

Lab Exercise 20

Creating a Pipeline Script

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Batch 2 DevOps

Objective: To create a pipeline script for automating build processes in Jenkins

Tools required: Jenkins

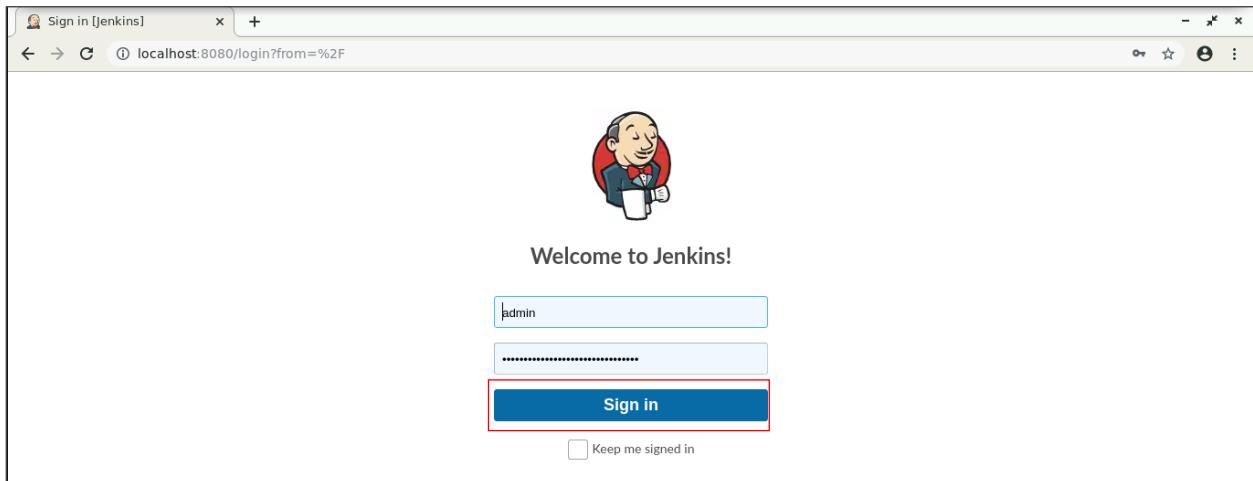
Prerequisites: None

Steps to be followed:

1. Log in to the Jenkins CI tool and create a pipeline script

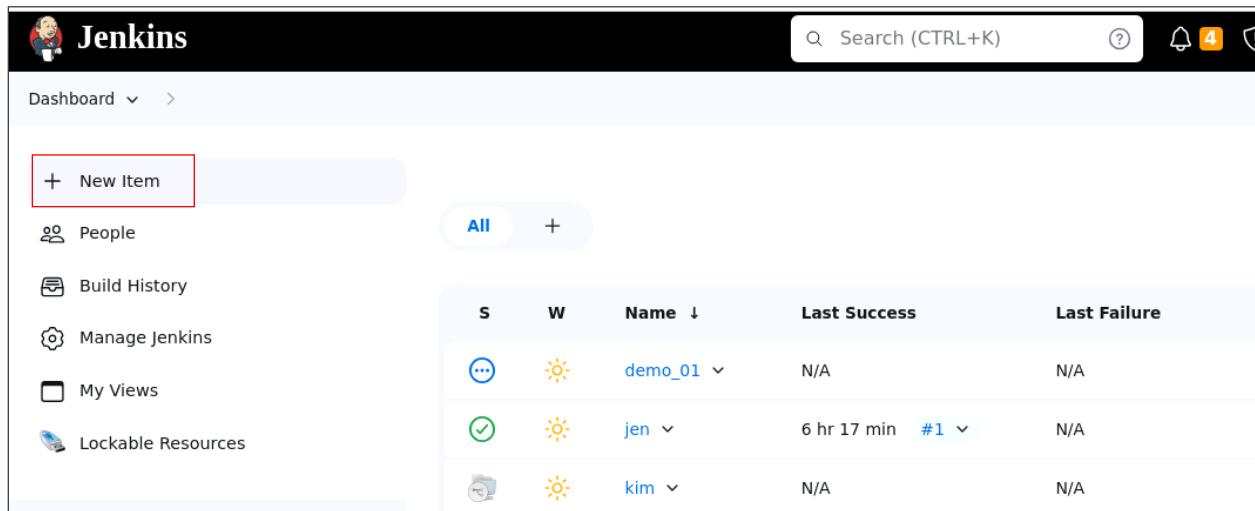
Step 1: Log in to the Jenkins CI tool and create a pipeline script

