

Multi-Branch Project

Project Overview

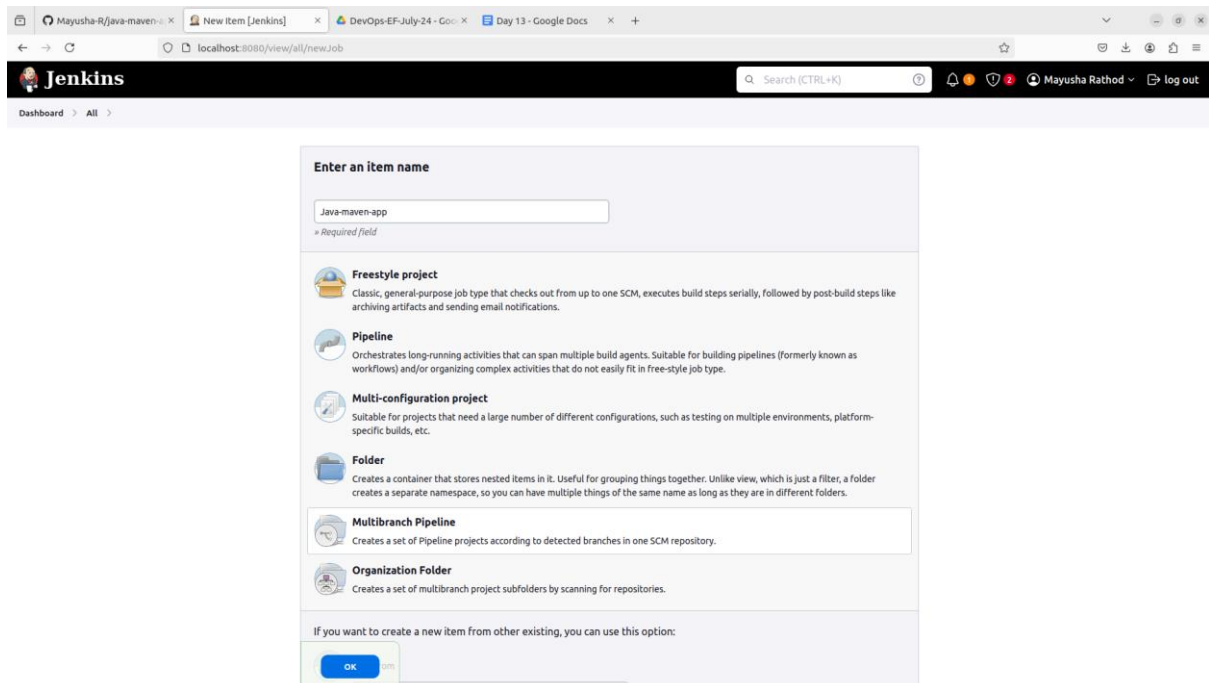
- Create a simple Java Maven project.
- Version-control the project using Git with multiple branches.
- Set up Jenkins multi-branch pipeline for automated build and deployment.
- Utilize Jenkins environment variables in the Jenkinsfile.

Project Objectives

- Version-control using Git.
- Jenkins multi-branch pipeline setup.
- Environment variable management using Jenkinsfile.

Project Deliverables

1. **Git Repository:**
 - Local Git repository initialized.
 - Branches: **development**, **staging**, and **production**.
 - Repository pushed to remote Git server (e.g., GitHub, GitLab, Bitbucket).
2. **Maven Project:**
 - Simple Java Maven project created (**HelloWorld** application).
 - **pom.xml** with dependencies and build configurations.
3. **Jenkins Setup:**
 - Multi-branch pipeline job configured in Jenkins.
 - Jenkinsfile defining build and deployment steps.
 - Environment variables managed using Jenkins environment variable settings.



Java-maven-app Config | x

localhost:8080/job/java-maven-app/configure

Dashboard > Java-maven-app > Configuration

Credentials ?

