ALTER TABLE
- B. ADD COLUMN
- C. MODIFY TABLE
- D. UPDATE TABLE

ANSWER: A

250. In MySQL, what is the purpose of the GROUP BY clause?

- A. To sort the result set
- B. To filter rows
- C. To group rows that have the same values
- D. To join two tables

ANSWER: C

251. Which data type is used to store large text data in MySQL?

- A. VARCHAR
- B. TEXT
- C. BLOB
- D. CHAR

ANSWER: B

252. In MySQL, which clause is used to specify the condition for selecting rows?

- A. WHERE
- B. HAVING
- C. LIMIT
- D. SELECT

ANSWER: A

253. What does the JOIN clause do in MySQL?

- A. Combines rows from two or more tables
- B. Filters rows based on a condition
- C. Updates multiple tables
- D. Deletes data from multiple tables

ANSWER: A

254. Which MySQL command is used to delete a table?

- A. DELETE TABLE
- B. DROP TABLE
- C. REMOVE TABLE
- D. TRUNCATE TABLE

ANSWER: B

255. What is the purpose of Angular's dependency injection?

- A. To manage app states
- B. To separate application logic from DOM manipulation
- C. To enhance testing by providing mock dependencies
- D. To create dynamic CSS classes

ANSWER: C

256. Which of the following is not a valid MySQL storage engine?

- A. InnoDB
- B. MyISAM
- C. MongoDB
- D. MEMORY

ANSWER: C

257. What is the purpose of the LIMIT clause in MySQL?

- A. To limit the number of columns in a query
- B. To limit the number of rows returned
- C. To limit the data types used
- D. To limit the size of a database

ANSWER: B

258. Which Angular feature enables the creation of interactive single-page applications?

- A. Routing
- B. Data binding
- C. Services
- D. Directives

ANSWER: A

259. Which Angular directive is used for conditional rendering?

- A. *ngIf
- B. *ngFor
- C. *ngSwitch
- D. *ngModel

ANSWER: A

260. What is the default data format used by MongoDB?

- A. JSON
- B. XML
- C. BSON
- D. CSV

ANSWER: C

261. What is the purpose of the find() method in MongoDB?

- A. To retrieve documents from a collection
- B. To insert new documents into a collection
- C. To update documents in a collection
- D. To delete documents from a collection

ANSWER: A

262. Which symbol is used for interpolation in Angular?

- A. {}
- B. []
- C. ()
- D. {{{}}

ANSWER: D

263. How do you update a document in MongoDB?

- A. db.collection.updateOne()
- B. db.collection.modify()
- C. db.collection.change()
- D. db.collection.replace()

ANSWER: A

264. Which of the following is not a form of data binding in Angular?

- A. Interpolation
- B. Property Binding
- C. Event Binding
- D. Function Binding

ANSWER: D

265. What does the ObjectId represent in MongoDB?

- A. A unique identifier for each document
- B. A reference to another document
- C. A binary data type
- D. A timestamp of document creation

ANSWER: A

266. In MongoDB, what does the \$match operator do in an aggregation pipeline?

- A. Filters documents based on specified criteria
- B. Groups documents by a specific field
- C. Sorts documents in a specified order
- D. Limits the number of documents

ANSWER: A

267. In Angular, which syntax is used for property binding?

- A. {{property}}
- B. [property]
- C. (property)
- D. {property}

ANSWER: B

268. What is two-way data binding in Angular?
- A. Binding data from the template to the component
 - B. Binding data from the component to the template
 - C. Binding data between the component and template in both directions
 - D. Binding data between two different components

ANSWER: C

269. What is the syntax for event binding in Angular?
- A. {{event}}
 - B. [event]
 - C. (event)
 - D. {event}

ANSWER: C

270. In MongoDB, which command is used to drop a database?
- A. db.dropDatabase()
 - B. db.removeDatabase()
 - C. db.deleteDatabase()
 - D. db.eraseDatabase()

ANSWER: A

271. How do you pass data from a child component to a parent component in Angular?
- A. Using services
 - B. Using @Input properties
 - C. Using serve
 - D. Using @Output properties

ANSWER: D

272. What is the purpose of an index in MongoDB?
- A. To improve the performance of queries
 - B. To enforce data validation rules
 - C. To automatically backup data
 - D. To define the schema of a collection

ANSWER: A

273. In MongoDB, which method is used to delete a document from a collection?
- A. db.collection.deleteOne()
 - B. db.collection.remove()
 - C. db.collection.drop()
 - D. db.collection.erase()

ANSWER: A

274. How is two-way binding implemented in Angular?
- A. Using [(ngModel)]
 - B. Using {{ngModel}}
 - C. Using [ngModel]
 - D. Using (ngModel)

ANSWER: A

275. What does the Angular ngModel directive do?
- A. It creates a new model
 - B. It synchronizes the value of an input field with a property
 - C. It binds a function to a model
 - D. It updates the model based on user interactions

ANSWER: B

276. In MySQL, which function is used to return the current date and time?
- A. NOW()
 - B. CURRENT_DATE()
 - C. GETDATE()
 - D. TODAY()

ANSWER: A

277. Which binding method is used to style an element dynamically in Angular?
- A. Class Binding
 - B. Style Binding
 - C. Property Binding
 - D. Event Binding

ANSWER: B

278. Which method is used to insert a new document in a MongoDB collection?

- A. db.collection.insertOne()
- B. db.collection.add()
- C. db.collection.new()
- D. db.collection.create()

ANSWER: A

279. Which feature of Angular improves code maintainability?

- A. Modular architecture
- B. Event binding
- C. Two-way data binding
- D. DOM manipulation

ANSWER: A

280. What is the purpose of the @Output decorator in Angular?

- A. To bind an output field
- B. To define a function that outputs data
- C. To mark a property as an output property
- D. To bind an event emitter to a property

ANSWER: C

281. Which of the following is a valid MongoDB data type?

- A. String
- B. Integer
- C. ObjectId
- D. All of the above

ANSWER: D

282. What is the purpose of the ngOnChanges lifecycle hook in Angular?

- A. It initializes the component
- B. It detects changes to input properties
- C. It cleans up resources
- D. It binds data to the component

ANSWER: B

283. How do you retrieve unique values from a column in MySQL?

- A. Using the DISTINCT keyword
- B. Using the UNIQUE keyword
- C. Using the DISTINCTROW keyword
- D. Using the LIMIT keyword

ANSWER: A

284. What is the purpose of the aggregate() method in MongoDB?

- A. To perform complex data processing and analysis
- B. To insert multiple documents at once
- C. To delete multiple documents at once
- D. To create a new collection

ANSWER: A

285. What does the Angular @ViewChild decorator do?

- A. Binds a child view to a property
- B. Marks a component as a child view
- C. Gets a reference to a child component or element
- D. Binds a method to a child view

ANSWER: C

286. What is one of the main benefits of using Angular?

- A. It is a server-side framework
- B. It provides a rich user interface
- C. It simplifies HTML into an easily understandable format
- D. It supports dynamic content generation

ANSWER: B

287. Which MongoDB command is used to display all collections in a database?

- A. show collections
- B. list collections
- C. display collections
- D. get collections

ANSWER: A

288. What is the primary benefit of using Angular's two-way data binding?

- A. It makes code more complex
- B. It reduces the amount of boilerplate code
- C. It eliminates the need for directives
- D. It ensures data integrity

ANSWER: B

289. How does Angular's component-based architecture benefit developers?

- A. It allows for faster compilation
- B. It reduces code duplication and enhances modularity
- C. It simplifies routing implementation
- D. It improves performance by caching components