- 1.1 Open the browser, go to the Jenkins **Dashboard** by typing **localhost:8080** in your browser, provide the credentials, and click the **Sign in** button



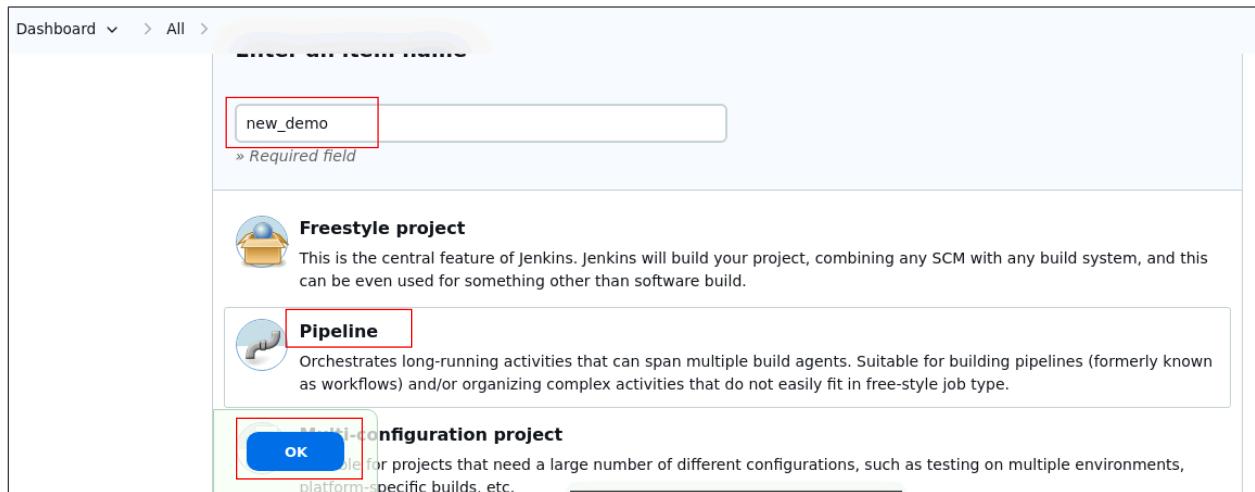
Note: The credentials for accessing Jenkins in the lab are Username: **admin** and Password: **admin**.