- none -

+ Add +

Credentials are recommended

Repository HTTP(S) URL

Repository HTTP(S) URL ?

https://github.com/Mayusha-R/java-maven-app.git

Validate

Repository Scan - Depreciated Visualization

Behaviors

Discover branches

Strategy ?

Exclude branches that are also filed as PRs

Discover pull requests from origin

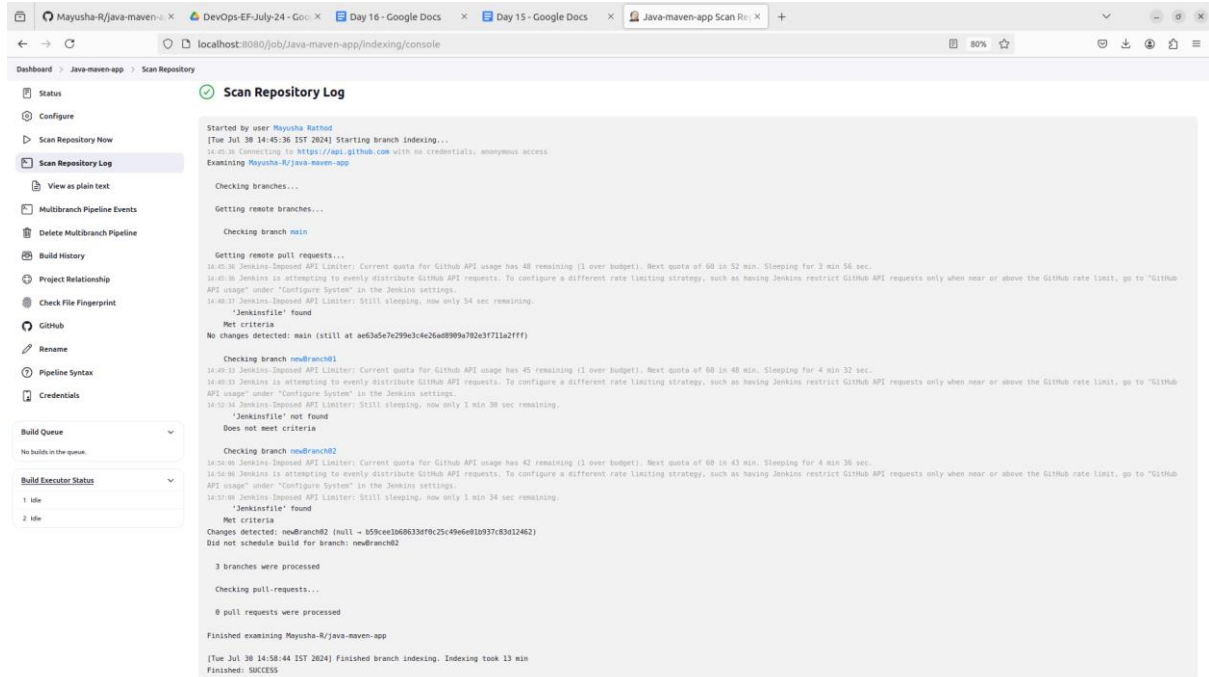
Strategy ?

