**Lab 3**

**Title: Introduction to Deployment Tools**

**Objective:**

To understand the basics of application deployment and gain hands-on experience using common deployment tools such as **Netlify**, **Vercel**, and **GitHub Pages**.
Students will:
- Deploy static or dynamic web apps
- Use version control integration for CI/CD
- Understand the deployment process and logs

**Theory:**

Deployment is the process of making a web application available online so users can access it through a browser. Common modern deployment tools simplify this by integrating with Git repositories for CI/CD (Continuous Integration / Continuous Deployment).

Popular deployment platforms include:

- Netlify: Ideal for static websites. Offers drag-and-drop deployment, Git integration, and serverless functions.

- Vercel: Optimized for frontend frameworks like React and Next.js. Automatically builds and deploys from Git.

- GitHub Pages: Free hosting directly from your GitHub repository, suitable for static content.

- Render, Heroku (legacy): Support for backend deployments, databases, and full-stack apps.

**Procedure :**

Deploy to Vercel

- Vercel:
  - Go to **vercel.com**
  - Click **"Add New Project"**
  - Select the GitHub repository
  - Click **"Deploy"**

**Conclusion:**

In this lab, we learned how to deploy a simple website using Vercel. Deployment platforms simplify the process by integrating with Git repositories for automatic builds and continuous delivery. Understanding these tools is essential for launching real-world web applications.