

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

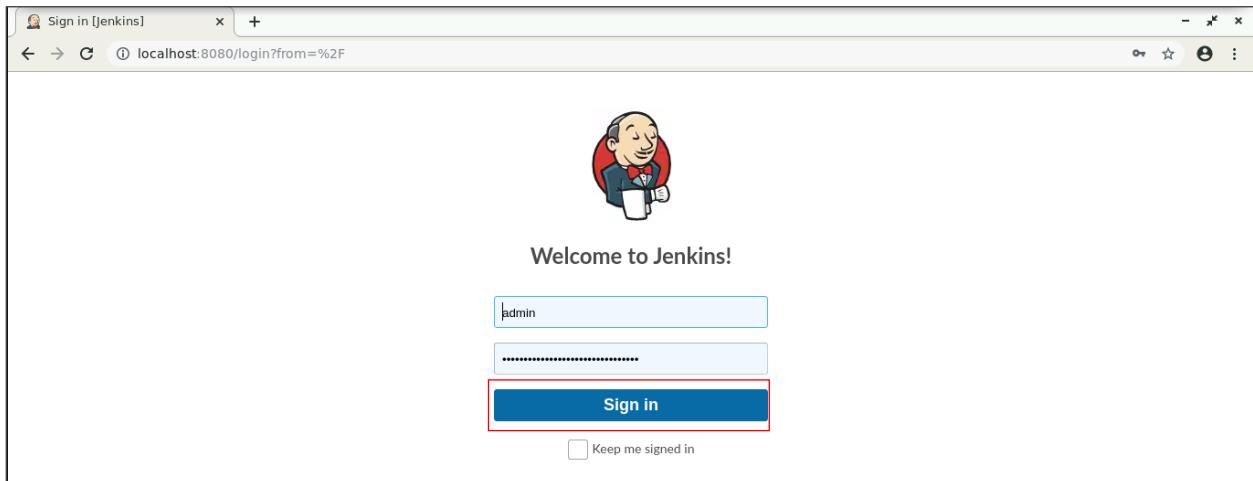
Prerequisites: None

Steps to be followed:

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

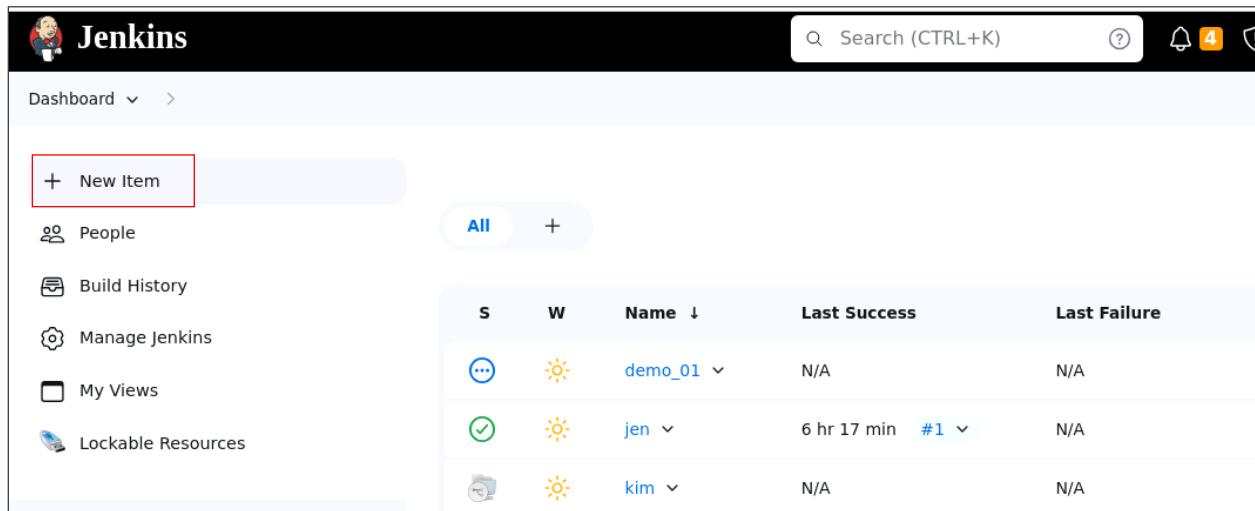
Step 1: Log in to the Jenkins CI tool and create a pipeline script

