



MODULE 5: DEPLOYMENT

LESSON 12: Preparing for Production

Learning Objective

By the end of this lesson, you will prepare your Next.js application for production deployment.

12.1 Environment Variables

Never hardcode sensitive data. Use environment variables.

Step 1: Create `.env.local` in your project root

```
env
```

```
# PayHere Sandbox Credentials
```

```
NEXT_PUBLIC_PAYHERE_MERCHANT_ID=121XXX
```

```
PAYHERE_SECRET=your-secret-key-here
```

```
# For Live (uncomment when ready)
```

```
# NEXT_PUBLIC_PAYHERE_MERCHANT_ID_LIVE=122XXX
```

```
# PAYHERE_SECRET_LIVE=your-live-secret
```

Step 2: Update checkout page to use env vars

```
javascript
```

```
1. // In app/checkout/page.js
```

```
2. const PAYHERE_MERCHANT_ID = process.env.NEXT_PUBLIC_PAYHERE_MERCHANT_ID;
```

Important:

- Variables with `NEXT_PUBLIC_` prefix are exposed to browser
 - Secret keys without prefix are only available on server
 - Never commit `.env.local` to git (add to `.gitignore`)
-

12.2 Building for Production

Step 1: Test build locally

```
bash
```

```
npm run build
```

This creates an optimized production build. Fix any errors that appear.

Step 2: Test production build locally

```
bash
```

```
npm run start
```

Visit <http://localhost:3000> to verify everything works.

12.3 Performance Optimization Checklist

✓ Images:

- Use Next.js Image component
- Provide width and height
- Use appropriate formats (WebP)
- Lazy load below-fold images

✓ Fonts:

- Use next/font for optimized fonts
- Avoid custom fonts when possible

✓ JavaScript:

- Code splitting happens automatically
- Use dynamic imports for heavy components
- Remove console.logs

✓ CSS:

- Purge unused CSS
 - Use CSS modules for scoping
-

12.4 Adding Meta Tags for SEO

Update app/layout.js:

javascript

```
1. export const metadata = {
2.   title: {
3.     default: 'CeylonMart - Authentic Sri Lankan Products',
4.     template: '%s | CeylonMart'
5.   },
6.   description: 'Discover authentic Sri Lankan products including Ceylon tea, handloom sarongs, spices, and traditional crafts. Fast delivery across Sri Lanka.',
7.   keywords: ['Sri Lankan products', 'Ceylon tea', 'handloom', 'batik', 'Sri Lanka shopping'],
8.   authors: [{ name: 'CeylonMart' }],
9.   openGraph: {
10.    title: 'CeylonMart - Authentic Sri Lankan Products',
11.    description: 'Shop authentic Sri Lankan products online',
12.    url: 'https://ceylonmart.com',
13.    siteName: 'CeylonMart',
14.    images: [
15.      {
16.        url: '/og-image.jpg',
17.        width: 1200,
18.        height: 630,
19.      },
20.    ],
21.    locale: 'en_US',
22.    type: 'website',
23.  },
24.   robots: {
25.     index: true,
26.     follow: true,
27.   },
28. };
```

Lesson 12 Summary

- Environment variables keep secrets safe
- Always test production build locally
- Optimize images and code for performance
- Meta tags improve SEO
- Never commit secrets to git