ANSWER: B

290. What advantage does Angular offer over traditional JavaScript frameworks?

- A. Strong typing and error checking
- B. Limited third-party library support
- C. Client-side rendering only
- D. Reduced cross-browser compatibility

ANSWER: A

291. What does MEAN stand for in the MEAN stack?

- A. MongoDB, Express, Angular, Node.js
- B. MySQL, Express, Angular, Node.js
- C. MongoDB, Express, Angular, Nest.js
- D. MongoDB, Ember, Angular, Node.js

ANSWER: A

292. Which part of the MEAN stack is responsible for handling server-side operations?

- A. MongoDB
- B. Express
- C. Angular
- D. Node.js

ANSWER: D

293. In the MEAN stack, which technology is used for the frontend framework?

- A. React
- B. Angular
- C. Vue
- D. Ember

ANSWER: B

294. What does the typeof operator return in TypeScript?

- A. The value of the variable
- B. The type of the variable as a string
- C. The size of the variable in bytes
- D. The memory address of the variable

ANSWER: B

295. Which MEAN stack component is used for creating RESTful APIs?

- A. MongoDB
- B. Express
- C. Angular
- D. Node.js

ANSWER: B

296. What is the purpose of the super keyword in TypeScript?

- A. To refer to the current instance of a class
- B. To access and call functions on an object's parent
- C. To define a new class
- D. To declare a class as a singleton

ANSWER: B

297. What is the benefit of using the MEAN stack for web application development?

- A. It provides a complete end-to-end JavaScript solution
- B. It limits the use of third-party libraries
- C. It offers server-side rendering by default
- D. It simplifies backend development only

ANSWER: A

298. Which of the following is a common use case for the MEAN stack?
- A. Developing desktop applications
 - B. Creating mobile applications
 - C. Building single-page web applications
 - D. Developing command-line tools

ANSWER: C

299. Which of the following TypeScript features helps ensure type safety when working with JSON data?
- A. Type assertions
 - B. Type casting
 - C. Type inference
 - D. Type guards

ANSWER: A

300. What is the purpose of Node.js modules?
- A. To create new web servers
 - B. To organize code into reusable components
 - C. To manage database connections
 - D. To facilitate routing in web applications

ANSWER: B

301. Which of the following is a correct way to create a generic type in TypeScript?
- A. `function identity<T>(arg: T): T { return arg; }`
 - B. `function identity(arg: T): T { return arg; }`
 - C. `function identity<T>(arg): T { return arg; }`
 - D. `function identity(arg): T { return arg; }`

ANSWER: A

302. Which of the following is a correct way to use the ternary operator in TypeScript?
- A. `condition ? expr1 : expr2`
 - B. `condition ? (expr1, expr2)`
 - C. `condition : expr1 ? expr2`
 - D. `condition then expr1 else expr2`

ANSWER: A

303. What is the role of MongoDB in the MEAN stack?
- A. To serve as the server-side framework
 - B. To manage user authentication
 - C. To store and retrieve data as a NoSQL database
 - D. To provide a frontend user interface

ANSWER: C

304. Which operator is used to spread the properties of an object in TypeScript?
- A. +
 - B. ...
 - C. =>
 - D. @

ANSWER: B

305. Which operator is used to check if a property exists in an object in TypeScript?
- A. in
 - B. of
 - C. exists
 - D. has

ANSWER: A

306. Which method is used to read a file in Node.js using the fs module?
- A. `fs.readFile()`
 - B. `fs.getFile()`
 - C. `fs.openFile()`
 - D. `fs.fetchFile()`

ANSWER: A

307. Which fs method is used to append data to an existing file in Node.js?
- A. `fs.appendFile()`
 - B. `fs.writeFile()`
 - C. `fs.addFile()`
 - D. `fs.insertFile()`

ANSWER: A

308. How do you create a mapped type in TypeScript?
- A. By using the map keyword with the type keyword
 - B. By using the type keyword with an object syntax
 - C. By using the keyof keyword with the type keyword
 - D. By using the type keyword with an array syntax

ANSWER: B

309. How do you terminate an HTTP server in Node.js?

- A. server.terminate()
- B. server.close()
- C. server.stop()
- D. server.shutdown()

ANSWER: B

310. What is the purpose of the http module in Node.js?

- A. To manage file operations
- B. To create and manage HTTP servers and clients
- C. To perform database operations
- D. To handle user authentication

ANSWER: B

311. Which method is used to create a server in Node.js using the http module?

- A. http.newServer()
- B. http.createServer()
- C. http.startServer()
- D. http.openServer()

ANSWER: B

312. Can a TypeScript interface have optional properties?

- A. Yes, using the ? symbol after the property name
- B. No, all properties must be defined
- C. Yes, using the optional keyword
- D. Yes, by omitting the property type

ANSWER: A

313. Which event is emitted when a client makes a request to the server in Node.js?

- A. request
- B. data
- C. connection
- D. listen

ANSWER: A

314. How do you send a response to a client in Node.js using the http module?

- A. response.send()
- B. response.end()
- C. response.write()
- D. response.output()

ANSWER: C

315. Which of the following is a correct way to write headers in an HTTP response in Node.js?

- A. response.headers()
- B. response.setHeader()
- C. response.writeHead()
- D. response.header()

ANSWER: B

316. How do you handle errors in the http module in Node.js?

- A. Using try-catch blocks
- B. Using the error event
- C. Using the catchError method
- D. By logging to the console

ANSWER: B

317. What is a type alias in TypeScript?

- A. A variable that holds a type
- B. A name given to a specific type or union of types
- C. An alternative name for a class
- D. A function that returns a type

ANSWER: B

318. How can you check if a file exists in Node.js using the fs module?

- A. fs.fileExists()
- B. fs.existsSync()
- C. fs.checkFile()
- D. fs.isFile()

ANSWER: B

319. Which method is used to rename a file in Node.js?

- A. fs.renameFile()
- B. fs.changeName()
- C. fs.rename()
- D. fs.modifyFile()

ANSWER: C

320. What is the purpose of the fs.mkdir() method in Node.js?

- A. To read a directory
- B. To create a new directory
- C. To delete a directory
- D. To rename a directory

ANSWER: B

321. Which fs method is used to read the contents of a directory in Node.js?

- A. fs.readDir()
- B. fs.getDir()
- C. fs.readdir()
- D. fs.listDir()

ANSWER: C

322. Which command is used to exit the Node REPL?

- A. quit()
- B. exit()
- C. close()
- D. end()

ANSWER: B

323. Which command is used to compile a TypeScript file?

- A. tsc
- B. ts
- C. tscompile
- D. typescript

ANSWER: A

324. Which keyword is used to declare a variable in TypeScript?

- A. let
- B. var
- C. const
- D. All of the above

ANSWER: D

325. Which module is primarily used for cryptographic functions in Node.js?

- A. crypto
- B. security
- C. cipher
- D. encrypt

ANSWER: A

326. What is the purpose of the ?? operator in TypeScript?

- A. To check for null values
- B. To perform a nullish coalescing operation
- C. To concatenate strings
- D. To perform a type assertion

ANSWER: B

327. Which of the following is not a valid TypeScript data type?

- A. boolean
- B. string
- C. integer
- D. any

ANSWER: C

328. How do you set a cookie in Express?

- A. Using the `res.cookie()` method
- B. Using the `req.cookie()` method
- C. Using the `app.cookie()` method
- D. Using the `cookie()` middleware

ANSWER: A

329. In TypeScript, what does the `readonly` modifier do?

- A. It makes the variable constant
- B. It makes the variable read-only after initial assignment
- C. It prevents the variable from being accessed
- D. It makes the variable accessible only within the class

ANSWER: B

330. What does the `http.get()` method do in Node.js?

- A. Creates an HTTP server
- B. Sends a GET request to a specified URL
- C. Starts listening on a port
- D. Retrieves server logs

ANSWER: B

331. What is the use of the `as` keyword in TypeScript?

- A. To assign a new type to a variable
- B. To create an alias for a type
- C. To typecast a variable to a specific type
- D. To declare a variable with a specified type

ANSWER: C

332. Which TypeScript feature allows you to define a variable without specifying its type, allowing it to be assigned any type?

