

Lab 2

Deploying a Web Application on a Hosting Service

Objective:

The primary goal of this lab is to learn how to deploy a web application on a hosting service, ensuring that it is accessible not only within a local network but also from other networks.

Lab Description:

You must take your existing web application and deploy it to a remote server or cloud-based hosting platform. The application should be fully functional and accessible via a public URL.

Requirements:

1. **Choosing a Hosting Provider:**
 - Select a hosting service for deployment (e.g., **Vercel, Netlify, Heroku, Render, DigitalOcean, AWS, or Firebase**).
 - Justify the choice of the hosting provider in a short explanation.
2. **Preparing the Web Application for Deployment:**
 - Ensure that all dependencies are properly configured.
 - Remove any development-related configurations.
 - Set up `.env` files for environment variables, including database URLs and API keys.
3. **Database Configuration:**
 - If the application requires a database, ensure that it is hosted on a remote database provider (e.g., **MongoDB Atlas, Supabase, PlanetScale, or Firebase Firestore**).
 - Update the application to connect to the remote database instead of a local database.
4. **Setting Up Deployment Configuration:**
 - Ensure that the application listens on the correct **port** (`process.env.PORT`).
 - Configure **CORS** settings to allow access from different networks.
5. **Deploying the Application:**
 - Use GitHub, GitLab, or Bitbucket for **version control**.
 - Push the project to a repository.
 - Deploy the application using the chosen hosting provider.
6. **Testing the Deployment:**
 - Verify that the application is publicly accessible via a provided **URL**.
 - Test the main features of the application to ensure it functions as expected.
 - Check for issues such as CORS errors, missing dependencies, and broken links.
7. **Final Deliverables:**
 - **Project repository link (GitHub/GitLab).**
 - **Deployed application link.**
 - **Documentation** describing:
 - Steps taken for deployment.
 - Issues encountered and how they were resolved.
 - Future improvements.