1 **Set Up the Express.js Application**:

npm init -y

npm install express

const express = require('express');

const app = express();

const port = 3000;

app.get('/', (req, res) => {

res.send('Hello World!');

});

app.listen(port, () => {

console.log(`Server running on http://localhost:${port}`);

});

2 **Implement Middleware to Capture Request Details**:

app.use((req, res, next) => {

const logDetails = {

timestamp: new Date().toISOString(),

ip: req.ip,

url: req.originalUrl,

protocol: req.protocol,

method: req.method,

hostname: req.hostname

};

logRequestDetails(logDetails);

next();

});

function logRequestDetails(logDetails) {

const logMessage = JSON.stringify(logDetails) + '\n';

fs.appendFile('requests.log', logMessage, (err) => {

if (err) console.error('Error writing log to file:', err);

});

}

3 **Use the fs Module to Write Request Details to a File**:

const fs = require('fs');

4 **Test the Logging Functionality**:

* Visit http://localhost:3000.
* Check requests.log.

5 **Optional Advanced Features**:

* **Log Rotation**:

fs.stat(logFilePath, (err, stats) => {

if (err) return console.error('Error checking log file:', err);

if (stats.size > 1 \* 1024 \* 1024) {

const timestamp = new Date().toISOString().replace(/:/g, '-');

fs.rename(logFilePath, `requests-${timestamp}.log`, (renameErr) => {

if (renameErr) return console.error('Error rotating log file:', renameErr);

fs.appendFile(logFilePath, logMessage, (writeErr) => {

if (writeErr) console.error('Error writing log to file:', writeErr);

});

});

} else {

fs.appendFile(logFilePath, logMessage, (writeErr) => {

if (writeErr) console.error('Error writing log to file:', writeErr);

});

}

});

* **Enhanced Logging**:

const logDetails = {

timestamp: new Date().toISOString(),

ip: req.ip,

url: req.originalUrl,

protocol: req.protocol,

method: req.method,

hostname: req.hostname,

query: req.query,

headers: req.headers,

userAgent: req.get('User-Agent')

};