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Experiment No. 1.4

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Semester: III
Subject Name: DevOps Process Automation Lab
Subject Code: 22CAP-745

1. Aim/Overview of the practical:

1. Install and configure Jenkins and Java 17.
2. Creating admin Jenkins user and touring the Jenkins dashboard.

2. Code for experiment/practical:

a. Install and configure Jenkins and Java 17.

Below are the steps of JDK installation (JAVA 17), if not installed initially:

STEP 1: Navigate to the website. Scroll to Java SE11 (LTS) and click on JDK Download.
STEP 2: Scroll to Java SE Development kit 11.0.10 and click on Windows x64 Installer.
STEP 3: Accept the Licence Agreement and download it.
STEP 4: Once downloaded, run the .exe to install JDK by double-clicking it. It might ask for permission before installation. Click on Yes to allow installer to execute. The Welcome Screen comes first.

STEP 6: Choose the installation path for jdk and click Ok. We can also choose the default path as well.
STEP7: Click on NEXT to start installation. Once it is completed it shows the success message as shown in the image below.

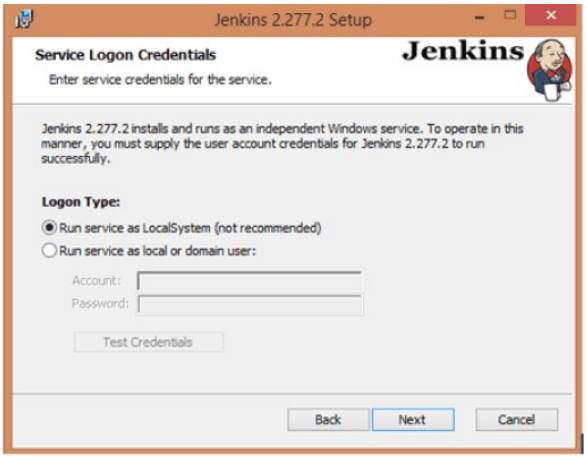
It is recommended to restart your system, further click on System Properties and choose Advance System Settings.

STEP 8: Choose the Environment Variable and set the User variable by assigning Variable name as JAVA_HOME and variable value as the path where Java is installed:
Click on Ok and then Apply.

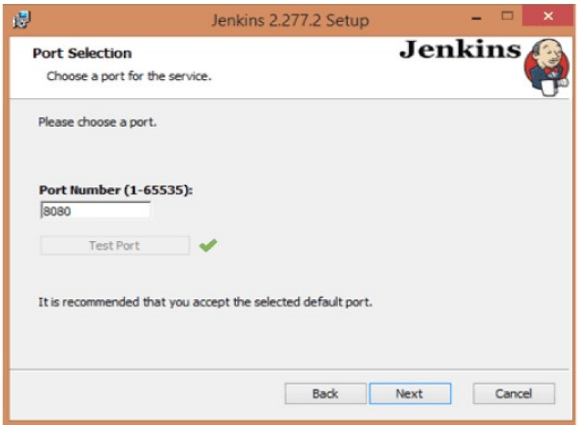
```
C:\Users\Pinda>java --version
java 19.0.2 2023-01-17
Java(TM) SE Runtime Environment (build 19.0.2+7-44)
Java HotSpot(TM) 64-Bit Server VM (build 19.0.2+7-44, mixed mode, sharing)
```

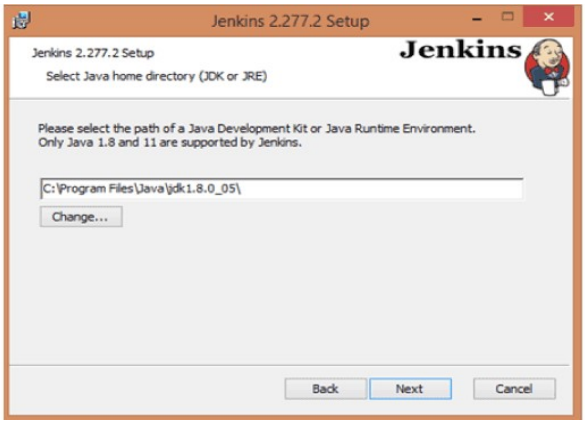
Jenkins Installation:

STEP 1: Navigate to the website and under Jenkins LTS system, click on Windows for the latest Jenkins package (currently it is 2.277.1)
STEP 2: Once the jenkins.msi is downloaded, open it and proceed.
STEP 3: Choose the Jenkins path.
STEP4: For Service logon credentials, choose Logon type as "Run Service as Local-System".