1.2 Click on the **New Item** option as shown in the screenshot below:



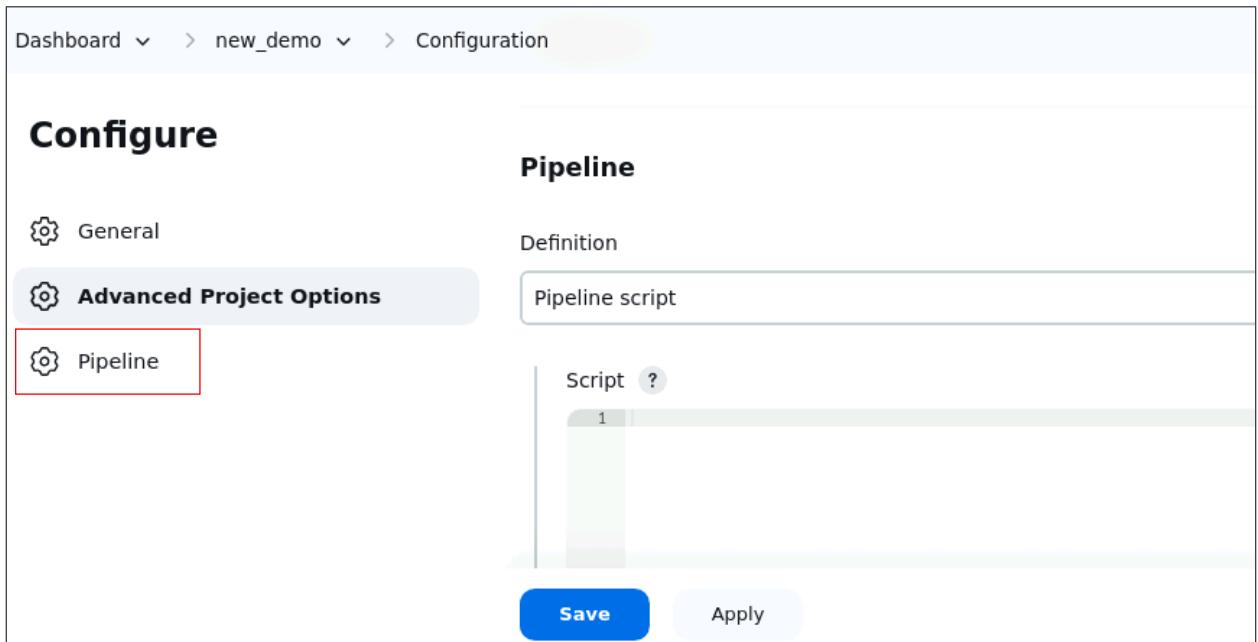
The screenshot shows the Jenkins dashboard. On the left, there's a sidebar with links like 'Dashboard', 'People', 'Build History', 'Manage Jenkins', 'My Views', and 'Lockable Resources'. A red box highlights the '+ New Item' button. On the right, there's a table showing project details: demo_01 (Last Success: N/A), jen (Last Success: 6 hr 17 min #1), and kim (Last Success: N/A). At the top right, there's a search bar, a help icon, a notifications icon with a '4' notification, and a shield icon.

1.3 Enter a desired name for the project, select **Pipeline**, and then click on **OK** as shown in the screenshot below:



The screenshot shows a 'Create New Item' dialog. The 'Name' field contains 'new_demo' (highlighted with a red box). Below it, there are three project types: 'Freestyle project', 'Pipeline' (highlighted with a red box), and 'Multi-configuration project'. The 'Pipeline' section has a detailed description. At the bottom, a blue 'OK' button is highlighted with a red box.

1.4 Click on **Pipeline** as shown in the screenshot below:



1.5 Enter the following pipeline script in the script editor and click on **Save** as shown in the screenshot below:

```
pipeline {
    agent any
    stages {
        stage("hello") {
            steps{
                echo"welcome to Jenkins pipeline"
            }
        }
    }
}
```