The current pull request revision

Save

Apply

Jenkinsfile in main and newbranch02 not in newbranch01



The screenshot shows the Jenkins 'Scan Repository Log' for the 'Java-maven-app' job. The log details the process of indexing branches and pull requests. It shows that the 'main' branch and 'newbranch02' were successfully indexed, but 'newbranch01' was not found, likely because it does not contain a Jenkinsfile. The log also includes API usage warnings and a final success message.

```
Started by user Mayusha Rathod
[Tue Jul 30 14:45:36 IST 2024] Starting branch indexing...
14:45:39 Connecting to https://api.github.com with no credentials; anonymous access
Examining Mayusha-R/java-maven-app

Checking branches...
Getting remote branches...
Checking branch main
Getting remote pull requests...
14:45:36 Jenkins-Deposed API Limiter: Current quota for Github API usage has 48 remaining (1 over budget). Next quota of 60 in 52 min. Sleeping for 3 min 56 sec.
14:45:36 Jenkins is attempting to evenly distribute Github API requests. To configure a different rate limiting strategy, such as having Jenkins restrict Github API requests only when near or above the Github rate limit, go to "Github API usage" under "Configure System" in the Jenkins settings.
14:45:37 Jenkins-Deposed API Limiter: Still sleeping, now only 54 sec remaining.
'Jenkinsfile' found
Met criteria
No changes detected: main (still at ae63de7c299c3c4e26ad999a782c37711a27fff)

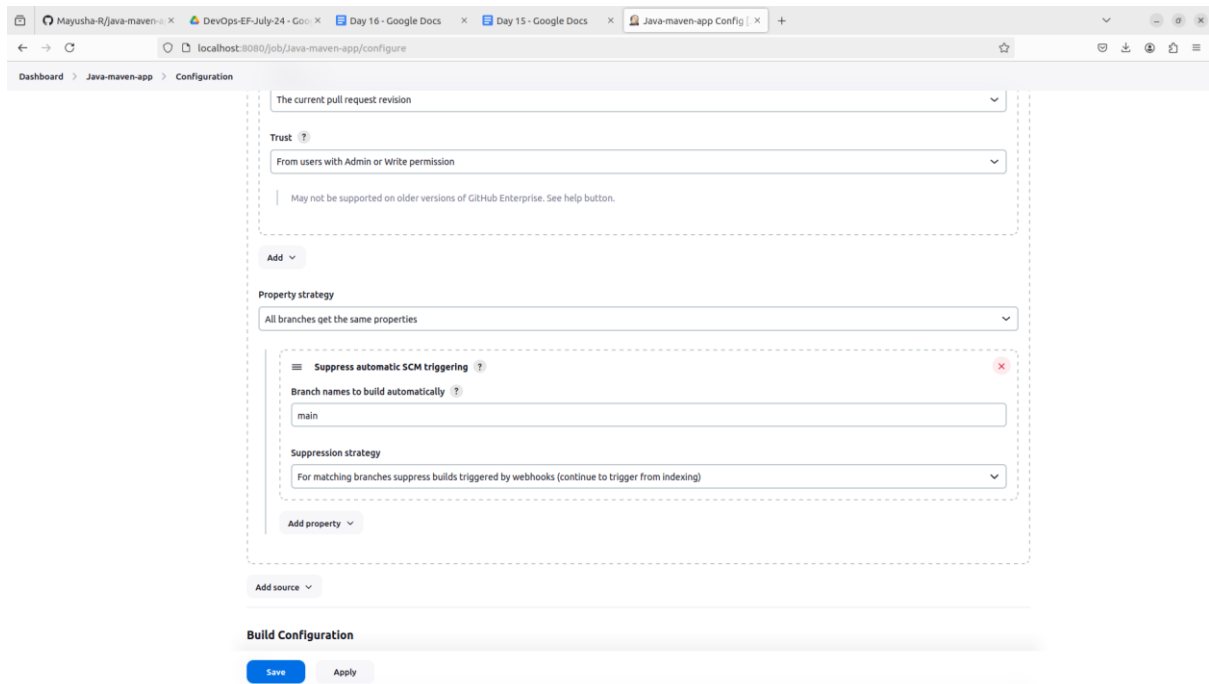
Checking branch newbranch01