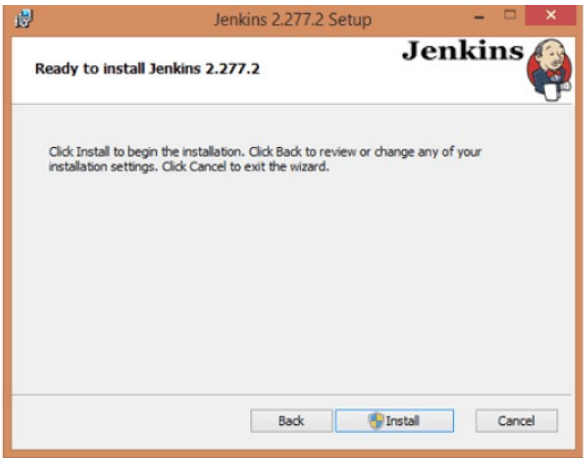


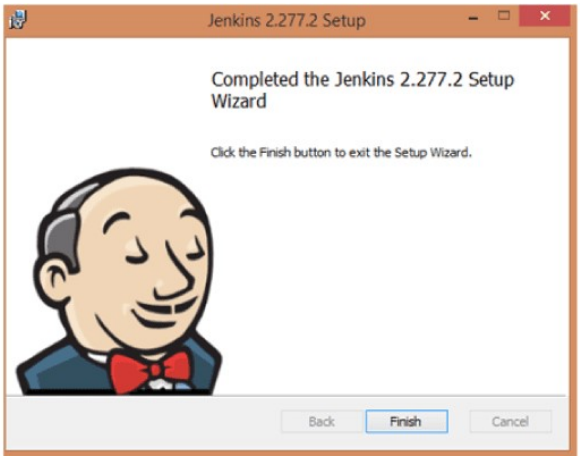
STEP 5: Choose the port available on the system and test it (recommended is 8080).
STEP6: Choose the JDK path and click Next.





STEP 7: Click the "Install" button to start the installation process.
STEP8: Please wait till the whole installation is completed.
STEP 9: Click on "Finish" after the installation is completed.
STEP8: Please wait till the whole installation is completed.

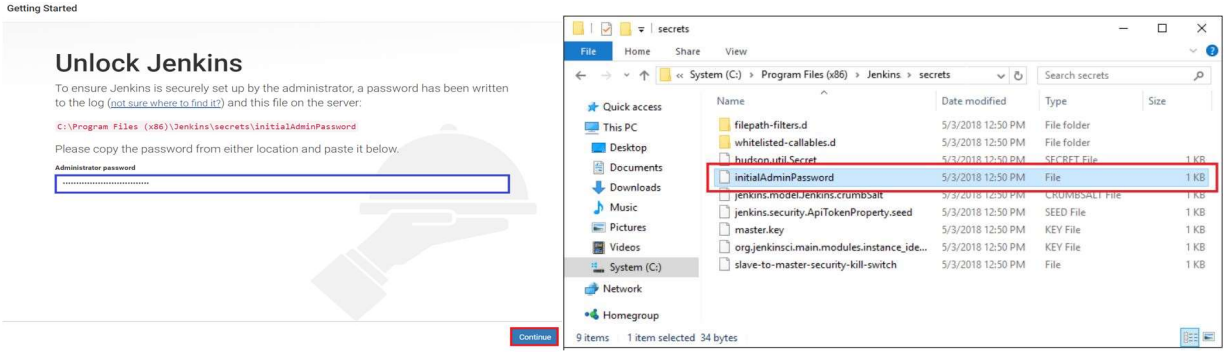




Jenkins Installed Successfully

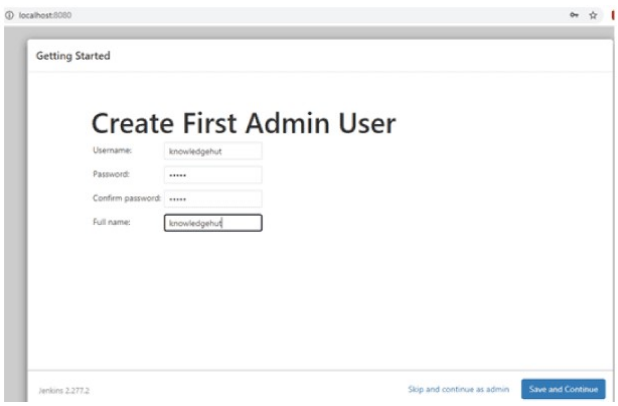
b. Creating admin Jenkins user and touring the Jenkins dashboard.

