# DAY 5 - TESTING AND BACKEND REFINEMENT

MORENT RENTAL CAR

## FUNCTIONAL TESTING

- **TEST CORE FEATURES:**
- **PRODUCT LISTING:** ENSURE PRODUCTS ARE DISPLAYED CORRECTLY.
- **FILTERS AND SEARCH:** VALIDATE ACCURATE RESULTS BASED ON USER INPUTS.
- **DYNAMIC ROUTING:** VERIFY INDIVIDUAL PRODUCT DETAIL PAGES LOAD CORRECTLY

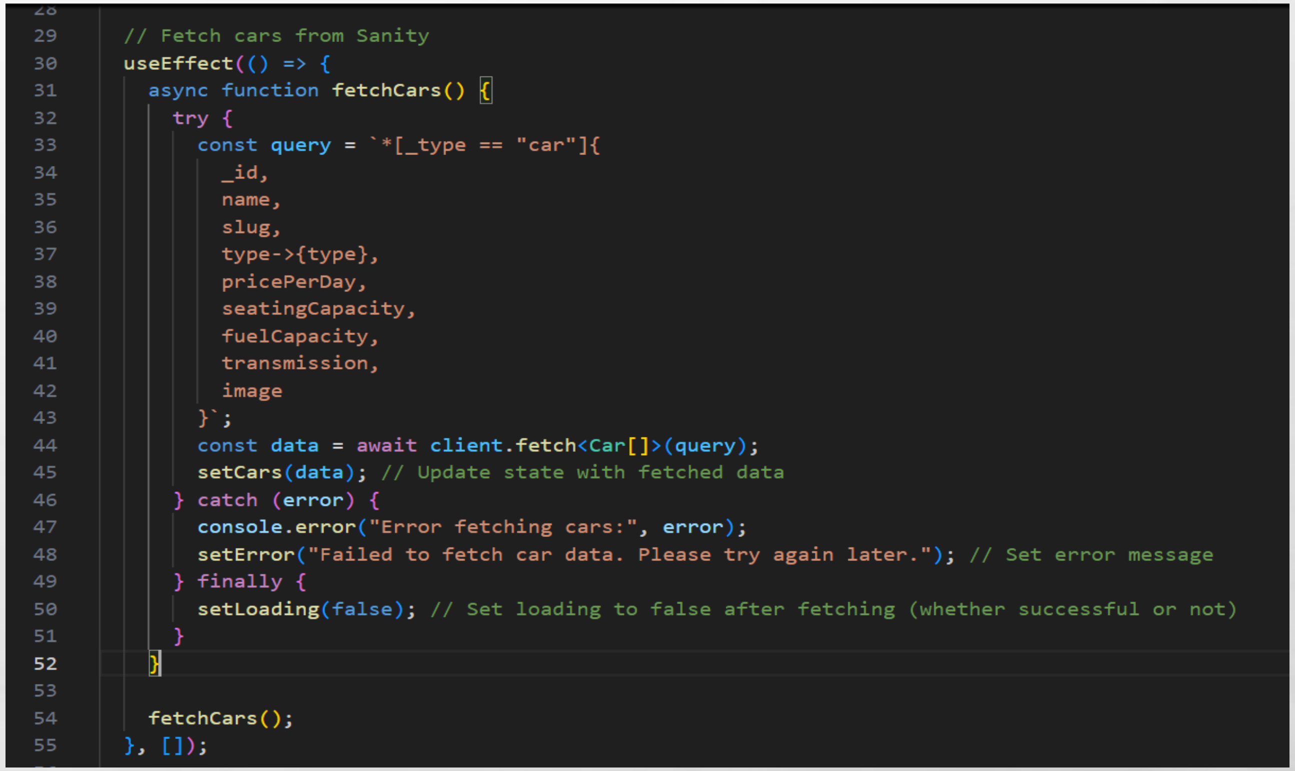
## ERROR HANDLING

IMPLEMENT PROPER ERROR MESSAGES FOR:

- NETWORK FAILURES.