- 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



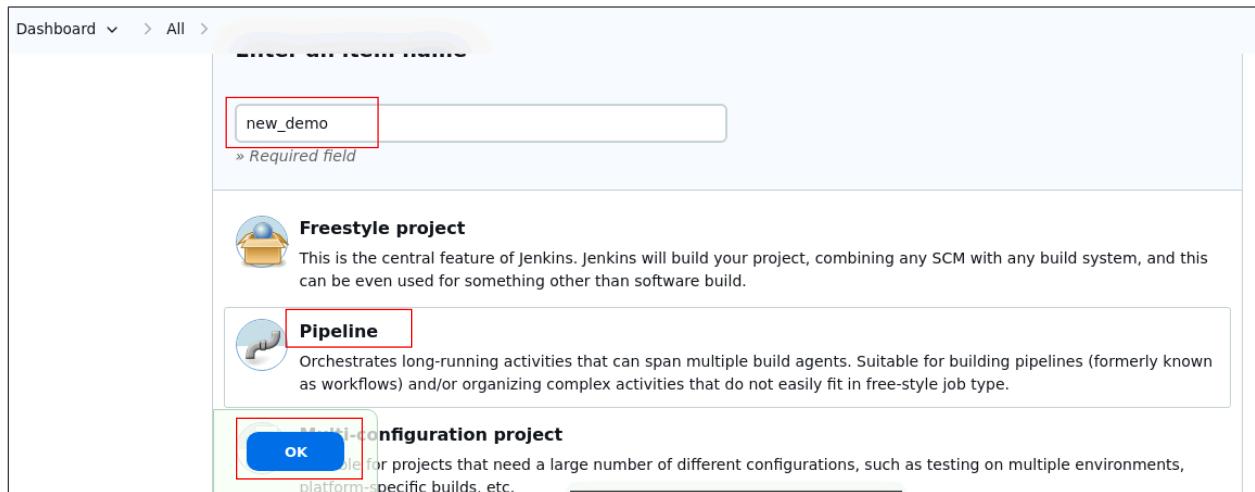
Note: The credentials for accessing Jenkins in the lab are Username: **admin** and Password: **admin**.

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



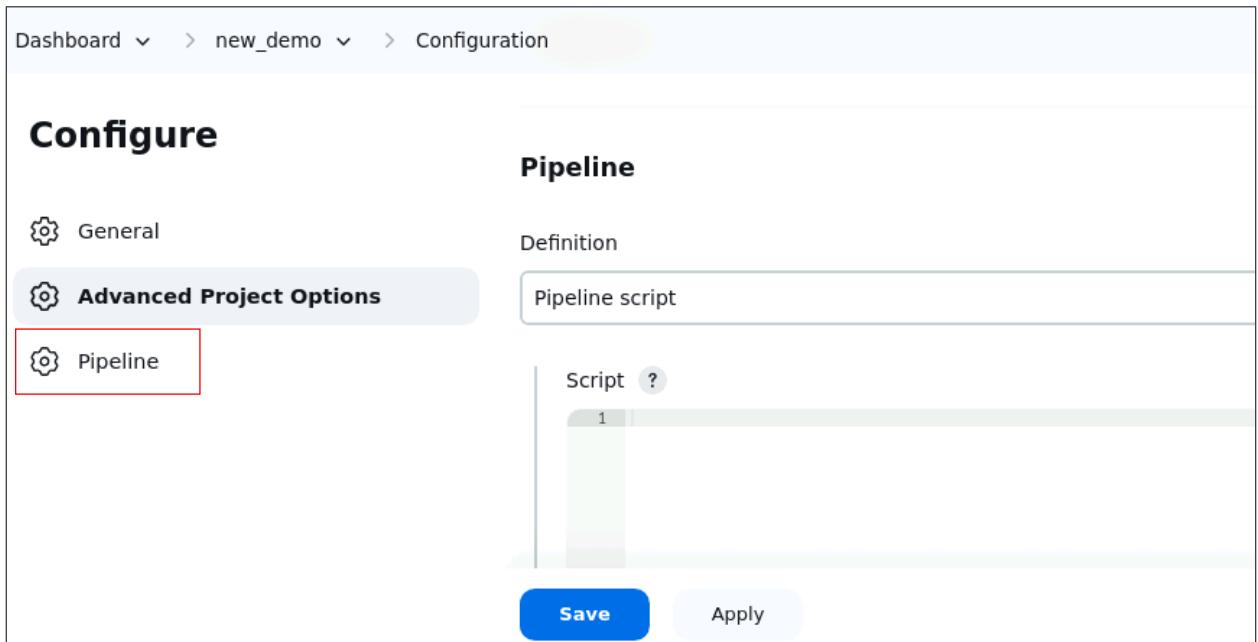
The screenshot shows the Jenkins dashboard. On the left, there's a sidebar with links like 'Dashboard', 'People', 'Build History', 'Manage Jenkins', 'My Views', and 'Lockable Resources'. A red box highlights the '+ New Item' button. On the right, there's a table showing project details: Name (demo_01, jen, kim), Last Success (N/A, 6 hr 17 min #1, N/A), and Last Failure (N/A, N/A, N/A). The table has columns for S, W, Name, Last Success, and Last Failure.

