

# Installation Guide for Spring Boot and Eclipse EE IDE

This step-by-step guide will walk you through installing and configuring the necessary tools to develop Spring Boot enterprise applications using Tomcat.

## 1. Install Java SDK

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Spring Boot requires Java SDK (JDK) version 17 or later.

### Step 1.1: Download Java SDK

- Visit the Oracle Java Downloads or OpenJDK.
- Download the Java SDK for your operating system (Windows, macOS, or Linux).

### Step 1.2: Install Java SDK

- Run the installer and follow the on-screen instructions.
- Note the installation directory (e.g., C:\Program Files\Java\jdk-17).

### Step 1.3: Configure JAVA\_HOME and PATH Environment Variables

- Set JAVA\_HOME:
  - Add a new System Variable:
    - Name: JAVA\_HOME
    - Value: Installation path (e.g., C:\Program Files\Java\jdk-17).
- Update PATH:
  - Add %JAVA\_HOME%\bin to the PATH.

### Step 1.4: Verify Installation

- Open a terminal or command prompt and run:

```
java -version
```

## 2. Install Maven

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Maven is required to manage project dependencies and the build lifecycle.

### Step 2.1: Download Maven

- Visit the [Maven Download Page](#).
- Download the Binary zip archive for your operating system.

### Step 2.2: Extract Maven

- Extract the downloaded archive to a location, e.g., C:\apache-maven-3.x.x.

### Step 2.3: Configure Maven Environment Variables

- Add MAVEN\_HOME and add %MAVEN\_HOME%\bin to PATH.

### Step 2.4: Verify Installation

- Open a terminal and run:

```
mvn -v
```

## 3. Install Spring Tool Suite (STS) or Eclipse EE IDE

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### Option A: Spring Tool Suite (STS)

- Download from the [Spring Tools website](#).
- Install and verify Spring Boot Starter Project.

## Option B: Eclipse EE IDE

- Download Eclipse IDE for Enterprise Java and Web Developers.
- Install Spring Tools Plugin from Eclipse Marketplace.

### 4. Set Up Tomcat for Deployment

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- Download Apache Tomcat from the Tomcat website.
- Configure Tomcat in Eclipse/STS under Window > Preferences > Server > Runtime Environments.

### 5. Create Your First Spring Boot Project

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- File > New > Spring Starter Project.
- Select dependencies like Web, Spring DevTools, and JSP (optional).

### 6. Verify the Setup

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- Java: `java -version`
- Maven: `mvn -v`
- STS/Eclipse: Launch and create a sample project.
- Tomcat: Deploy and run the application.

This setup ensures a smooth development environment for Spring Boot enterprise applications with Tomcat.