IT WILL RETURN "FAILED TO FETCH CAR DATA. PLEASE TRY AGAIN'

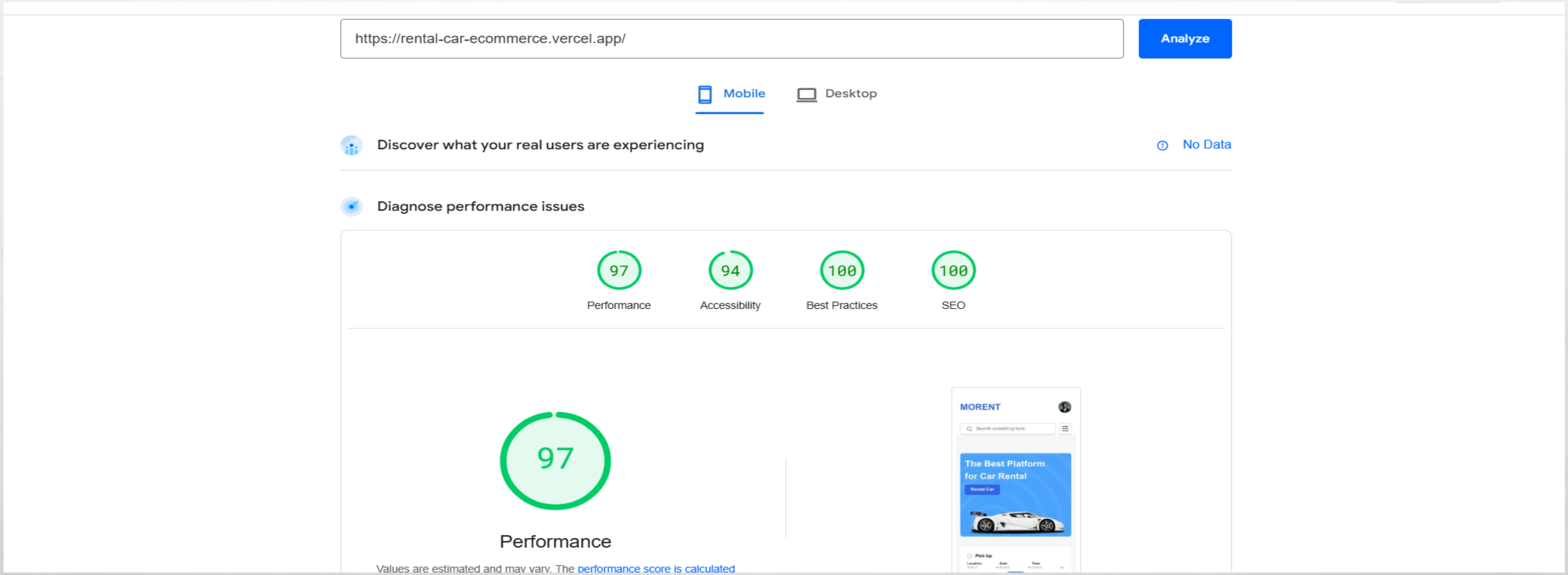
NETWORK SLOW.
IT WILL RETURN "LOADING CARS..."



```
  // Fetch cars from Sanity
  useEffect(() => {
    async function fetchCars() {
      try {
        const query = `*[_type == "car"]{
          _id,
          name,
          slug,
          type->{type},
          pricePerDay,
          seatingCapacity,
          fuelCapacity,
          transmission,
          image
        }`;
        const data = await client.fetch<Car[]>(query);
        setCars(data); // Update state with fetched data
      } catch (error) {
        console.error("Error fetching cars:", error);
        setError("Failed to fetch car data. Please try again later."); // Set error message
      } finally {
        setLoading(false); // Set loading to false after fetching (whether successful or not)
      }
    }

    fetchCars();
  }, []);
```

