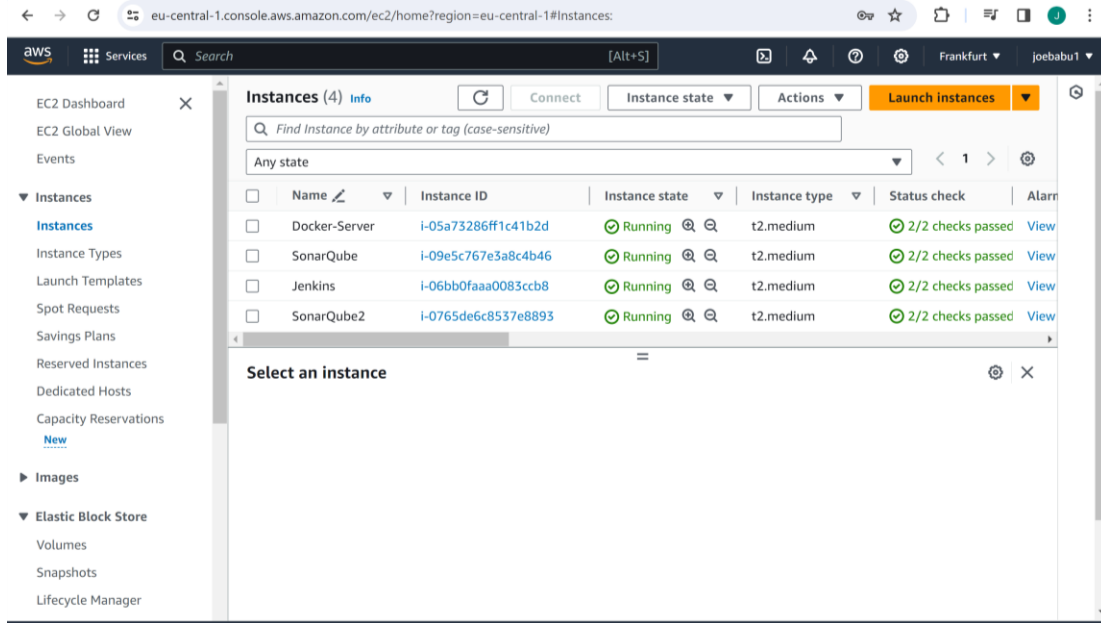
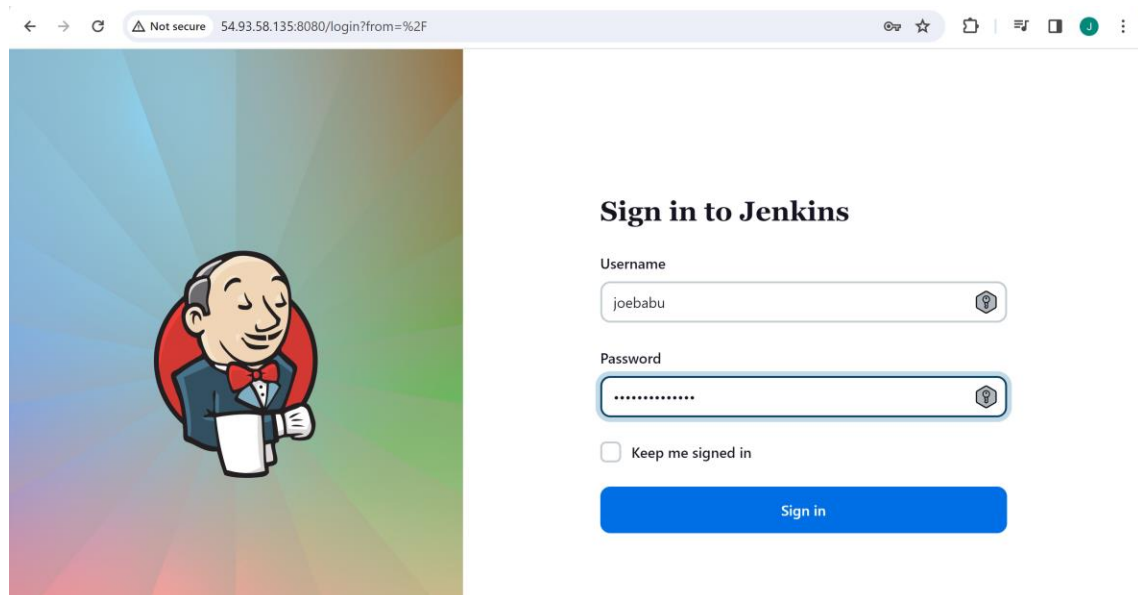


