Freestyle and Pipeline in Jenkins

Setting Up Freestyle Jobs

1. After successfully setting up Jenkins, navigate to the dashboard.

2. Click on New Item.

3. Enter the item name as F1.

4. Select Freestyle Project.

5. Click OK and continue.

6. Under the Build section:

   - Click on Build Steps.

   - Select Execute Shell.

   - Enter the command: echo 'hello1'.

   - Click Save.

Create Another Freestyle Job (F2)

1. Go to the dashboard.

2. Click on New Item.

3. Enter the item name F2.

4. Select Freestyle Project.

5. Click OK and continue.

6. Under the Build section:

   - Click on Build Steps.

   - Select Execute Shell.

   - Enter the command: sleep 60.

7. Click Save.

Create Another Freestyle Job (F3)

1. Go to the dashboard.

2. Click on New Item.

3. Enter the item name F3.

4. Select Freestyle Project.

5. Click OK and continue.

6. Under the Build section:

   - Click on Build Steps.

   - Select Execute Shell.

   - Enter the command: echo 'hello2'.

7. Click Save.

Note: We have now created three freestyle jobs.

Linking the Three Freestyle Projects Together

1. Go to the dashboard.

2. Click on F2.

3. Click on Configure in the navigation bar.

4. Under the General tab:

   - Scroll down to the Build Triggers section.

   - Select Build after other projects are built.

   - In Projects to watch, enter F1.

   - Click Save.

5. Go to the dashboard.

6. Click on F3.

7. Click on Configure in the navigation bar.

8. Under the General tab:

   o Scroll down to the Build Triggers section.

   o Select Build after other projects are built.

   o In Projects to watch, enter F2.

   o Click Save.

9. Now, go to the dashboard and click on F1.

10. You will see that F1 is linked to F2, and F2 is linked to F3 in a downstream sequence.

11. Open F1 and click Build Now.

12. Check the Console Output in the build history.

13. You will see that a new build for F2 has been triggered.

14. Click on F2 and check its Console Output in the build history.

15. You will see that a new build for F3 has been triggered.

16. Click on F3 and check its Console Output in the build history.

Note: We successfully created a linked sequence where F1 triggers F2, and F2 triggers F3.

Setting Up a Pipeline Job

1. Go to the dashboard.

2. Click on New Item.

3. Enter the item name P1.

4. Select Pipeline.

5. Click OK.

6. Under the Pipeline section, enter the following pipeline script:

```
pipeline {

  agent any

  stages {

    stage('Hello1') {

      steps {

        sh 'echo hello1'

      }

    }


    stage('Sleep') {

      steps {

        sh 'sleep 60'

      }

    }


    stage('Hello2') {

      steps {

        sh 'echo hello2'

      }

    }
```

```
    }

}
```

7. Click Save.

8. Click Build Now.

9. Under Build History, check the Console Output.

10. You will see that the jobs are executed in the pipeline sequentially.

Checking the Difference Between Freestyle and Pipeline Jobs

1. Go to the dashboard.

2. Click on the dropdown next to F1.

3. Click Build Now.

4. Click on the dropdown next to P1.

5. Click Build Now.

6. Open the Console Output for both F1 and P1.

7. In P1, you will see the execution paused for sleep 60.

8. In F1, you will also see a pause for sleep 60.

Summary:

- Freestyle jobs require manual linking for sequential execution.

- Pipeline jobs can handle execution flow within a single script, making them more efficient for complex workflows.