- A. `any`
- B. `unknown`
- C. `object`
- D. `dynamic`

ANSWER: A

333. Which of the following is a correct way to declare a tuple in TypeScript?

- A. `let tuple: [number, string] = [1, "one"];`
- B. `let tuple = (1, "one");`
- C. `let tuple: {number, string} = {1, "one"};`
- D. `let tuple: array = [1, "one"];`

ANSWER: A

334. What is the default value of a boolean variable in TypeScript?

- A. `true`
- B. `false`
- C. `null`
- D. `undefined`

ANSWER: D

335. What does the `unknown` type represent in TypeScript?

- A. It represents an error in type declaration
- B. It is a type-safe counterpart of `any` and requires type checking before assignment
- C. It represents a missing value
- D. It is used for variables that can be of any type

ANSWER: B

336. How do you declare an enum in TypeScript?

- A. `enum Colors { R, G, B }`
- B. `enum Colors = { Red, Green, Yellow }`
- C. `enum Colors [Red, Green, Blue]`
- D. `enum Colors (Red, Pink, Blue)`

ANSWER: A

337. What is the recommended way to handle user passwords in Express applications?

- A. Store them in plain text in the database
- B. Store them as hashed values in the database
- C. Store them encrypted in a cookie
- D. Store them in an environment variable

ANSWER: B

338. Which of the following is true about the void type in TypeScript?

- A. It represents a function that does not return a value
- B. It represents a variable that is uninitialized
- C. It is used for variables that can be any type
- D. It is used for functions that return a boolean

ANSWER: A

339. How do you pass data to a layout template in EJS?

- A. Using the layout option in the res.render() method
- B. Using the locals object in the layout template
- C. Using the include tag in the main template
- D. Using the partial tag in the main template

ANSWER: B

340. What will be the result of the following TypeScript expression?

```
let x = 5;  
let y = x++;
```

- A. x = 6, y = 6
- B. x = 5, y = 6
- C. x = 6, y = 5
- D. x = 5, y = 5

ANSWER: C

341. Which keyword is used to create a class in TypeScript?

- A. object
- B. struct
- C. class
- D. module

ANSWER: C

342. How can you create nested routes in Express?

- A. By using multiple app.use() statements
- B. By using the express.Router() object
- C. By using the app.mount() method
- D. By using the app.subroutes() method

ANSWER: B

343. Which of the following is true about inheritance in TypeScript?

- A. A class can inherit from multiple classes
- B. A class can only inherit from one class
- C. A class cannot inherit from another class
- D. Inheritance is not supported in TypeScript

ANSWER: B

344. What is the purpose of the exports object in Node.js?

- A. To import modules
- B. To export multiple functions or variables from a module
- C. To define a default module export
- D. To configure module settings

ANSWER: B

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

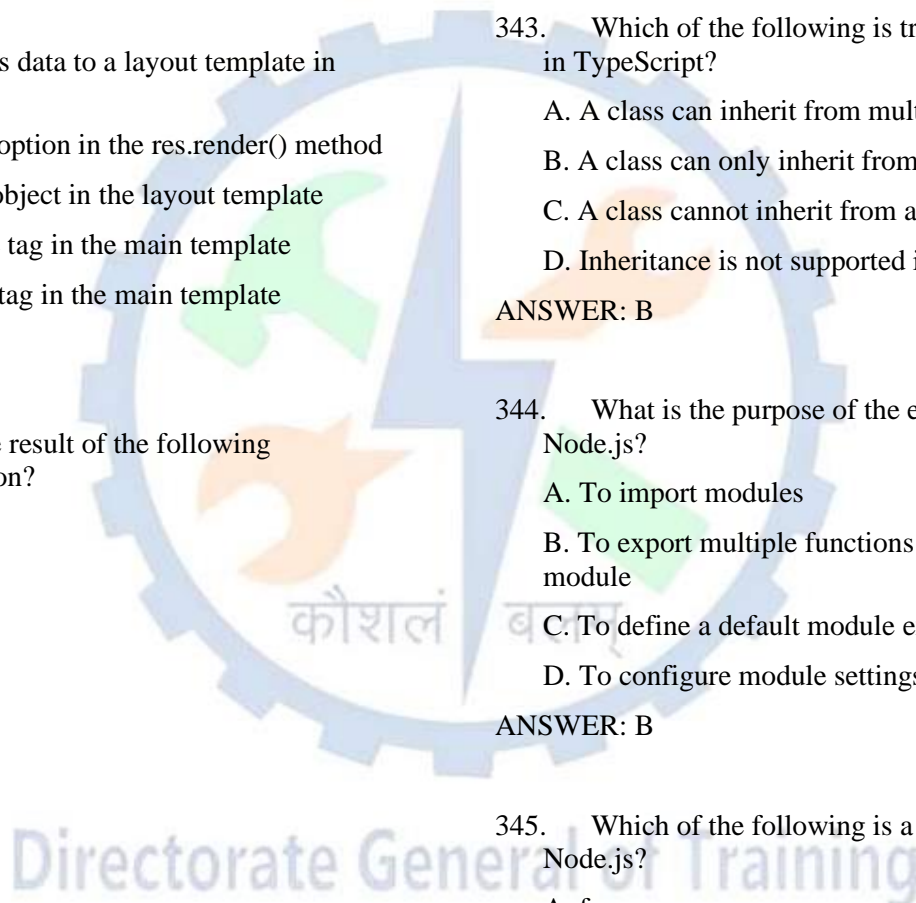
- A. fs
- B. lodash
- C. express
- D. react

ANSWER: A

346. How do you make a module's functionality available to other modules in Node.js?

- A. By using the require() function
- B. By exporting the functionality using module.exports
- C. By referencing the module directly in the code
- D. By declaring the functionality as public

ANSWER: B



347. What is the main benefit of using modules in Node.js?
- A. It increases the application size
 - B. It improves code maintainability and reusability
 - C. It restricts the use of third-party libraries
 - D. It simplifies debugging by reducing code separation

ANSWER: B

348. How do you access the exports of another module in Node.js?
- A. By calling the module name directly
 - B. By using the exports object
 - C. By assigning the result of require() to a variable
 - D. By invoking the import() function

ANSWER: C

349. What is the purpose of the AUTO_INCREMENT attribute in MySQL?
- A. To automatically generate a unique value for each row
 - B. To automatically update a column
 - C. To automatically create a new column
 - D. To automatically delete a row

ANSWER: A

350. Which command is used to create a new collection in MongoDB?
- A. db.createCollection()
 - B. db.addCollection()
 - C. db.newCollection()
 - D. db.insertCollection()

ANSWER: A

351. In MongoDB, what does a document represent?
- A. A record in a collection
 - B. A table in a database
 - C. A column in a table
 - D. A database itself

ANSWER: A

352. Which operator is used to perform bitwise AND in TypeScript?
- A. &&
 - B. and
 - C. &
 - D. ||

ANSWER: C

353. What is the purpose of the session middleware in Express?
- A. To manage user sessions
 - B. To handle cookies
 - C. To encrypt data
 - D. To validate user input

ANSWER: A

354. How does the === operator differ from the == operator in TypeScript?
- A. === performs type conversion, == does not
 - B. === checks for strict equality, == checks for loose equality
 - C. === is a bitwise operator, == is a logical operator
 - D. === is used for string comparison, == is used for number comparison

ANSWER: B

355. In TypeScript, what does the ? symbol after a property name in an interface signify?
- A. The property is optional
 - B. The property is deprecated
 - C. The property is of type any
 - D. The property is read-only

ANSWER: A

356. What is the purpose of HTTP Strict Transport Security (HSTS)?

- A. To prevent clickjacking attacks
- B. To enforce HTTPS connections
- C. To protect against XSS attacks
- D. To prevent CSRF attacks

ANSWER: B

357. Which of the following is a correct way to declare a constructor in a TypeScript class?

- A. constructor() {}
- B. construct() {}
- C. classConstructor() {}
- D. initialize() {}

ANSWER: A

358. What is the purpose of the static keyword in TypeScript?

- A. To declare a variable that cannot be changed
- B. To define a class method or property that can be accessed without creating an instance
- C. To indicate that a class cannot be extended
- D. To specify a default method in a class

ANSWER: B

359. How do you create an instance of a class in TypeScript?

- A. let obj = className();
- B. let obj = new className();
- C. let obj = create className();
- D. let obj = className.new();

ANSWER: B

360. What is the use of the abstract keyword in TypeScript?

- A. To declare a class or method that cannot be instantiated or used directly
- B. To create a singleton class
- C. To indicate that a class is final and cannot be extended
- D. To define a method that must be overridden in a subclass

ANSWER: A

361. How do you define a class that inherits from another class in TypeScript?

- A. class SubClass inherits BaseClass {}
- B. class SubClass extends BaseClass {}
- C. class SubClass implements BaseClass {}
- D. class SubClass derives BaseClass {}

ANSWER: B

362. What is polymorphism in the context of TypeScript OOP?

- A. The ability of a class to inherit from multiple classes
- B. The ability of different objects to respond uniquely to the same method call
- C. The ability of a class to encapsulate data and methods
- D. The ability of a class to prevent instantiation

ANSWER: B

363. Which access modifier restricts access to a class member to the class itself and its subclasses?

- A. public
- B. private
- C. protected
- D. readonly

ANSWER: C

364. What is an interface in TypeScript?
- A. A class that provides default methods
 - B. A blueprint for classes, specifying the structure but not the implementation
 - C. A mechanism to handle asynchronous operations
 - D. A special type of function

ANSWER: B

365. Which keyword is used to declare an interface in TypeScript?
- A. class
 - B. struct
 - C. interface
 - D. object

ANSWER: C

366. How do you implement an interface in a TypeScript class?
- A. `class MyClass inherits MyInterface { }`
 - B. `class MyClass extends MyInterface { }`
 - C. `class MyClass implements MyInterface { }`
 - D. `class MyClass uses MyInterface { }`

ANSWER: C

367. How do you delete a cookie in Express?
- A. Using the `res.clearCookie()` method
 - B. Using the `res.removeCookie()` method
 - C. Setting the Expires attribute to a past date
 - D. All of the above

ANSWER: D

368. What is the purpose of the extends keyword when used with interfaces in TypeScript?
- A. To allow an interface to inherit properties from another interface
 - B. To allow an interface to be implemented by multiple classes
 - C. To define default values for interface properties
 - D. To create an instance of an interface

ANSWER: A

369. How can you specify that a function parameter in TypeScript is a function itself?
- A. By using the Function type
 - B. By using the function keyword
 - C. By using an arrow function syntax
 - D. By using the func keyword

ANSWER: A

370. Can an interface in TypeScript extend a class?
- A. Yes, and it inherits the class's implementation
 - B. Yes, but it only inherits the class's public and protected members
 - C. No, interfaces can only extend other interfaces
 - D. No, interfaces cannot extend classes

ANSWER: B

371. How can you define an indexable type in a TypeScript interface?
- A. `interface MyInterface { [key: string]: any; }`
 - B. `interface MyInterface { index: string; }`
 - C. `interface MyInterface { key: any; }`
 - D. `interface MyInterface { index[key: string]: any; }`

ANSWER: A

372. What is the primary concern with using `child_process.exec()` without proper input validation?
- A. Performance issues
 - B. Syntax errors
 - C. Security vulnerabilities (e.g., command injection)
 - D. Memory leaks

ANSWER: C

373. Can a TypeScript interface extend multiple interfaces?
- A. No, an interface can only extend one interface
 - B. Yes, using the extends keyword
 - C. Yes, using the implements keyword
 - D. Yes, by listing the interfaces separated by commas

ANSWER: B

374. What is the purpose of the readonly modifier in a TypeScript interface?

- A. It makes a property accessible only within the interface
- B. It makes a property read-only and unchangeable after initialization
- C. It prevents a property from being inherited
- D. It defines a property as optional

ANSWER: B

375. What is the primary concern with using eval() in Node.js?

- A. Performance overhead
- B. Syntax errors
- C. Security vulnerabilities
- D. Memory leaks

ANSWER: C

376. How can you make all properties of a TypeScript interface optional?

- A. By using the ? symbol after each property
- B. By prefixing the interface name with Partial
- C. By using the optional keyword before each property
- D. By using the ? symbol after the interface name

ANSWER: B

377. What is the use of the implements keyword in TypeScript?

- A. To indicate that a class inherits properties from another class
- B. To define a new class
- C. To specify that a class follows the structure of an interface
- D. To declare a class as a singleton

ANSWER: C

378. Which of the following is a correct way to implement multiple interfaces in a TypeScript class?

- A. class MyClass extends Interface1, Interface2 { }
- B. class MyClass implements Interface1 & Interface2 { }
- C. class MyClass implements Interface1, Interface2 { }
- D. class MyClass uses Interface1, Interface2 { }

ANSWER: C

379. Can interfaces in TypeScript define default values for properties?

- A. Yes, using the default keyword
- B. No, interfaces cannot define default values
- C. Yes, using the = operator
- D. Yes, using the value keyword

ANSWER: B

380. How do you enforce that a function parameter must be an object that matches a specific interface in TypeScript?

- A. By specifying the interface name as the parameter type
- B. By using the instanceof keyword
- C. By using the as keyword
- D. By defining the function inside the interface

ANSWER: A

381. Which of the following is true about implementing interfaces in TypeScript?

- A. A class can implement multiple interfaces
- B. A class cannot implement interfaces
- C. Interfaces can only be implemented by abstract classes
- D. Interfaces must be implemented before they can be used

ANSWER: A

382. What is the purpose of the index signature in a TypeScript interface?
- A. To allow an interface to define methods
 - B. To enable an interface to represent arrays or objects with dynamic keys
 - C. To declare a class that implements an interface
 - D. To specify the return type of a function

ANSWER: B

383. How can you create a new type by combining multiple interfaces in TypeScript?
- A. Using the interface keyword followed by the & operator
 - B. Using the type keyword followed by the | operator
 - C. Using the type keyword followed by the & operator
 - D. Using the interface keyword followed by the | operator