# PERFORMANCE TESTING ON MOBILE



https://rental-car-ecommerce.vercel.app/

Discover what your real users are experiencing — No Data

Diagnose performance issues

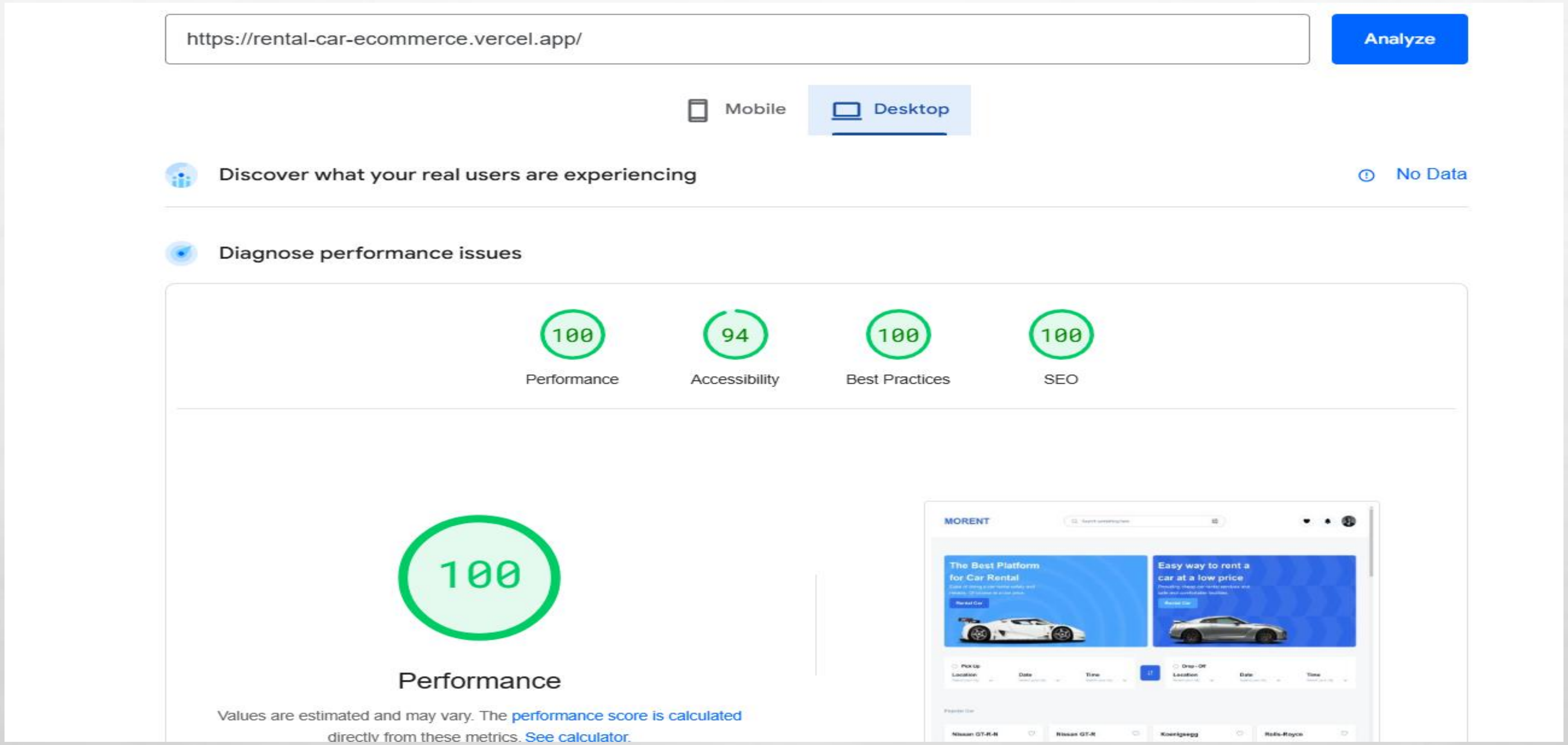
| 97 | 94 | 100 | 100 |
|---|---|---|---|
| Performance | Accessibility | Best Practices | SEO |

97

Performance

Values are estimated and may vary. The performance score is calculated

# PERFORMANCE TESTING ON DESKTOP



https://rental-car-ecommerce.vercel.app/

Analyze

Mobile | Desktop

Discover what your real users are experiencing — No Data

Diagnose performance issues

| Performance | Accessibility | Best Practices | SEO |
|---|---|---|---|
| 100 | 94 | 100 | 100 |