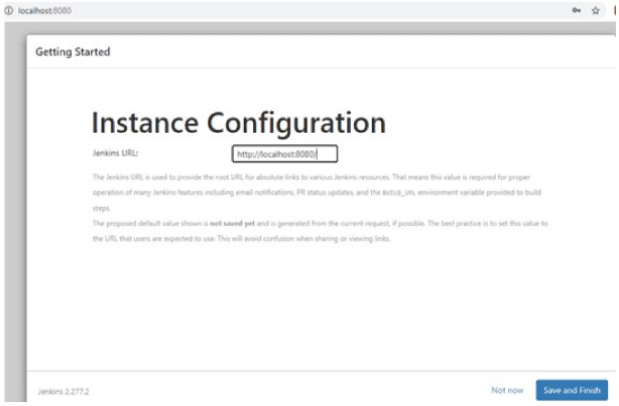
STEP 1: After installation You will be redirected to a local Jenkins page by default. If page is not loaded by default, paste the URL http://localhost:8080 , with the chosen port in the browser.
STEP 2: For Unlocking Jenkins, copy the password from the file at C:\Windows\System32\config\systemprofile\AppData\Local\Jenkins\.jenkins\secrets (shown on screen) and paste it in the Administrator password field. Click on Continue.



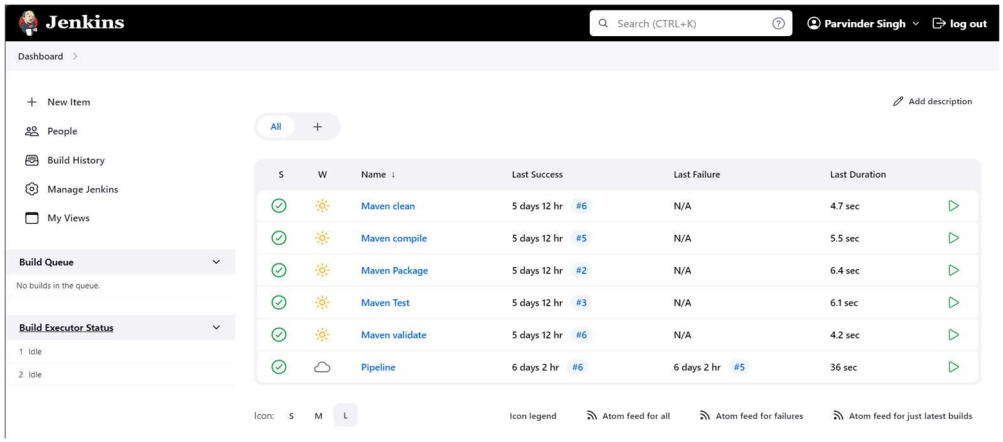
STEP 3: We can either choose the Jenkins suggested plugins or manually select plugins to install. It's preferable to choose "install suggested plugins". If not, we can install this later as well.
STEP 4: Choose "Install suggested plugins" and let the plugins install completely.
STEP 5: If you choose the Option "Select Plugins to Install", then select the plugins you want to install.
STEP 6: Create an admin user account by filling up the details.

STEP 7: Click Save and Finish to complete the Jenkins set up.





STEP 8: Click "Start using Jenkins" option.
STEP 9: Finally, the default Jenkins page will be shown as below.



The Jenkins dashboard is the main page of the Jenkins web interface. It provides a quick overview of your Jenkins instance, including the status of your builds and jobs.

Here is a tour of the Jenkins dashboard:

- Navigation bar: The navigation bar at the top of the page provides links to the main sections of Jenkins, such as the dashboard, jobs, and builds.
- Breadcrumbs: The breadcrumbs below the navigation bar show your current location in the Jenkins hierarchy.
- Sidebar: The sidebar on the left-hand side of the page provides links to your jobs, views, and other resources.
- Build queue: The build queue shows the builds that are currently waiting to be executed.
- Build executor status: The build executor status shows the status of the build executors on your Jenkins instance.
- View: The view section shows the contents of the currently selected view. Views are a way to organize and filter your jobs.
- Jobs: The jobs section shows a list of all of the jobs on your Jenkins instance.
- Builds: The builds section shows a list of all of the builds that have been executed recently.