Build Management and CI/CD using Jenkins for MaswaliYote Quiz Management System

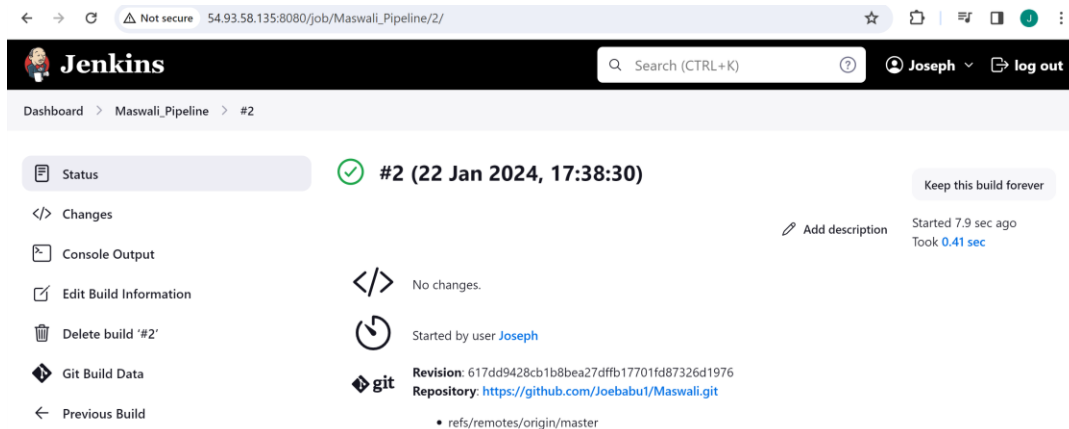
1. Create the Jenkins Server on an AWS EC2 instance



