# Setting Up Jenkins for Unit Tests

## Step 1: Install Jenkins

1. Download Jenkins:  
 - Visit https://www.jenkins.io/download/  
 - Install using package manager:  
 - Windows: Use the installer.  
 - macOS: `brew install jenkins-lts`  
 - Linux: `sudo apt install jenkins` or `sudo yum install jenkins`  
2. Start Jenkins:  
 - Run `jenkins` or use `systemctl start jenkins` on Linux.  
 - Open `http://localhost:8080` and follow the setup wizard.  
 - Install recommended plugins.

## Step 2: Create a Jenkins Job

1. Navigate to Jenkins Dashboard → New Item → Choose 'Freestyle Project'.  
2. Configure Source Code Management:  
 - Select Git and enter the repository URL.  
3. Set up Build Triggers:  
 - Enable 'Build when a change is pushed to GitHub' or set up polling.  
4. Configure Build Steps:  
 - If using Maven: `mvn test`  
 - If using Gradle: `gradle test`  
 - If using Python: `pytest` or `unittest`  
5. Save and Build the Job.

## Step 3: Configure Test Reporting

1. Install 'JUnit' Plugin from Jenkins Plugin Manager.  
2. In the Post-build Actions:  
 - Select 'Publish JUnit test result report'.  
 - Specify the results file: `target/surefire-reports/\*.xml` for Maven or `build/test-results/test/\*.xml` for Gradle.  
3. Save and rerun the job.  
4. View test reports under the 'Test Result' section.