Deployment instructions Development stage

To deploy a project from a GitHub repository to Vercel, follow these structured instructions:

Step 1: Prepare Your GitHub Repository

1. Create a GitHub Repository (if you don't have one already):
2. Go to GitHub.
3. Create a new repository or use an existing one.
4. Push your project's code to the repository if it's not already there.

2. Check for Required Files: Ensure that your repository contains the necessary files for your project. Common files might include:

1. package.json for Node.js projects.
2. next.config.js for Next.js projects.
3. vercel.json (optional) for custom configuration.

Step 2: Create a Vercel Account

1. Sign up or Log in to Vercel:
2. Visit Vercel.
3. Sign up with GitHub (or another supported provider).
4. Connect Your GitHub Account to Vercel:
5. After logging in, go to the Dashboard.
6. Click on New Project.
7. Vercel will ask you to connect your GitHub account (if not already done). Allow Vercel to access your repositories.

Step 3: Deploy from GitHub to Vercel

1. Import Your GitHub Repository:
2. After linking your GitHub account, Vercel will show your repositories.
3. Select the repository you want to deploy.
4. Configure Build Settings:
5. Vercel will auto-detect the framework and settings (for example, Next.js, React, etc.).

2. If Vercel does not detect the correct settings, you can manually specify the build command, output directory, etc.

Common configurations

1. Build Command: e.g., npm run build or next build
2. Output Directory: e.g.,./out or .next
3. Set Environment Variables (if needed):
4. If your project uses environment variables, you can set them during the setup process.
5. Deploy:
6. After configuring, click Deploy.
7. Vercel will start the deployment process.
8. Once completed, you'll get a live URL where your project is deployed.

Step 4: Post-Deployment Steps

1. Access the Live Application:
2. Vercel will provide a live URL to your deployed project, typically in the format your-project-name.vercel.app.
3. Automatic Deployments on Push:
4. After the initial deployment, Vercel will automatically redeploy the project on any changes you push to the connected GitHub repository.
5. Check Build Logs:
6. If there are any issues with the deployment, you can check the build logs in the Vercel dashboard to debug.

Optional: Add Custom Domain

1. Set Up Custom Domain (if applicable):
2. Go to the Settings of your deployed project in Vercel.
3. Under the Domains section, you can add a custom domain.
4. Follow the instructions for connecting your domain (DNS configuration).

Optional: Configure vercel.json

For custom configurations, you can create a vercel.json file in the root of your project. Example configurations:

json

Copy

```
{
 "version": 2,
 "builds": [
   {
     "src": "index.js",
     "use": "@vercel/node"
   }
 ],
 "routes": [
   {
     "src": "/api/(.*)",
     "dest": "/api/$1.js"
   }
 ]
}
```

- Version: Specifies the version of Vercel's deployment platform.
- Builds: Specifies how to build and deploy the project.
- Routes: Configures URL rewrites or redirects.

Conclusion

Once you've followed these steps, your GitHub project will be deployed on Vercel with continuous deployment enabled. Every time you push changes to the GitHub repository, Vercel will automatically redeploy the project.

Performance testing results.

Performance testing results (GTmetrix):

- Performance: Overall performance score based on Lighthouse benchmarks.
  Obtained value: 100%.
- Structure: Measures adherence to web development best practices.
  Obtained value: 96%
- Cumulative Layout Shift: Measures the visual stability of page elements.
  Obtained value: 0.18
- Largest Contentful Paint: Time taken to render the largest visible content on the page.
  Obtained value: 641ms

Speed Visualization:

The page demonstrates excellent loading performance with a TTFB of 246ms, First Contentful Paint at 395ms, and Time to Interactive at 590ms, though the Fully Loaded Time of 6.2s suggests potential optimizations for non-critical resource loading.Performance testing results (