14:45:39 Jenkins-Deposed API Limiter: Current quota for Github API usage has 42 remaining (1 over budget). Next quota of 60 in 48 min. Sleeping for 4 min 32 sec.
14:45:39 Jenkins is attempting to evenly distribute Github API requests. To configure a different rate limiting strategy, such as having Jenkins restrict Github API requests only when near or above the Github rate limit, go to "Github API usage" under "Configure System" in the Jenkins settings.
14:50:14 Jenkins-Deposed API Limiter: Still sleeping, now only 1 min 38 sec remaining.
'Jenkinsfile' not found
Does not meet criteria

Checking branch newbranch02
14:54:36 Jenkins-Deposed API Limiter: Current quota for Github API usage has 42 remaining (1 over budget). Next quota of 60 in 43 min. Sleeping for 4 min 36 sec.
14:54:36 Jenkins is attempting to evenly distribute Github API requests. To configure a different rate limiting strategy, such as having Jenkins restrict Github API requests only when near or above the Github rate limit, go to "Github API usage" under "Configure System" in the Jenkins settings.
14:57:18 Jenkins-Deposed API Limiter: Still sleeping, now only 1 min 34 sec remaining.
'Jenkinsfile' found
Met criteria
Changes detected: newbranch02 (null - b59ce13656336f0c25c496e910937c83d12462)
Did not schedule build for branch: newbranch02

3 branches were processed
Checking pull requests...
0 pull requests were processed

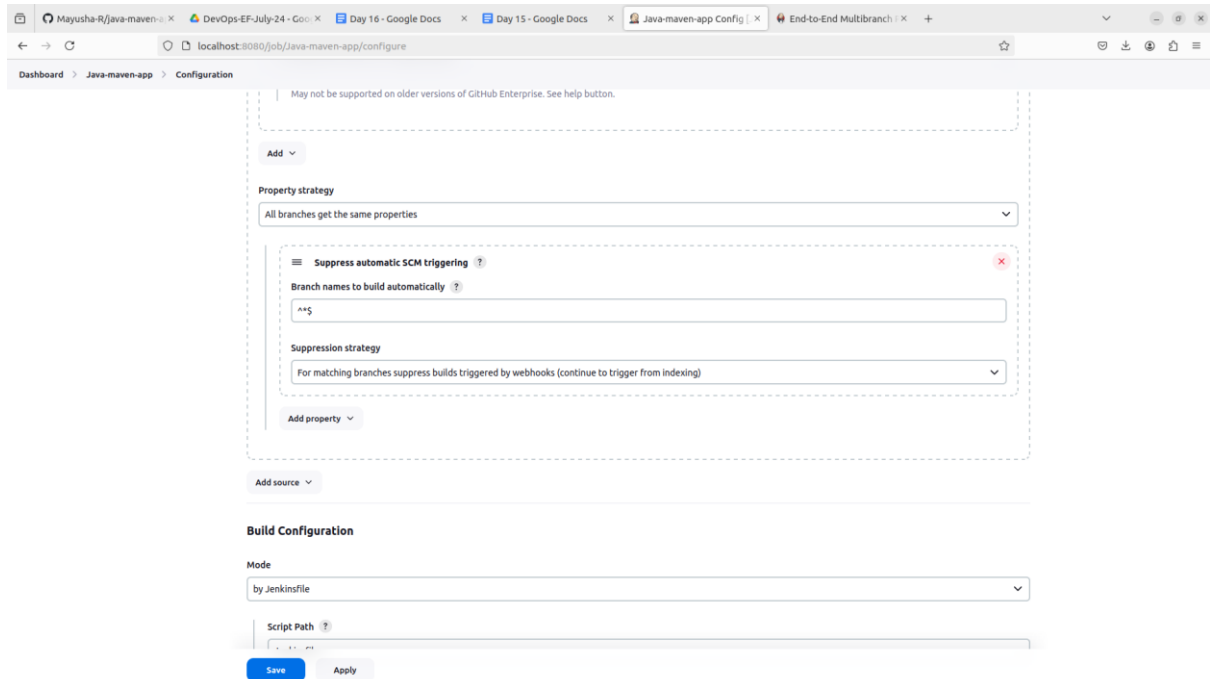
Finished examining Mayusha-R/java-maven-app
[Tue Jul 30 14:58:44 IST 2024] Finished branch indexing. Indexing took 13 min
Finished: SUCCESS
```