100

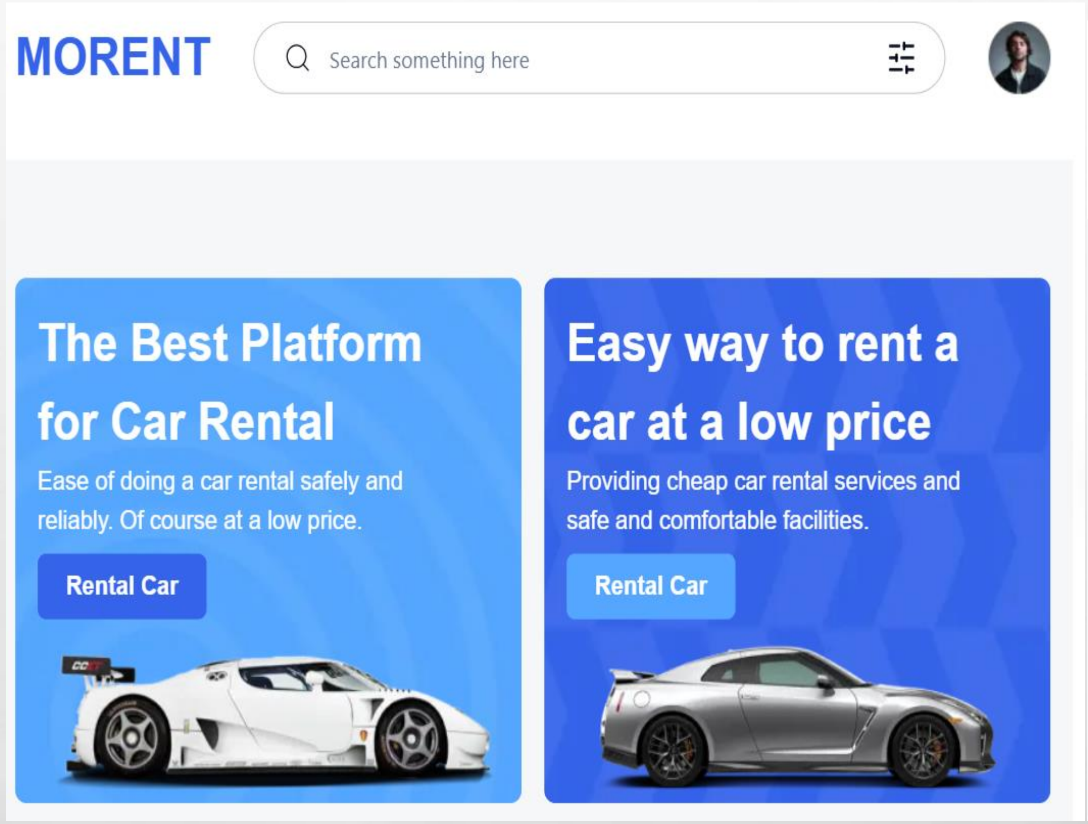
Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

# CROSS-BROWSER AND DEVICE TESTING

WEBSITE IS FULLY RESPONSIVE

ON ALL SCREENS

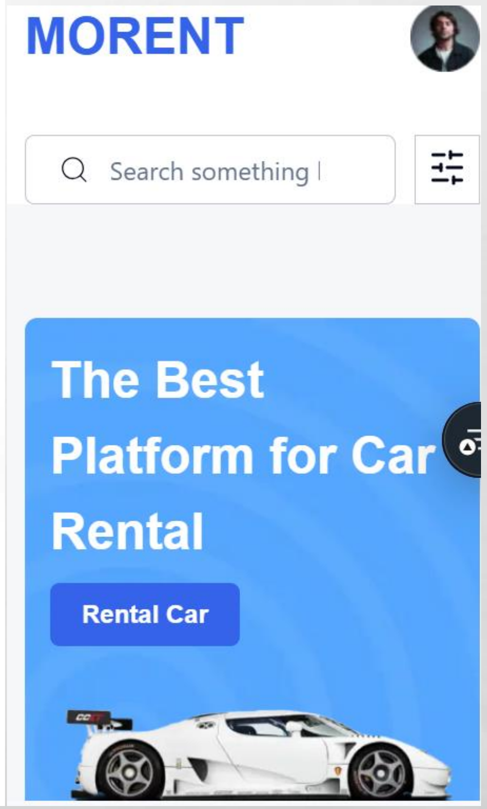


The Best Platform for Car Rental

Ease of doing a car rental safely and reliably. Of course at a low price.

Easy way to rent a car at a low price

Providing cheap car rental services and safe and comfortable facilities.