ANSWER: C

384. Which of the following is an example of a TypeScript union type?
- A. `let id: number | string;`
 - B. `let id: number, string;`
 - C. `let id: [number, string];`
 - D. `let id: number || string;`

ANSWER: A

385. Which HTTP header can be used to set the Content-Security-Policy?
- A. Content-Security-Policy
 - B. X-Content-Security-Policy
 - C. Security-Policy
 - D. X-Security-Policy

ANSWER: B

386. How do you pass data to a template engine in Express?
- A. Using the `render()` method with a data object
 - B. Using the `send()` method with a data object
 - C. Using the `json()` method with a data object
 - D. Using the `sendFile()` method with a data object

ANSWER: A

387. What is the purpose of the `never` type in TypeScript?
- A. It is used to represent values that will never occur
 - B. It is used for nullable types
 - C. It is used for functions that return null
 - D. It is used for variables that can be of any type

ANSWER: A

388. Which of the following correctly describes type inference in TypeScript?
- A. TypeScript automatically assigns a type based on the assigned value
 - B. TypeScript requires explicit type declarations for all variables
 - C. TypeScript ignores all type declarations and uses dynamic typing
 - D. TypeScript provides no support for type inference

ANSWER: A

389. What is a discriminated union in TypeScript?
- A. A union type with a common literal property to distinguish between variants
 - B. A special type of union that is not allowed in interfaces
 - C. A combination of multiple interfaces into a single type
 - D. A type alias that includes only primitive types

ANSWER: A

Hard

390. What will happen if you define two Express routes with the same path and HTTP method?

- A. The first route will be ignored
- B. The second route will be ignored
- C. Both routes will be executed
- D. The last route defined will be executed

ANSWER: D

391. Which TypeScript feature allows you to add new properties to an existing type?

- A. Type assertion
- B. Type augmentation
- C. Type inference
- D. Type casting

ANSWER: B

392. What is the purpose of the typeof type operator in TypeScript?

- A. It returns the type of a variable as a string
- B. It creates a new type based on the type of a variable
- C. It checks the type of a variable at runtime
- D. It converts a variable to a specific type

ANSWER: B

393. What is the difference between a cookie and a session?

- A. Cookies are stored on the server, sessions on the client
- B. Cookies are stored on the client, sessions on the server
- C. There is no difference
- D. Cookies are more secure than sessions

ANSWER: B

394. What is the primary concern with using eval() on untrusted input?

- A. Performance issues
- B. Syntax errors
- C. Security vulnerabilities (e.g., code injection)
- D. Memory leaks

ANSWER: C

395. What is the difference between let and var in TypeScript?

- A. let is block-scoped, while var is function-scoped
- B. let is function-scoped, while var is block-scoped
- C. There is no difference
- D. let cannot be reassigned, while var can

ANSWER: A

396. What is the recommended way to handle sensitive data in Express applications?

- A. Store it in plain text in environment variables
- B. Use strong encryption and store it in the database
- C. Use environment variables and strong encryption
- D. Store it in session cookies

ANSWER: C

397. How can you inspect the value of an expression in the Node REPL without logging it to the console?

- A. Using the inspect() function
- B. Using the util.inspect() function
- C. Using the console.dir() method
- D. There is no direct way to do this

ANSWER: B

398. Which global object provides access to the REPL environment?

- A. global
- B. process
- C. repl
- D. console

ANSWER: C

399. What is the difference between `app.get()` and `app.route()` in Express?

- A. `app.get()` is for GET requests, `app.route()` is for all HTTP methods
- B. `app.get()` defines a route handler, `app.route()` creates a route object
- C. `app.get()` is for middleware, `app.route()` is for route handlers
- D. There is no difference

ANSWER: B

400. What is the purpose of the `req.params` object in Express?

- A. To access query parameters
- B. To access route parameters
- C. To access request body
- D. To access session data

ANSWER: B

401. In Express, which method is used to define a middleware function for all routes?

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

ANSWER: B

402. How can you define a route in Express that responds to all HTTP methods?

- A. `app.all('/path', (req, res) => {});`
- B. `app.get('/path', (req, res) => {});`
- C. `app.route('/path').all((req, res) => {});`
- D. Both A and C

ANSWER: D

403. In Express, how do you access route parameters in a request?

- A. `req.body.params`
- B. `req.params`
- C. `req.query.params`
- D. `req.route.params`

ANSWER: B

404. Which of the following is a common security best practice in Node.js applications?

- A. Using `eval()` for parsing user input
- B. Running your application as root
- C. Validating and sanitizing user input
- D. Disabling encryption for data storage

ANSWER: C

405. What is the primary purpose of using helmet in a Node.js application?

- A. To improve performance
- B. To add security headers
- C. To manage user sessions
- D. To handle routing

ANSWER: B

406. What is one way to protect a Node.js application from SQL injection attacks?

- A. Using string concatenation for SQL queries
- B. Using prepared statements and parameterized queries
- C. Storing SQL queries in plain text files
- D. Running SQL queries through `eval()`

ANSWER: B

407. Which Node.js module can be used to prevent brute-force attacks by limiting repeated requests to public APIs?

- A. bcrypt
- B. cors
- C. express-rate-limit
- D. passport

ANSWER: C

408. What is the main purpose of the bcrypt module in Node.js?

- A. To compress and decompress data
- B. To handle file encryption and decryption
- C. To hash and compare passwords
- D. To manage user authentication tokens

ANSWER: C

409. What is the risk of using eval() in a Node.js application?

- A. It can cause memory leaks
- B. It can execute arbitrary code, leading to security vulnerabilities
- C. It slows down the application
- D. It is not supported in newer Node.js versions

ANSWER: B

410. What is the purpose of the .clear() command in the Node REPL?

- A. Clears the console output
- B. Clears the current line of input
- C. Clears all variables from memory
- D. Exits the REPL

ANSWER: B

411. Which of the following is a method to secure Express sessions in a Node.js application?

- A. Using in-memory session storage
- B. Storing session data in plain text
- C. Setting the secure flag on cookies to ensure they're only sent over HTTPS
- D. Disabling session timeout

ANSWER: C

412. How do you create a readable stream in Node.js using the fs module?

- A. fs.createReadStream()
- B. fs.openReadStream()
- C. fs.readFileStream()
- D. fs.streamRead()

ANSWER: A

413. What is the primary function of the jsonwebtoken library in Node.js?

- A. To manage API rate limits
- B. To generate and verify JSON Web Tokens (JWTs)
- C. To handle file uploads
- D. To encrypt and decrypt data

ANSWER: B

414. Which Node.js package can be used to detect and fix vulnerabilities in your project's dependencies?

- A. npm-check
- B. node-inspector
- C. nsp
- D. snyk

ANSWER: D

415. Which Node.js module provides tools for creating and verifying JSON Web Tokens (JWTs)?

- A. jsonwebtoken
- B. jwt
- C. token
- D. crypto

ANSWER: A

416. How do you start the REPL in Node.js?

- A. By running node start in the terminal
- B. By running node repl in the terminal
- C. By running node shell in the terminal
- D. By simply running node in the terminal

ANSWER: D

417. Which command in the REPL will exit the session?

- A. exit
- B. quit
- C. .exit
- D. stop

ANSWER: C

418. In Node.js REPL, which command is used to save the current session to a file?

- A. .save filename
- B. .write filename
- C. .export filename
- D. .dump filename

ANSWER: A

419. What is the purpose of a rate limiter in Express?

- A. To prevent denial of service attacks
- B. To encrypt user data
- C. To validate user input
- D. To protect against SQL injection