Dashboard > new_demo > Configuration

Configure

Pipeline script

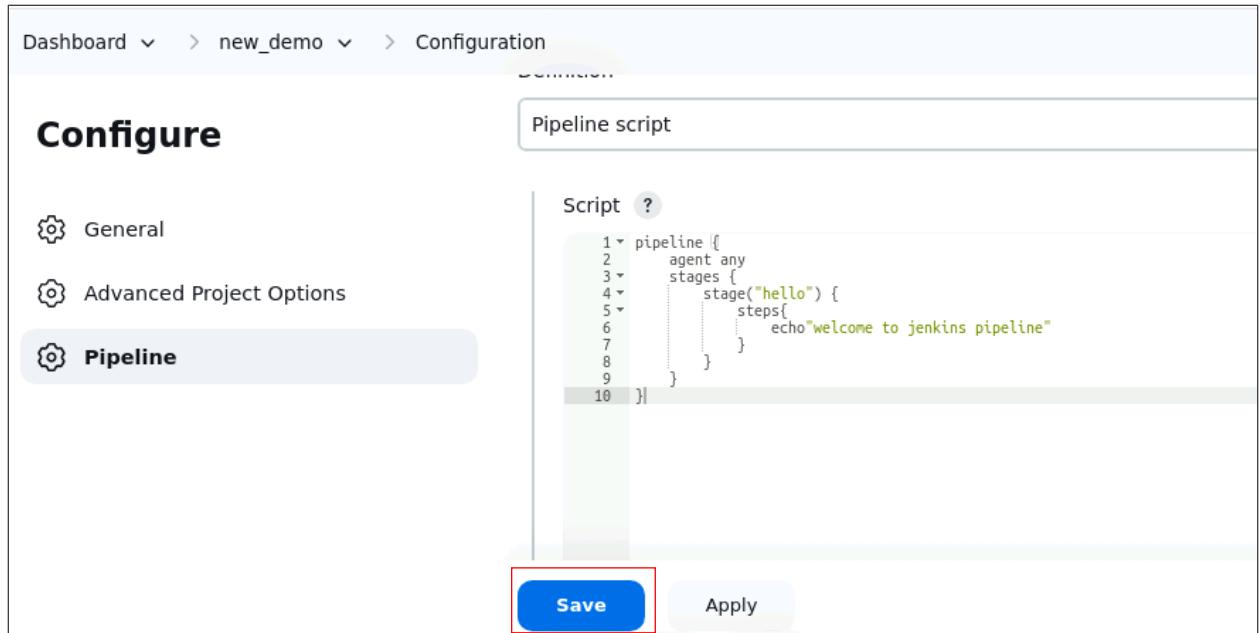
General

Advanced Project Options

Pipeline

```
1 pipeline {  
2   agent any  
3   stages {  
4     stage("hello") {  
5       steps {  
6         echo "welcome to jenkins pipeline"  
7       }  
8     }  
9   }  
10 }
```

Save **Apply**



1.6 Click on **Build Now** to run the pipeline script as shown in the screenshot below:

Jenkins / FirstPipeline

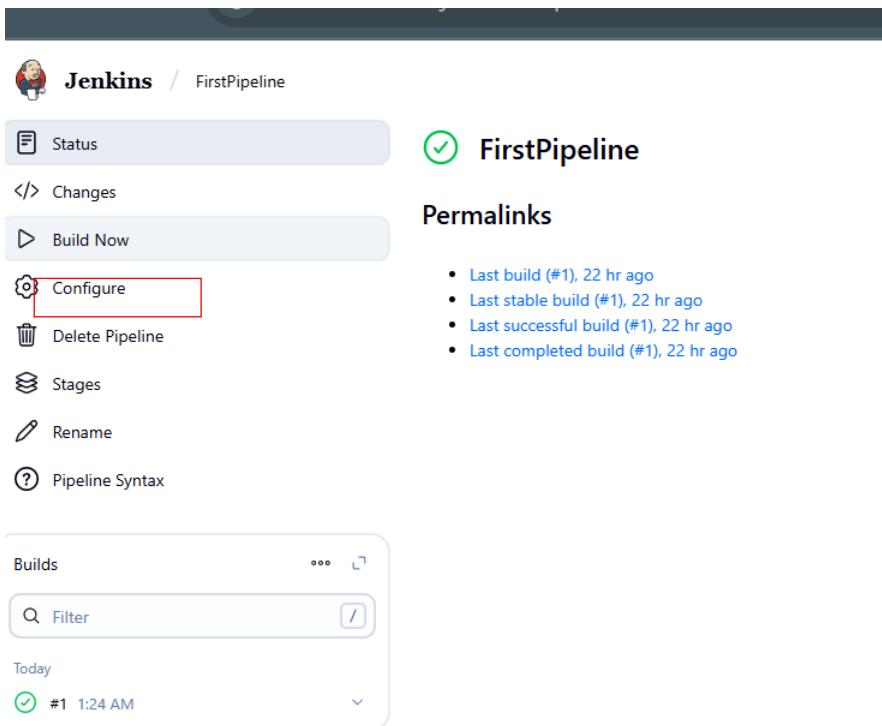
Status Changes Build Now **Configure** Delete Pipeline Stages Rename Pipeline Syntax

FirstPipeline

Permalinks

- Last build (#1), 22 hr ago
- Last stable build (#1), 22 hr ago
- Last successful build (#1), 22 hr ago
- Last completed build (#1), 22 hr ago

Builds **Filter** Today #1 1:24 AM



1.7 Hover over the milliseconds number next to the build stage name as shown in the screenshot below:

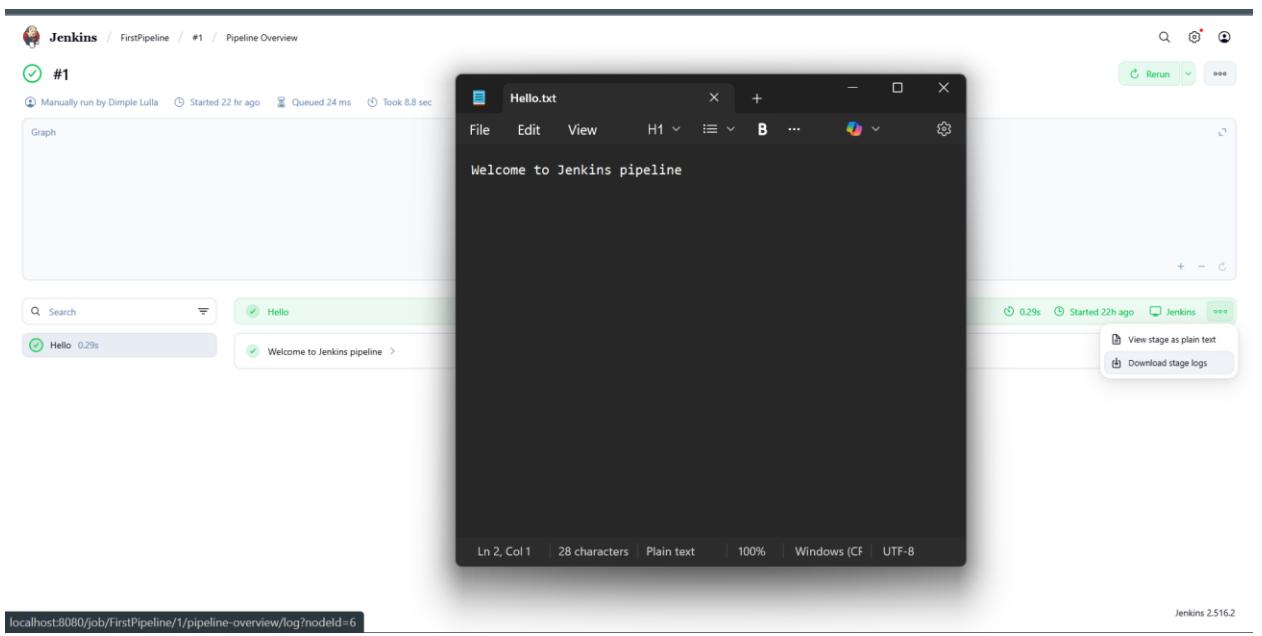
The screenshot shows the Jenkins Pipeline Overview for a job named 'FirstPipeline' run #1. At the top, there's a navigation bar with Jenkins logo, job name, run number, and Pipeline Overview link. Below it is a green button labeled '#1'. To the right are search, settings, and other job controls. Underneath is a timeline with stages: 'Manually run by Dimple Lulla', 'Started 22 hr ago', 'Queued 24 ms', and 'Took 8.8 sec'. A 'Graph' section displays a simple pipeline flow from 'Start' to 'Hello' (which has a checkmark) to 'End'. Below the graph is a search bar and a table of stages. The first stage, 'Hello', is highlighted with a grey background and shows a green checkmark icon, the stage name 'Hello', a duration of '0.29s', and a timestamp 'Started 22h ago'. The second stage, 'Welcome to Jenkins pipeline', shows a duration of '28ms'. At the bottom left is the URL 'localhost:8080' and at the bottom right is the Jenkins version 'Jenkins 2.516.2'.

Note: Ensure that you hover the cursor over the milliseconds number without clicking on it

1.8 Click on **Logs** as shown in the screenshot below:



1.9 Check for the message in the top-left corner to confirm the successful execution of the pipeline stage as shown in the screenshot below:



By following these steps, you have successfully created a pipeline script for automating build processes in Jenkins.