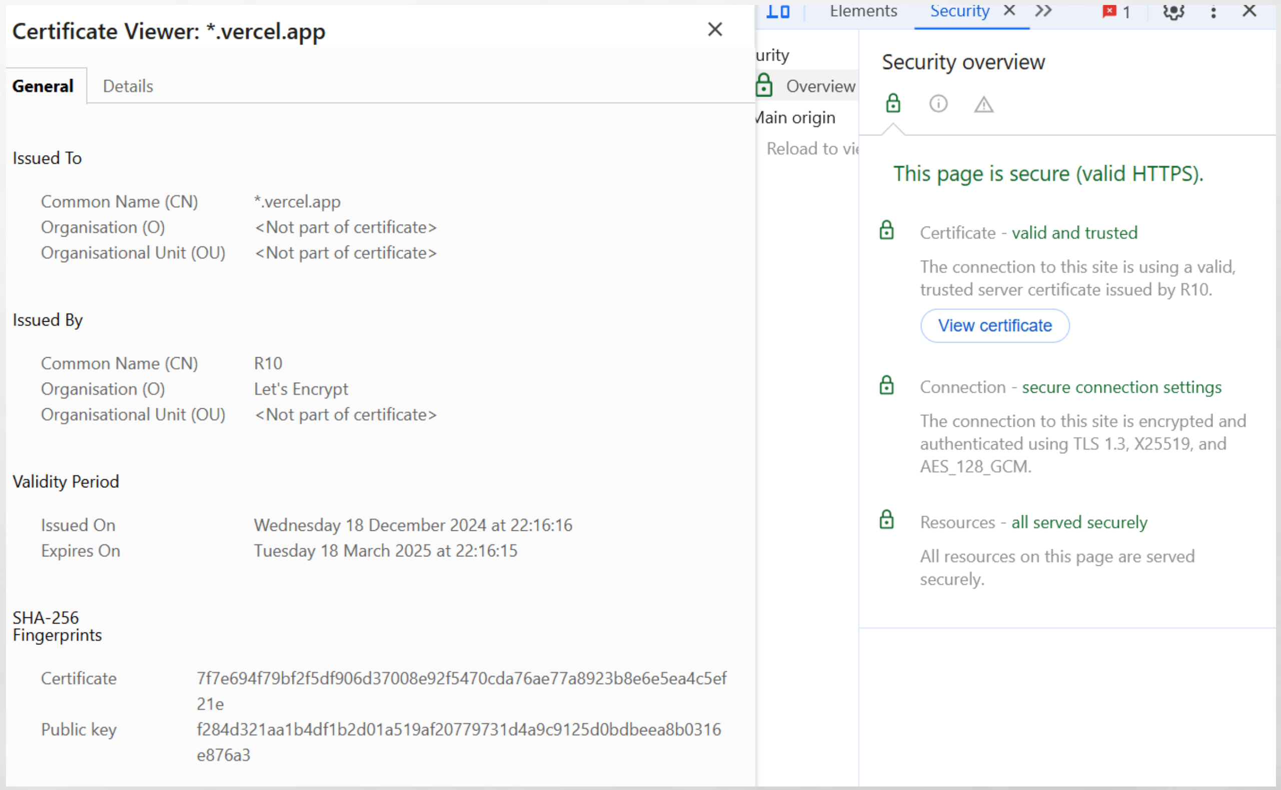


The Best Platform for Car Rental

# SECURITY TESTING

## USING HTTPS FOR SECURE COMMUNICATION IN MY WEBSITE

- IMPLEMENTING HTTPS (HYPERTEXT TRANSFER PROTOCOL SECURE) ON MY WEBSITE ENSURES SECURE COMMUNICATION BETWEEN THE USER'S BROWSER AND THE SERVER BY ENCRYPTING DATA. THIS HELPS PROTECT SENSITIVE INFORMATION SUCH AS USER CREDENTIALS



Certificate Viewer: *.vercel.app

General | Details

Issued To

| | |
|---|---|
| Common Name (CN) | *.vercel.app |
| Organisation (O) | <Not part of certificate> |
| Organisational Unit (OU) | <Not part of certificate> |

Issued By

| | |
|---|---|
| Common Name (CN) | R10 |
| Organisation (O) | Let's Encrypt |
| Organisational Unit (OU) | <Not part of certificate> |

Validity Period

| | |
|---|---|
| Issued On | Wednesday 18 December 2024 at 22:16:16 |
| Expires On | Tuesday 18 March 2025 at 22:16:15 |

SHA-256 Fingerprints

| | |
|---|---|
| Certificate | 7f7e694f79bf2f5df906d37008e92f5470cda76ae77a8923b8e6e5ea4c5ef21e |
| Public key | f284d321aa1b4df1b2d01a519af20779731d4a9c9125d0bdbeea8b0316e876a3 |

Security overview

This page is secure (valid HTTPS).

Certificate - valid and trusted

The connection to this site is using a valid, trusted server certificate issued by R10.

View certificate

Connection - secure connection settings

The connection to this site is encrypted and authenticated using TLS 1.3, X25519, and AES_128_GCM.

