**What is Jenkins?**

**Jenkins** is an **open-source automation tool** used to **build, test, and deploy software** automatically. It helps developers deliver software faster and more reliably.

Think of it as a **robot assistant** that runs tasks for you whenever something changes in your code.

**Key Concepts**

1. **CI/CD Tool**:
   * **CI (Continuous Integration)** → Automatically combines code from multiple developers and tests it.
   * **CD (Continuous Deployment/Delivery)** → Automatically deploys code to servers after testing.
2. **Automation**:
   * Instead of manually compiling code or deploying apps, Jenkins does it automatically.
3. **Plugins**:
   * Jenkins has thousands of plugins to integrate with tools like Git, Docker, Kubernetes, Slack, etc.
4. **Jobs/Pipelines**:
   * A **Job** or **Pipeline** is a set of instructions that Jenkins will run.
   * Example: “Pull code from Git → Build code → Run tests → Deploy to server.”

**Simple Example**

Imagine you are building a website:

1. You write some code.
2. You push it to **GitHub**.
3. Jenkins automatically:
   * Pulls your code from GitHub.
   * Compiles it.
   * Runs tests.
   * If everything is okay, deploys it to your server.

So you don’t have to do any of these steps manually every time.