ANSWER: A

420. How do you clear the console in Node.js REPL?

- A. .clear
- B. .cls
- C. .reset
- D. Ctrl + L

ANSWER: D

421. What command in Node.js REPL is used to see the list of available commands?

- A. .help
- B. .commands
- C. .list
- D. .options

ANSWER: A

422. In the Node.js REPL, how do you reload the previous command?

- A. Press the up arrow key
- B. Type .prev
- C. Press Ctrl + P
- D. Type .last

ANSWER: A

423. How can you view all the previously executed commands in Node.js REPL?

- A. Using the .history command
- B. By pressing Ctrl + H
- C. By typing history
- D. There is no way to view them

ANSWER: A

424. What does the _ variable represent in the Node.js REPL?

- A. The previous command entered
- B. The last evaluated expression
- C. The current session ID
- D. The first expression evaluated

ANSWER: B

425. In Node.js applications, what method is used to send a JSON response back from a server?

- A. res.pushJSON()
- B. res.sendJSON()
- C. res.returnJSON()
- D. res.json()

ANSWER: D

426. What is the HTTP Status Code Related to Page Not Found?

- A. 402
- B. 403
- C. 404
- D. 401

ANSWER: C

427. In which format does MongoDB store its data?

- A. XML
- B. JSON
- C. CSV
- D. BSON

ANSWER: D

428. How do you capture query parameters in Express routes?

- A. req.data
- B. req.params
- C. req.query
- D. req.body

ANSWER: C

429. Which decorator is used to define an Angular component?

- A. @Service
- B. @Directive
- C. @Module
- D. @Component

ANSWER: D

430. What is the default type for variables in TypeScript if not explicitly defined?

- A. unknown
- B. string
- C. void
- D. any

ANSWER: D

431. Which file defines the version and dependencies of an npm package?

- A. node_modules.json
- B. package-lock.json
- C. package.json
- D. dependencies.json

ANSWER: C

432. How do you set up a connection to a MySQL database using Node.js?

- A. Using the pg package
- B. Using the mongodb package
- C. Using the mysql or mysql2 package
- D. Using the redis package

ANSWER: C

433. In Angular, ng serve is used to

- A. Run unit tests
- B. Create a new Angular service
- C. Deploy the application to a remote server
- D. Compile the application and serves it locally

ANSWER: D

434. To serve static files like images, CSS and JavaScript files in Express, we use:

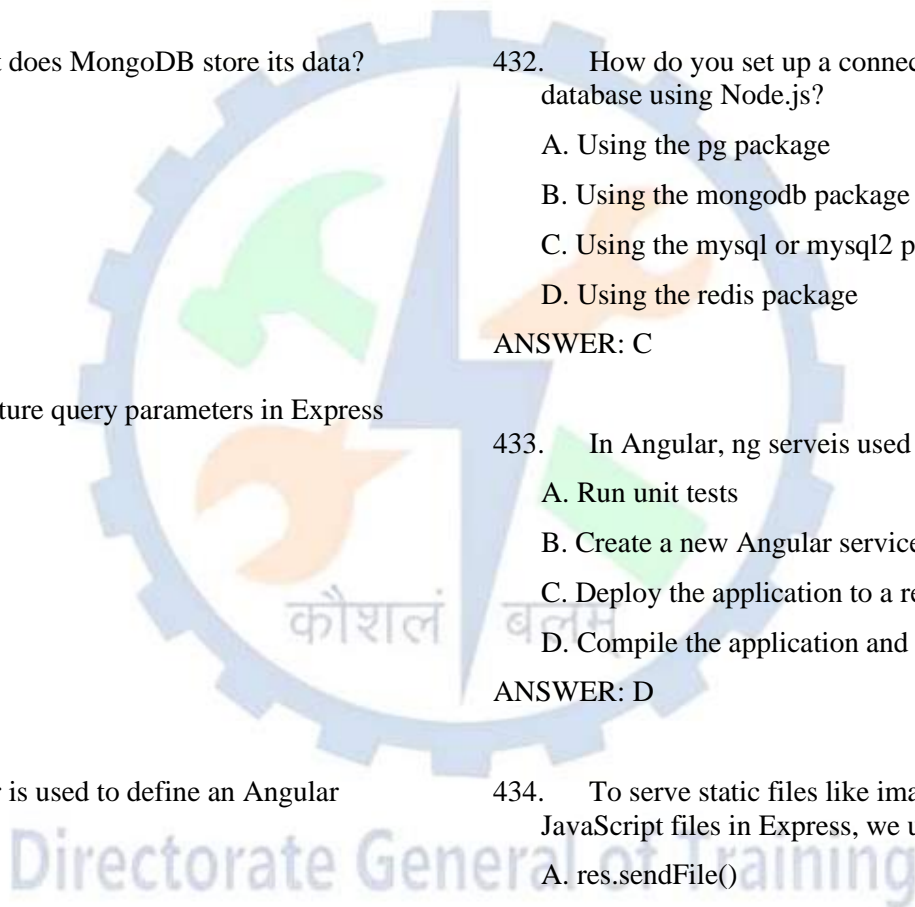
- A. res.sendFile()
- B. express.static()
- C. app.static()
- D. res.sendStatic()

ANSWER: B

435. What is the advantage of TypeScript over JavaScript?

- A. No need for a build step
- B. Faster execution speed
- C. Simplified syntax
- D. Static typing and compile-time checking

ANSWER: A



436. In Angular, how do we bind a property to an element?
- A. Using square brackets, e.g., [property]="value"
 - B. Using parentheses, e.g., (property)="value"
 - C. Using curly braces, e.g., {property}
 - D. Using quotes, e.g., "property"="value"

ANSWER: A

437. Which command is used to list all installed npm packages?
- A. npm new
 - B. npm show
 - C. npm list
 - D. npm info

ANSWER: D

438. Which component of the MEAN stack is responsible for handling server-side logic?
- A. MongoDB
 - B. Angular
 - C. Express
 - D. Node.js

ANSWER: C

439. How do we do attribute binding in Angular?
- A. (attr.class)="className"
 - B. {attr.class}="className"
 - C. {{attr.class}}="className"
 - D. [attr.class]="className"

ANSWER: D

440. Which npm command is used to initialize a new package.json file?
- A. npm st
 - B. npm init
 - C. npm setup
 - D. npm run

ANSWER: B

441. What keyword is used to define a class in TypeScript?
- A. new
 - B. define
 - C. type
 - D. class

ANSWER: D

442. How does Angular interact with other components in the MEAN stack?
- A. Through direct database queries
 - B. Through the server-side Express API
 - C. Through server-side scripts
 - D. Through client-side routing

ANSWER: B

443. The primary advantage of using Node.js in the MEAN stack is
- A. It offers strong typing
 - B. It supports synchronous I/O operations
 - C. It enables high performance and scalability
 - D. It restricts use to a single language

ANSWER: C

444. Which keyword is used to import a module in Node.js?
- A. include
 - B. gett
 - C. require
 - D. fetch

ANSWER: C

445. The file format is used for Node modules is
- A. .json
 - B. .module
 - C. .node
 - D. .js

ANSWER: D

446. How to load a built-in module in Node.js?
- A. Using the require() function with the module name
 - B. Including the module file in your code
 - C. Referencing the module in the HTML file
 - D. Importing the module from an external source

ANSWER: A

447. How to export a function from a Node.js module?
- A. module.functionName = functionName
 - B. exports.functionName = functionName
 - C. export functionName
 - D. module.exports = functionName