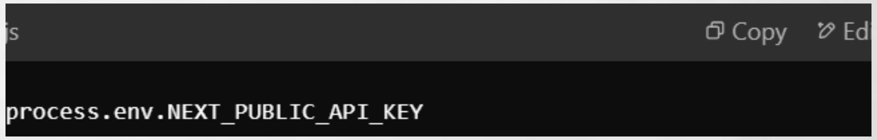
Resources - all served securely

All resources on this page are served securely.

# AVOID EXPOSING SENSITIVE API KEYS

**Avoiding Exposure of Sensitive API Keys in My Website**

To protect my website from security vulnerabilities, it is crucial to avoid exposing sensitive API keys, such as those used for payment gateways (e.g., Stripe), database connections, or third-party services. Exposing these keys can lead to unauthorized access, data breaches, and financial loss.



```
process.env.NEXT_PUBLIC_API_KEY
```

**Best Practices to Prevent API Key Exposure:**

**1. Use Environment Variables:**

Store API keys securely in .env files instead of hardcoding them in the codebase.

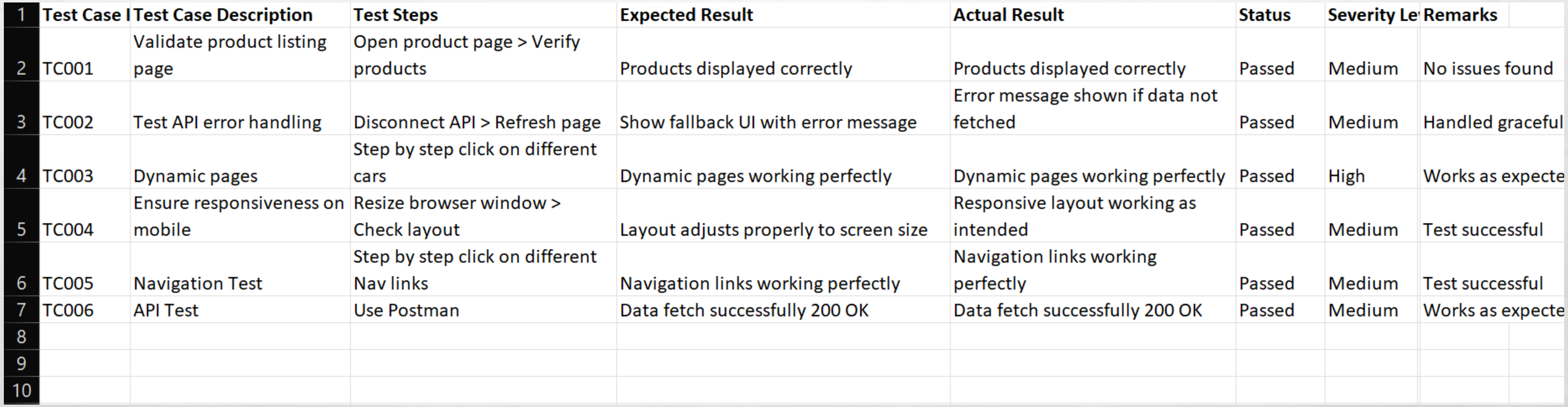
**2. RESTRICT KEY USAGE:**

Use API key restrictions based on IP addresses, domain or specific services

**3. VERSION CONTROL SAFETY:**

Use API key restrictions based on IP addresses, domain or specific services

# DOCUMENTATION TEST CASES EXECUTED AND THEIR RESULTS



| 1 | Test Case I | Test Case Description | Test Steps | Expected Result | Actual Result | Status | Severity Le | Remarks |
|---|---|---|---|---|---|---|---|---|
| 2 | TC001 | Validate product listing page | Open product page > Verify products | Products displayed correctly | Products displayed correctly | Passed | Medium | No issues found |
| 3 | TC002 | Test API error handling | Disconnect API > Refresh page | Show fallback UI with error message | Error message shown if data not fetched | Passed | Medium | Handled graceful |
| 4 | TC003 | Dynamic pages | Step by step click on different cars | Dynamic pages working perfectly | Dynamic pages working perfectly | Passed | High | Works as expecte |
| 5 | TC004 | Ensure responsiveness on mobile | Resize browser window > Check layout | Layout adjusts properly to screen size | Responsive layout working as intended | Passed | Medium | Test successful |
| 6 | TC005 | Navigation Test | Step by step click on different Nav links | Navigation links working perfectly | Navigation links working perfectly | Passed | Medium | Test successful |
| 7 | TC006 | API Test | Use Postman | Data fetch successfully 200 OK | Data fetch successfully 200 OK | Passed | Medium | Works as expecte |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |