

Training Day 28 Report

Date: 28 July 2025

Project: MERN Notes App

Topic Covered: Post-Deployment Debugging and Optimizations

On the twenty-eighth day, we debugged and optimized the deployed application. We fixed common deployment issues such as CORS, HTTPS redirects, and added error monitoring.

Concepts Learned

- Handling CORS issues in Express for frontend-backend communication.
- Forcing HTTPS redirection in production.
- Using environment-specific logging for debugging.
- Optimizing API error responses for clarity.

Fixing CORS Issues

Installed CORS package:

```
1 npm install cors
```

Configured in `server.js`:

Listing 1: CORS setup

```
1 const cors = require('cors');
2
3 app.use(cors({
4   origin: ['https://mern-notes-app.onrender.com'], // frontend URL
5   credentials: true
6 }));
```

Enforcing HTTPS

Listing 2: Redirect HTTP to HTTPS

```
1 if (process.env.NODE_ENV === 'production') {
2   app.use((req, res, next) => {
3     if (req.headers['x-forwarded-proto'] !== 'https') {
4       return res.redirect('https://' + req.headers.host + req.url);
5     }
6     next();
7   });
8 }
```

Improved Error Handling

Listing 3: Centralized error handler

```
1 app.use((err, req, res, next) => {  
2   console.error(err.stack);  
3   res.status(err.statusCode || 500).json({  
4     success: false,  
5     message: err.message || 'Server Error'  
6   });  
7 });
```

Testing the Deployment

- Initially received CORS errors → fixed by configuring allowed origins.
- Confirmed that HTTP requests are redirected to HTTPS in production.
- Tested error cases (invalid routes, failed login) → user-friendly messages displayed.
- Verified logs are visible only in development mode.

Outcome of the Day

- Successfully debugged and fixed post-deployment issues.
- Secured app with HTTPS redirection and proper CORS handling.
- Added centralized error handling for consistent API responses.