ANSWER: A

448. In Node.js, the fs module stands for
- A. File Server
 - B. File System
 - C. File Storage
 - D. File Sync

ANSWER: B

449. What is the primary method to handle cross-site scripting (XSS) in Node.js applications?
- A. Using API keys
 - B. Using secure cookies
 - C. Implementing HTTPS
 - D. Sanitizing user input

ANSWER: D

450. How do you start a server in Node.js using the http module?
- A. server.begin()
 - B. server.open()
 - C. server.listen()
 - D. server.start()

ANSWER: C

451. Which of the following is the file extension for TypeScript files?
- A. .js
 - B. .tsx
 - C. .ts
 - D. .tsp

ANSWER: C

452. What is the output of the following TypeScript code?
- ```
let x: number = 52;
console.log(typeof x);
```

- A. number
- B. string
- C. object
- D. undefined

ANSWER: A

453. What is the default access modifier for properties and methods in a TypeScript class?
- A. new
  - B. private
  - C. public
  - D. default

ANSWER: C

454. How can you define an optional parameter in a TypeScript function?
- A. By adding a question mark ? after the parameter name
  - B. By using the optional keyword
  - C. By using the ? symbol before the parameter name
  - D. By using the nullable keyword

ANSWER: A

455. How do you write data to a file using the fs module in Node.js?

- A. fs.writeFile()
- B. fs.createFile()
- C. fs.addFile()
- D. fs.setFile()

ANSWER: A

456. Which of the following is the correct way to define an array of numbers in TypeScript?

- A. let numbers: number[] = [11, 12, 43];
- B. let numbers: array = [11, 12, 43];
- C. let numbers: [number] = [11, 12, 43];
- D. let numbers: Array = [11, 12, 43];

ANSWER: A

457. What will be the output of the following TypeScript code?

```
let num: number = 130;
```

```
let result: string = num as unknown as string;
```

```
console.log(typeof result);
```

- A. number
- B. string
- C. object
- D. unknown

ANSWER: B

458. How do you declare a variable that can hold either a string or a number in TypeScript?

- A. let var: string | number;
- B. let var: string || number;
- C. let var: string or number;
- D. let var: [string, number];

ANSWER: A

459. What does REPL stand for in Node.js?

- A. Read Evaluate Process Loop
- B. Read Execute Print Loop
- C. Read Evaluate Print Loop
- D. Read Edit Print Loop

ANSWER: C

460. What does the fs.unlink() method do in Node.js?

- A. Creates a new file
- B. Deletes a file
- C. Renames a file
- D. Copies a file

ANSWER: B

461. Which of the following operators is used for exponentiation in TypeScript?

- A. ^
- B. \*\*
- C. exp
- D. pow

ANSWER: B

462. How can you protect a Node.js application from Cross-Site Request Forgery (CSRF) attacks?

- A. By using strong encryption for passwords
- B. By implementing CSRF tokens
- C. By disabling cookies
- D. By using a firewall

ANSWER: B

463. Which of the following shortcuts executes the last command in the REPL?

- A. Ctrl + L
- B. Ctrl + R
- C. Ctrl + P
- D. Ctrl + Y

ANSWER: C

464. What is the purpose of the `express.Router()` object?
- A. To define middleware functions
  - B. To create modular route handlers
  - C. To manage HTTP requests
  - D. To handle errors

ANSWER: B

465. Which HTTP method is used to create a new resource?
- A. GET
  - B. POST
  - C. PUT
  - D. DELETE

ANSWER: B

466. What will be the output of the following TypeScript code?

```
let a = 14;
```

```
let b = 25;
```

```
console.log(a > b ? "a is greater" : "b is greater");
```

- A. a is greater
- B. b is greater
- C. undefined
- D. null

ANSWER: B

467. Which HTTP header is often used to prevent Cross-Site Request Forgery (CSRF) attacks?

- A. X-Requested-With
- B. X-CSRF-Token
- C. Content-Security-Policy
- D. Referer

ANSWER: B

468. Which template engine is often used with Express?

- A. EJS
- B. Handlebars
- C. Pug
- D. All of these

ANSWER: D

469. Which HTTP header is used to set a cookie?

- A. Content-Type
- B. Cookie
- C. X-Cookie
- D. Set-Cookie

ANSWER: D

470. What is the purpose of a cryptographic hash function?

- A. To encrypt data
- B. To generate a unique digital fingerprint of data
- C. To decrypt data
- D. To create random numbers

ANSWER: B

471. How do you define a route parameter in Express?

- A. Using the `:param` syntax in the route path
- B. Using the `params` object in the request
- C. Using the `query` object in the request
- D. Using middleware

ANSWER: A

472. Which Node.js module provides tools for creating and verifying digital certificates?

- A. `crypto`
- B. `tls`
- C. `https`
- D. `cert`

ANSWER: B

473. What is the purpose of the next() function in Express middleware?
- A. To pass control to the next middleware function
  - B. To end the request-response cycle
  - C. To redirect the user
  - D. To render a view

ANSWER: A

474. Which of the following is used to transform data in Angular templates?
- A. Guards
  - B. Filters
  - C. Services
  - D. Pipes

ANSWER: D

475. Which module can be used for creating and verifying digital signatures?
- A. path
  - B. tls
  - C. https
  - D. crypto

ANSWER: D

476. How to access session data in an Express request handler?
- A. Using the req.session object
  - B. Using the req.cookies object
  - C. Using the res.session object
  - D. Using the res.cookies object

ANSWER: A

477. What is the purpose of a rate limiter middleware in Express?
- A. To prevent brute force attacks
  - B. To protect against SQL injection
  - C. To validate user input
  - D. To encrypt user data

ANSWER: A

478. Which HTTP header can be used to indicate that a web application is secure?
- A. X-Secure
  - B. Strict-Transport-Security
  - C. Secure-Connection
  - D. X-Security

ANSWER: B

479. What is the purpose of template engines in Express?
- A. To render dynamic HTML content
  - B. To manage database connections
  - C. To handle routing
  - D. To create middleware functions

ANSWER: A

480. How do you define a dynamic route in Express?
- A. `app.get('/user?', (req, res) => {});`
  - B. `app.get('/user', (req, res) => {});`
  - C. `app.get('/user/*', (req, res) => {});`
  - D. `app.get('/user/:id', (req, res) => {});`

ANSWER: D

481. In Express, what is the function of a router?
- A. To manage file uploads
  - B. To handle database connections
  - C. To define and organize endpoints for the application
  - D. To provide middleware for authentication

ANSWER: C

482. What is the purpose of the declare keyword in TypeScript?
- A. To create a new variable
  - B. To define an external variable or function in a global scope
  - C. To initialize a variable with a default value
  - D. To cast a variable to a specific type

ANSWER: B

483. Which of the following is a correct way to define a function with a return type in TypeScript?
- A. `function add(a: number, b: number): number { return a + b; }`
  - B. `function add(a, b): number { return a + b; }`
  - C. `function add(a: number, b: number) { return a + b; }`
  - D. `function add(a: number, b: number): { return a + b; }`

ANSWER: A

484. How does Express facilitate development in the MEAN stack?
- A. By providing a simple routing mechanism and middleware support
  - B. By offering database management tools
  - C. By enabling client-side data binding
  - D. By implementing a model-view-controller architecture

ANSWER: A

485. Which Angular feature facilitates unit testing?
- A. Services
  - B. Modules
  - C. Directives
  - D. Dependency Injection

ANSWER: D

486. Which of the following is a benefit of using Angular's CLI?
- A. It reduces the need for manual coding
  - B. It provides built-in testing capabilities
  - C. It enhances code readability
  - D. It simplifies the build process

ANSWER: D

487. In Express, how can you handle 404 errors for all undefined routes?
- A. By using `app.use((req, res) => { res.status(404).send('Not found'); });`
  - B. By defining a route `app.get('*', (req, res) => { res.status(404).send('Not found'); });`
  - C. By using `app.all((req, res) => { res.status(404).send('Not found'); });`
  - D. All of the above

ANSWER: D

488. How does Angular enhance the performance of web applications?
- A. By rendering the entire page on every update
  - B. By using two-way data binding
  - C. By implementing lazy loading and ahead-of-time compilation
  - D. By minimizing code reusability

ANSWER: C

489. In Angular, which of the following is used to bind a method to a button click event?
- A. `(click)="method()"`
  - B. `[click]="method()"`
  - C. `{{click}}="method()"`
  - D. `{click}="method()"`

ANSWER: A

490. What is the primary benefit of two-way data binding?
- A. It makes data flow unidirectional
  - B. It eliminates the need for a model
  - C. It allows automatic synchronization of data
  - D. It enhances the security of data

ANSWER: C



491. In MongoDB, which operator is used for equality checks in queries?

- A. \$eq
- B. \$equals
- C. \$is
- D. \$match

ANSWER: A

492. Which HTTP method is used to update a resource in Express?

- A. GET
- B. POST
- C. PUT
- D. DELETE

ANSWER: C

493. Which file contains the root component in an Angular application?

- A. main.ts
- B. app.component.ts
- C. index.html
- D. app.module.ts

ANSWER: B

494. How to pass data from parent component to child component in Angular?

- A. Using services
- B. Using serve
- C. Using @Input properties
- D. Using @Output properties

ANSWER: C

495. In Node.js, how do you handle exceptions thrown in asynchronous code?

- A. try-catch blocks
- B. Promises or callbacks
- C. event listeners
- D. process.on('exception')

ANSWER: B

496. Which lifecycle hook is called after the first ngOnChanges in Angular?

- A. ngAfterContentInit
- B. ngAfterViewInit
- C. ngDoCheck
- D. ngOnInit

ANSWER: A

497. Which Angular feature allows you to hide or display elements based on conditions?

- A. Data binding
- B. Directives
- C. Pipes
- D. Services

ANSWER: B

498. In Node.js, which module is used to work with paths?

- A. field
- B. os
- C. url
- D. path

ANSWER: D

499. Which Angular directive is used for rendering lists?

- A. \*ngList
- B. \*ngLoop
- C. \*ngFor
- D. \*ngRender

ANSWER: C

500. In Express, what is the purpose of the next function in a middleware?

- A. To move to the next route handler
- B. To terminate the request-response cycle
- C. To skip the current middleware
- D. To invoke the next middleware function

ANSWER: D

501. What is a binding target in Angular?
- A. The source of the data
  - B. The element that receives the data
  - C. The property of the element to be bound
  - D. The function that binds the data

ANSWER: C

502. Which method is used to define a route in Express.js?
- A. `app.listen()`
  - B. `app.route()`
  - C. `app.use()`
  - D. `app.get()`

ANSWER: D

503. What is npm in Node.js?
- A. A package manager for Node.js
  - B. A web server
  - C. A database
  - D. A template engine

ANSWER: A

504. What does the `ngModel` directive do in Angular?
- A. Defines routing rules
  - B. Manages component state
  - C. Handles HTTP responses
  - D. Binds data to a form element

ANSWER: D

505. What is an example of a built-in Angular pipe?
- A. `NgFor`
  - B. `NgModel`
  - C. `NgIf`
  - D. `DatePipe`

ANSWER: D

506. Which feature of MongoDB allows for flexible schema design?
- A. Key-value pairs
  - B. Document-based data model
  - C. SQL-based schema
  - D. Relational tables

ANSWER: B

507. How does Node.js handle concurrency?
- A. By using a single-threaded approach
  - B. By using synchronous I/O operations
  - C. By using an event-driven, non-blocking I/O model
  - D. By using multi-threading

ANSWER: C

508. Why is MongoDB a preferred choice for the MEAN stack?
- A. It is a lightweight framework
  - B. It uses SQL for querying
  - C. It is schema-less and flexible
  - D. It is primarily a front-end library

ANSWER: C

509. Which symbol is used to separate key-value pairs in JSON?
- A. `,`
  - B. `=`
  - C. `;`
  - D. `:`

ANSWER: D

510. In Express, if you wanted a middleware function to be executed for every request, where would you place it?
- A. Inside the app's main file
  - B. At the end of all route definitions
  - C. Inside each route definition
  - D. Before all route definitions

ANSWER: D

511. What method is used to create a middleware in Express?

- A. app.use()
- B. app.middleware()
- C. express.use()
- D. express.middleware()

ANSWER: A

512. Which of these is not a core feature of Express?

- A. Middleware
- B. Routing
- C. Templating
- D. ORM

ANSWER: D

513. Which of the following ensures atomic transactions in MongoDB?

- A. WriteConcern
- B. Sharding
- C. Indexing
- D. Replication

ANSWER: A

514. Which HTTP methods are commonly used in REST API operations?

- A. SEND, RECEIVE, MODIFY, DELETE
- B. CREATE, READ, UPDATE, DELETE
- C. GET, POST, PUT, DELETE
- D. INSERT, SELECT, UPDATE, DELETE

ANSWER: C

515. What would be the primary use case for the cluster module in Node.js?

- A. Data validation
- B. Improved logging
- C. Load balancing over multiple CPU cores
- D. Data encryption

ANSWER: C

516. What is the primary concern with storing sensitive data in session cookies?

- A. Performance issues
- B. Security vulnerabilities
- C. Compatibility issues
- D. Cookie size limits

ANSWER: B

517. Which keyword is used to export a class in Angular?

- A. import
- B. class
- C. export
- D. module

ANSWER: C

518. Which of the following is true about interfaces in TypeScript?

- A. Interfaces can define private members
- B. Interfaces can define method implementations
- C. Interfaces can extend multiple interfaces
- D. Interfaces cannot have optional properties

ANSWER: C

519. What happens if a class does not implement all the methods of an interface in TypeScript?

- A. The class will fail to compile
- B. The missing methods will be ignored
- C. The class will implement default methods
- D. The class will throw a runtime error

ANSWER: A

520. Which of the following can be used to define a function type in a TypeScript interface?

- A. function myFunc(): void;
- B. myFunc(): void;
- C. myFunc: () => void;
- D. myFunc: function;

ANSWER: C

521. Which TypeScript feature helps you write asynchronous code in a more readable way?

- A. Promises
- B. Generators
- C. Async/await
- D. Callbacks

ANSWER: C

522. What does the event Emitter.emit method in Node.js do?

- A. It sets up a new event.
- B. It triggers an event.
- C. It listens for an event.
- D. It terminates an ongoing event.

ANSWER: B

523. What is the Node.js event loop?

- A. A loop that emits custom events
- B. A loop that continuously checks for events and processes them
- C. A mechanism to define custom events
- D. The main process of a Node.js application

ANSWER: B

524.

How do you define a route in Express that handles a GET request to the path /users?

- A. `app.put('/users', (req, res) => {});`
- B. `app.get('/users', (req, res) => {});`
- C. `app.route('/users').get((req, res) => {});`
- D. `app.post('/users', (req, res) => {});`

ANSWER: B

