#### **Risk Mitigation, Monitoring, and Management Plan**

| **Risk ID** | **Risk Description** | **Probability (Low/Med/High)** | **Impact (Low/Med/High)** | **Mitigation Strategy** | **Monitoring Strategy** |
| --- | --- | --- | --- | --- | --- |
| R1 | Server Downtime or Hosting Issues | Medium | High | Use reliable cloud hosting (e.g., AWS, Vercel) with regular backups | Monitor uptime via tools like UptimeRobot |
| R2 | Payment Gateway Failure | Low | High | Integrate tested APIs (Stripe, PayPal) and include fallback mechanism | Regular testing and API version tracking |
| R3 | Data Breach or Security Vulnerability | Medium | High | Use HTTPS, secure backend, hash passwords, validate inputs | Penetration testing, logs monitoring |
| R4 | Incomplete or Incorrect Inventory Data | Medium | Medium | Develop admin panel for product/inventory management | Manual checks and admin reports |
| R5 | Delay in Frontend/Backend Integration | Medium | Medium | Follow Agile with daily standups and task division | Monitor progress via GitHub/GitLab issues or Trello |
| R6 | Unclear Client Requirements or Feature Creep | Medium | Medium | Document features in SRS, get early approvals | Track changes through changelog and SRS updates |
| R7 | Cross-browser/device compatibility issues | Medium | Medium | Use responsive design and test on all major browsers and devices | Use BrowserStack or manual testing |
| R8 | Team Member Unavailability or Task Neglect | Low | Medium | Assign backup responsibilities, use version control | Weekly updates and team check-ins |
| R9 | Performance Lag during High Traffic | Low | High | Optimize code, lazy loading, compress images | Monitor site performance via Lighthouse, GTMetrix |
| R10 | SEO and Product Visibility Not Effective | Medium | Low | Add SEO tags, use semantic HTML, sitemap generation | Use Google Search Console or SEO tools |