**JENKINS DOCUMENT**

**1. Installing Jenkins**

**Prerequisites**

* Ensure you have Java installed. Jenkins requires Java 8 or Java 11. You can check your Java version by running:

java -version

* If Java is not installed, download and install it from [Oracle's official website](https://www.oracle.com/java/technologies/javase-downloads.html).

**Download Jenkins**

1. Go to the Jenkins download page: https://www.jenkins.io/download/
2. Select the appropriate package for your operating system (Windows, macOS, or Linux).

**Install Jenkins**

**For Windows:**

1. Run the downloaded installer.
2. Follow the installation wizard.
3. By default, Jenkins will be installed to C:\Program Files (x86)\Jenkins.
4. Jenkins will start automatically after the installation completes.

**For macOS:**

1. Open Terminal.
2. Run the following command to install Jenkins via Homebrew:

brew install jenkins-lts

1. Start Jenkins:

brew services start jenkins-lts

**For Linux:**

1. Open Terminal.
2. Add the Jenkins repository key to your system:

wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -

1. Add the Jenkins repository to your system:

sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'

1. Update your package index:

sudo apt-get update

1. Install Jenkins:

sudo apt-get install jenkins

1. Start Jenkins:

sudo systemctl start jenkins

**2. Setting Up Jenkins**

1. Open a web browser and go to http://localhost:8080 (or the appropriate URL for your installation).
2. You will be prompted to unlock Jenkins using the initial admin password. You can find this password in the following location:
   * **Windows**: C:\Program Files (x86)\Jenkins\secrets\initialAdminPassword
   * **macOS**: /usr/local/var/jenkins/secrets/initialAdminPassword
   * **Linux**: /var/lib/jenkins/secrets/initialAdminPassword
3. Copy the password from the file and paste it into the Jenkins unlock screen.
4. Follow the setup wizard:
   * Install the suggested plugins.
   * Create your first admin user.
   * Configure the Jenkins URL.

**Creating Your First Jenkins Job**

**Step-by-Step Guide**

**Step 1: Open Jenkins Dashboard**

1. Open your web browser and navigate to the Jenkins URL. By default, this is usually http://localhost:8080.
2. Log in with your credentials if prompted.

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**Step 2: Create a New Item**

1. On the Jenkins dashboard, click on the New Item link in the left-hand menu.

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1. In the Enter an item name field, provide a name for your new project (e.g., MyFreestyleProject).
2. Select Freestyle project from the list of options.

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1. Click the OK button.

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**Step 3: Configure the General Settings**

1. You will be directed to the project configuration page.
2. Under the General tab, you can add a description for your project (optional). A screenshot of a computer

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3. Click “Advanced” Button, choose ‘Use custom workspace’ option and enter Directory. A screenshot of a computer

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**Step 4: Configure Source Code Management (SCM)**

1. Scroll down to the Source Code Management section.
2. Select ‘None’ option

**Step 5: Add Build Steps**

1. Scroll down to the Build section.
2. Click the Add build step button.
3. Select the appropriate build step for your project. Common options include:
   * Execute Shell (for Linux/Mac) or Execute Windows batch command (for Windows): Add shell or batch commands to be executed.
   * Invoke top-level Maven targets: If you are using Maven, enter the Maven goals to execute (e.g., clean install).
   * Invoke Gradle script: If you are using Gradle, configure the Gradle build step. A screenshot of a computer

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**Example: Execute Windows Batch Command**

Run.bat

**Step 6: Save the Configuration**

1. Scroll to the bottom of the configuration page.
2. Click the Save button to save your project configuration.

**Step 7: Build the Project**

1. After saving, you will be redirected to the project’s main page.
2. Click the Build Now link in the left-hand menu to start the build.
3. You can monitor the build progress by clicking on the build number in the Build History section. A screenshot of a computer

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**Additional Tips**

* **Viewing Build Logs**: Click on a build number in the Build History to view the build logs and details.
* **Configuring Credentials**: Manage your credentials securely from the Manage Jenkins -> Manage Credentials page.
* **Installing Plugins**: Enhance Jenkins functionality by installing plugins from the Manage Jenkins -> Manage Plugins page.