Configuration for above output:

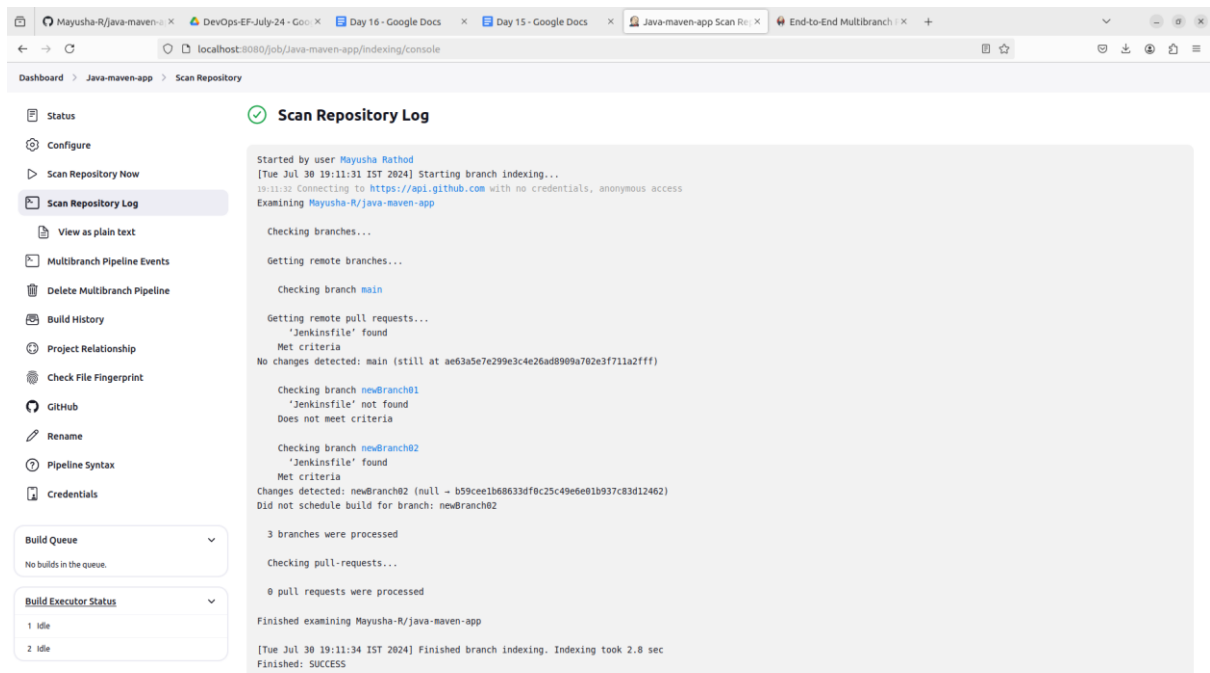


The screenshot shows the Jenkins 'Configuration' page for the 'Java-maven-app' job. The 'Property strategy' is set to 'All branches get the same properties'. Under 'Suppress automatic SCM triggering', the 'Branch names to build automatically' field is set to 'main', and the 'Suppression strategy' is set to 'For matching branches suppress builds triggered by webhooks (continue to trigger from indexing)'. The 'Build Configuration' section at the bottom has 'Save' and 'Apply' buttons.

Different configuration:



Output:



Branches build:

Status

Configure

Scan Repository Now

Scan Repository Log

Multibranch Pipeline Events

Delete Multibranch Pipeline

Build History

Project Relationship

Check File Fingerprint

GitHub

Rename

Pipeline Syntax

Credentials

Java-maven-app

Disable Multibranch Pipeline

Branches (2) Pull Requests (0)

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	main	1 day 0 hr #4	N/A	9 min 12 sec
✓	☀	newBranch02	19 hr #2	N/A	7.3 sec

Icon: S M L

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle