Web Development Using Java

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

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 csurf 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.newServer()

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.writeHeader()

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

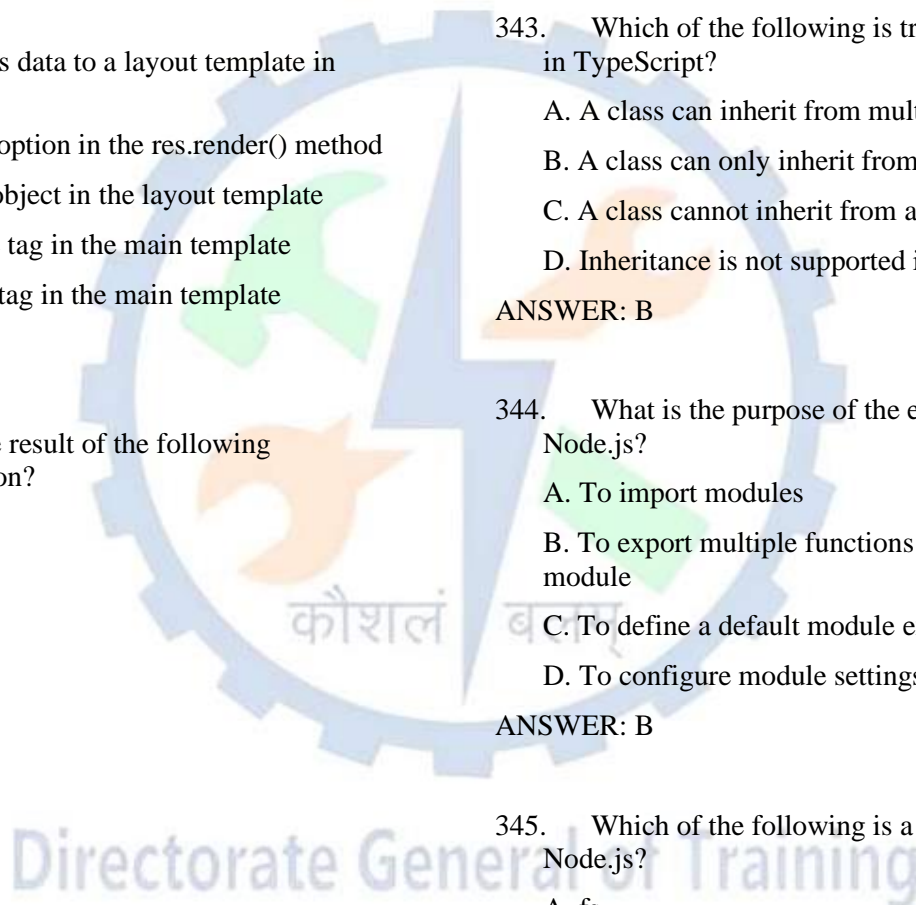345. Which of the following is a built-in module in Node.js?

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

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 serveis 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

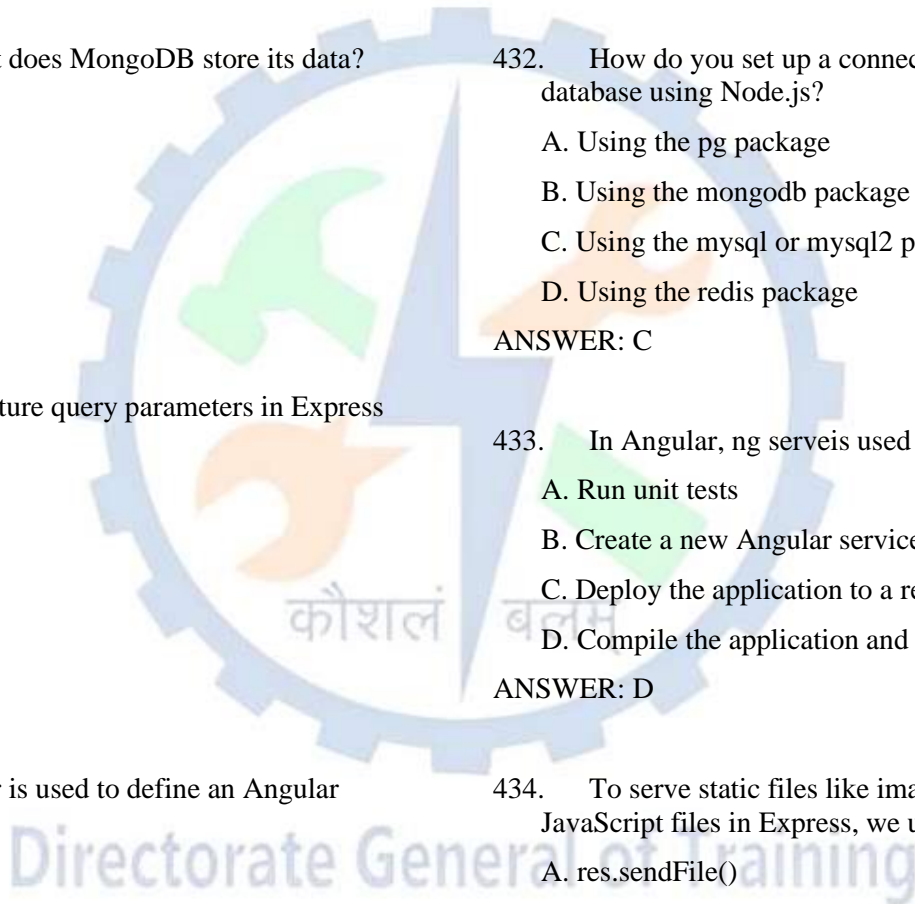434. To serve static files like images, CSS and JavaScript files in Express, we use:

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

   A. 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 toaccess 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