

Middleware in Express.js

Topics: Node js

Written on November 30, 2023

Middleware functions have access to the request (req) and response (res) objects, and they can also call the next middleware function in the stack.

Here are some key points about middleware in Express.js:

Middleware Function: Middleware functions in Express.js are functions that have three parameters: req (request object), res (response object), and next (a function to call the next middleware function in the stack). They can perform tasks such as modifying the request or response objects, ending the request-response cycle, or calling the next middleware function.

Example middleware function:

```
function myMiddleware(req, res, next) {
   // Do something with the request or response
   console.log('Middleware executed');

   // Call the next middleware function
   next();
}
```

Application-Level Middleware: Middleware can be applied at the application level using app.use() or for specific routes using app.use('/path', myMiddleware). These middleware functions will be executed for every incoming request.

Example:

```
const express = require('express');
const app = express();

// Application-level middleware
app.use(myMiddleware);

// Route handler
app.get('/', (req, res) => {
    res.send('Hello, World!');
});

app.listen(3000, () => {
    console.log('Server is running on port 3000');
});
```

Router-Level Middleware: Middleware can also be applied at the router level using router.use(). This allows you to define middleware specific to a set of routes.

```
Example:
```

```
const express = require('express');
const router = express.Router();

// Router-level middleware
router.use(myMiddleware);

// Route handler
router.get('/route', (req, res) => {
    res.send('This is a route with middleware');
});

module.exports = router;
```

Error Handling Middleware: Middleware functions with four parameters (err, req, res, next) are considered error-handling middleware. They are used to handle errors that occur during the execution of previous middleware or route handlers.

Example:

```
app.use((err, req, res, next) => {
  console.error(err.stack);
  res.status(500).send('Something went wrong!');
});
```

Built-in Middleware: Express.js comes with several built-in middleware functions that handle common tasks such as serving static files (express.static), parsing incoming request bodies (express.json, express.urlencoded), and more.

Example:

```
const express = require('express');
const app = express();

// Built-in middleware to parse JSON bodies
app.use(express.json());

// Route handler
app.post('/api/data', (req, res) => {
    console.log(req.body);
    res.send('Data received');
});
```

