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Deployment and Operations

Project Title : Online Grocery Delivery Web App Blink-Shop-Now

1. Live Deployment

The Blinkit system is now running correctly on Vercel, which is a cloud platform that hosts websites and makes sure they are fast, dependable, and don't need servers for modern web apps.

Platform Selection:

Vercel was picked because it works with React.js and Next.js projects, provides free hosting with a worldwide content delivery network, and easily connects to GitHub for ongoing deployment.

Deployment Process:

The project was uploaded to a GitHub online storage space.

Vercel was linked to the GitHub storage space to automatically create the site.

Private keys (like database login details) were safely added in Vercel's settings area.

The site creation process started, and the live version was put online.

Challenges Faced:

At first, the private keys for MongoDB weren't loading correctly. This was fixed by changing the .env settings in Vercel.

Some image and other files weren't small enough, so we turned on Vercel's settings to make them better.

Evidence of Deployment:

The live system can be found here: <https://blinkitcp.vercel.app/>

2. Monitoring

To make sure the system stays dependable and quick, we've set up ways to keep an eye on it.

Monitoring Tools Used:

Vercel Analytics for how long pages take to load and how much traffic there is.

UptimeRobot to check if the site is up all the time and send alerts if it goes down.

Checking logs from the backend (MongoDB Atlas settings) to find mistakes and see how the database is doing.

Key Performance Indicators :

Uptime: The system should be up and running at least 99% of the time.

Response Time: The website and its features should load in under 3 seconds.

Error Rate: Less than 2% of website feature uses should have errors.

Evidence of Monitoring:

Vercel analytics showed that pages loaded in about 2.1 seconds on average.

UptimeRobot showed that the site was up 100% of the time for the last week.

MongoDB Atlas monitoring showed that the database was working smoothly with no big slowdowns.

3. Maintenance Plan

To make sure it works well for a long time, we've made a clear maintenance plan:

Regular Updates:

Fix small problems and make small improvements every week.

Add new features every month.

Fix urgent issues right away.

Security Measures:

Regularly update the software we use to keep it safe.

Use HTTPS (SSL is enabled by Vercel).

Watch the database access logs for anything strange.

Backups and Data Safety:

Automatically back up the MongoDB database every day.

Save a copy of the code on GitHub every week.

Scalability Plan:

If more people start using the site, upgrade the Vercel plan for more data usage.

Use CDN caching to send content faster.

Make the database work better for lots of users.

Maintenance Schedule:

Weekly: Fix bugs, check logs.

Monthly: Security updates, update software we use.

Quarterly: Check performance and add new features.

4. Challenges and Solutions

Challenge: When putting the site online, some features didn't work because of CORS problems.

Solution: Set up the backend to allow the right CORS settings.

Challenge: Sometimes the site got slow when we tested it a lot.

Solution: Used caching and made the features work better.

Conclusion

The BlinkitCP project is now successfully running in a live setting using Vercel. Monitoring ensures it's always up and fast, while the maintenance plan ensures it will stay stable, scalable, and secure in the future.