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. It has a text input field with 'new_demo' typed in, which is highlighted with a red box. Below it, there are three options: 'Freestyle project', 'Pipeline', and 'Multi-configuration project'. The 'Pipeline' option is selected and highlighted with a red box. At the bottom, there's a blue 'OK' button, which is also 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

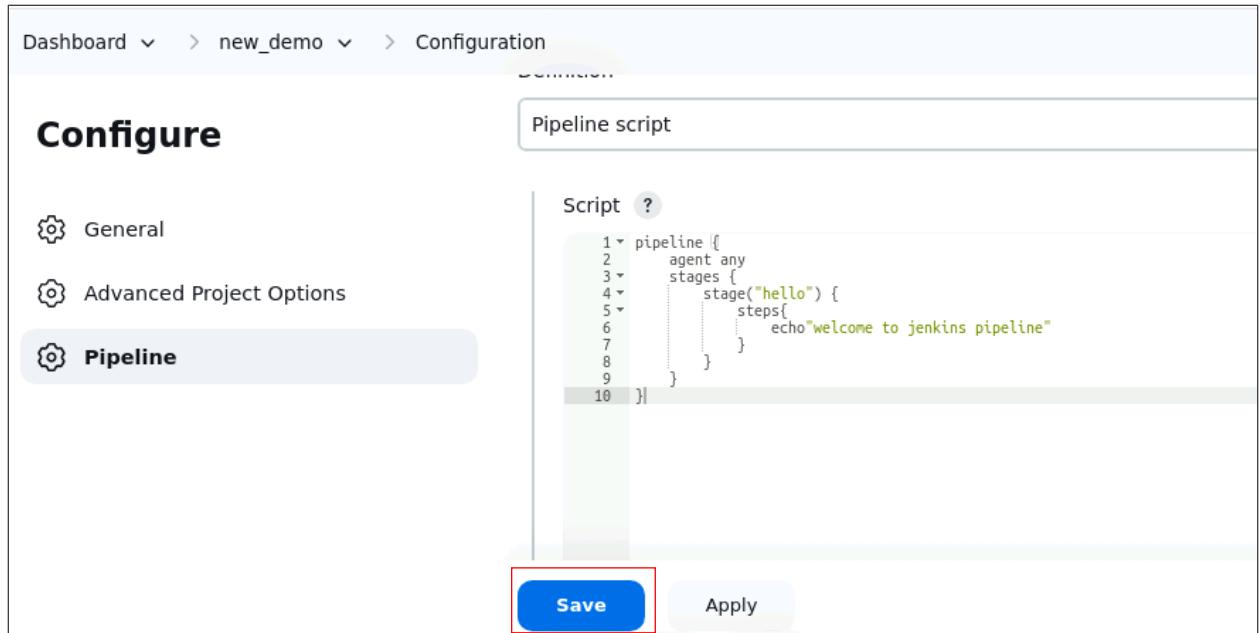
General

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

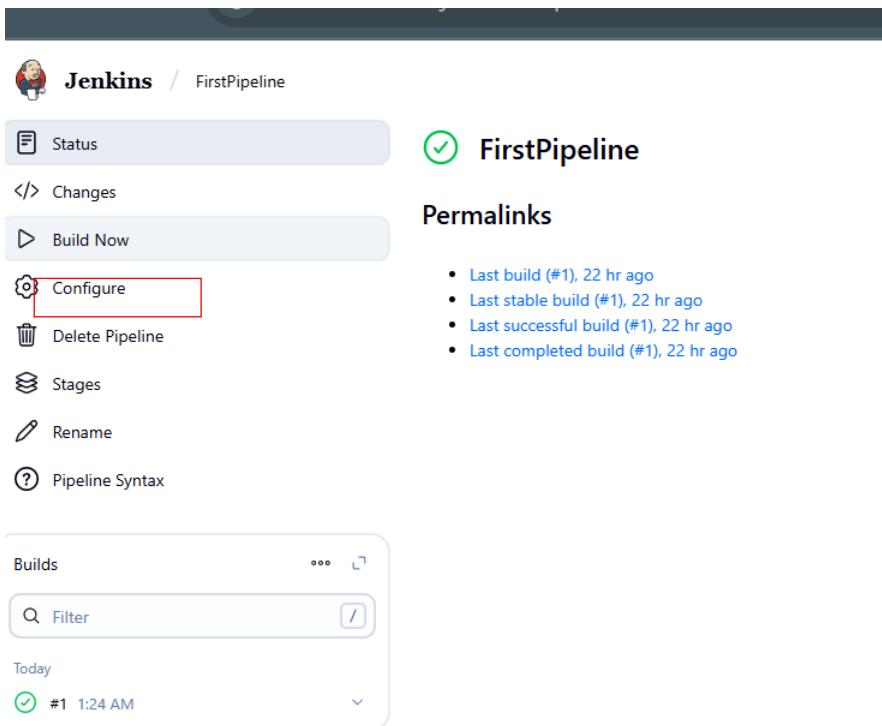
Status Changes Build Now **Configure** Delete Pipeline Stages Rename Pipeline Syntax

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:

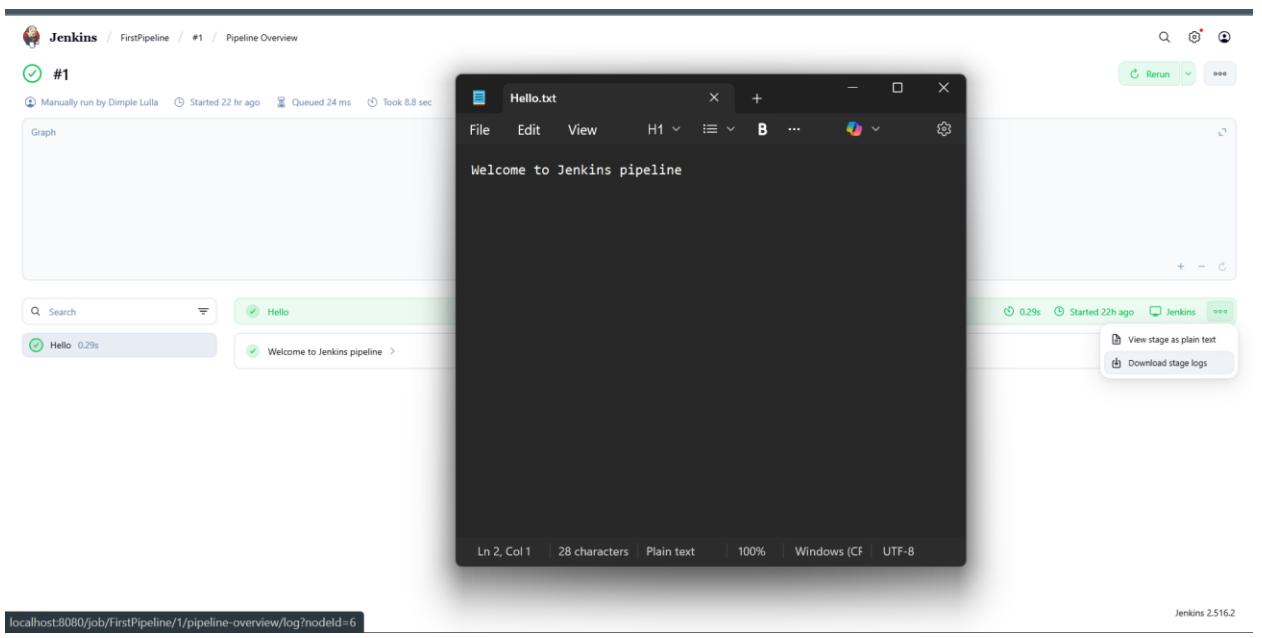
The screenshot shows the Jenkins Pipeline Overview for a job named 'FirstPipeline' run #1. At the top, there's a navigation bar with Jenkins logo, job name, run number, and Pipeline Overview link. Below it is a green button labeled '#1'. To the right are search, settings, and other job controls. Underneath, status information is displayed: 'Manually run by Dimple Lulla', 'Started 22 hr ago', 'Queued 24 ms', and 'Took 8.8 sec'. A 'Graph' section shows 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', its duration '0.29s', when it started 'Started 22h ago', the executor 'Jenkins', and three dots for more options. The second stage, 'Welcome to Jenkins pipeline', is shown with a duration of '28ms'. The bottom of the screenshot shows the browser address bar with 'localhost:8080' and 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.