2. Setup and login to Jenkins remotely through the public IP Address provided by the EC2 instance

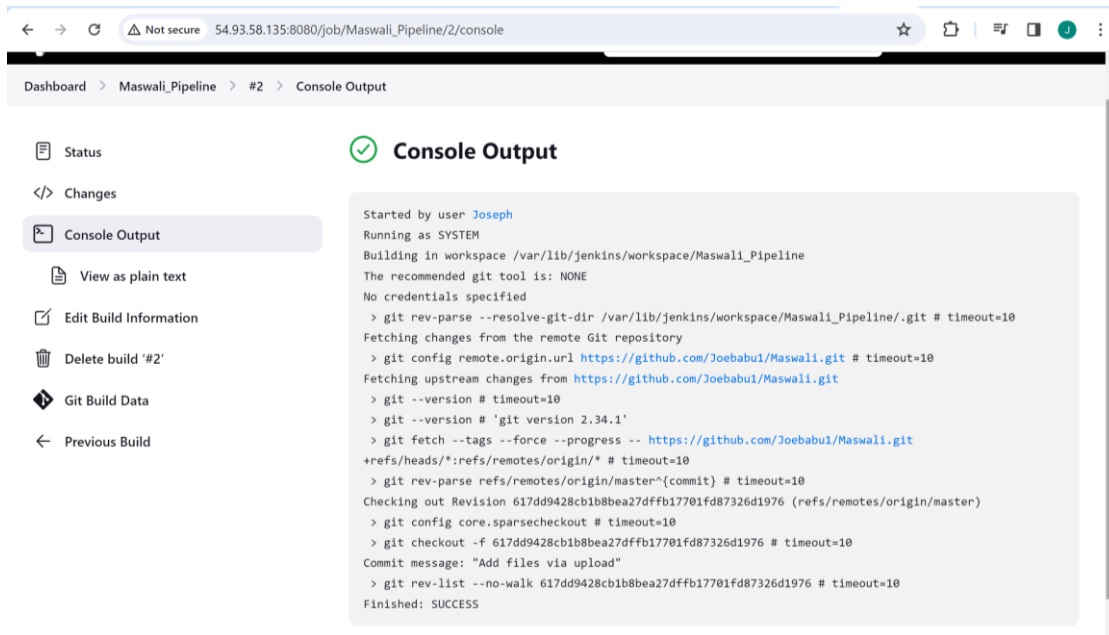


3. Create a Jenkins Pipeline for the project and build it



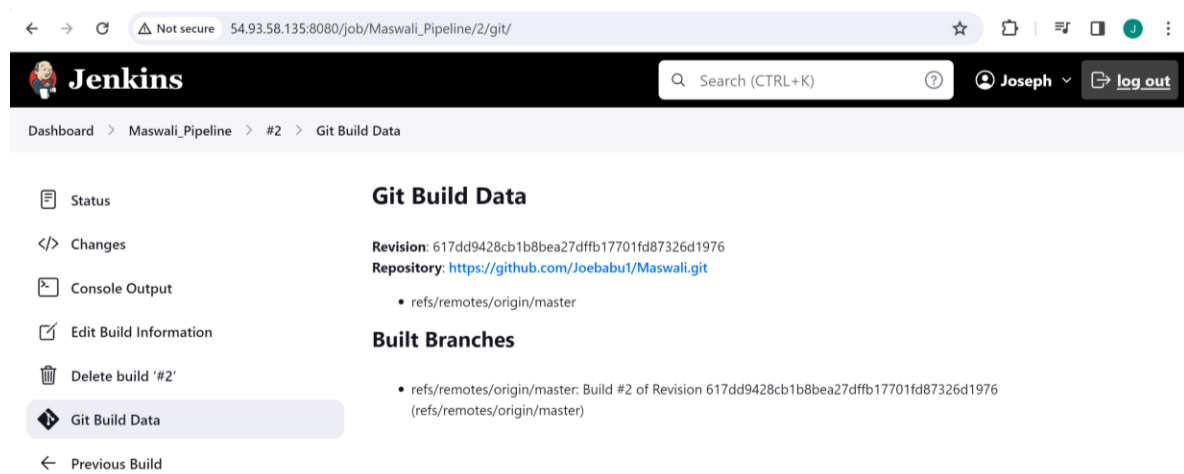
The screenshot shows the Jenkins web interface. The top navigation bar includes the Jenkins logo, a search bar, and the user 'Joseph' with a 'log out' button. The breadcrumb trail is 'Dashboard > Maswali_Pipeline > #2'. On the left sidebar, the 'Status' tab is selected. The main content area displays a green checkmark icon followed by '#2 (22 Jan 2024, 17:38:30)'. To the right of this, there is a button 'Keep this build forever' and text indicating 'Started 7.9 sec ago' and 'Took 0.41 sec'. Below the status, there are links for 'Changes', 'Console Output', 'Edit Build Information', 'Delete build '#2'', 'Git Build Data', and 'Previous Build'. The 'Changes' section shows 'No changes.' and 'Started by user Joseph'. The 'Git Build Data' section shows the 'Revision: 617dd9428cb1b8bea27dff17701fd87326d1976' and the 'Repository: https://github.com/Joebabu1/Maswali.git'.

4. The console after a successful build



The screenshot shows the Jenkins console output for build #2. The breadcrumb trail is 'Dashboard > Maswali_Pipeline > #2 > Console Output'. The left sidebar shows the 'Console Output' tab selected. The main content area displays the console output text, which starts with 'Started by user Joseph' and 'Running as SYSTEM'. The output shows the build process in the workspace '/var/lib/jenkins/workspace/Maswali_Pipeline'. It lists the recommended git tool as 'NONE' and notes that no credentials were specified. The output then shows the execution of several git commands: 'git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Maswali_Pipeline/.git # timeout=10', 'git config remote.origin.url https://github.com/Joebabu1/Maswali.git # timeout=10', 'git fetch --tags --force --progress -- https://github.com/Joebabu1/Maswali.git +refs/heads/*:refs/remotes/origin/* # timeout=10', 'git rev-parse refs/remotes/origin/master^{commit} # timeout=10', 'git checkout -f 617dd9428cb1b8bea27dff17701fd87326d1976 # timeout=10', and 'git rev-list --no-walk 617dd9428cb1b8bea27dff17701fd87326d1976 # timeout=10'. The output ends with 'Finished: SUCCESS'.

5. Git Build from the Jenkins Dashboard



The screenshot shows the Jenkins web interface. The browser address bar indicates the URL is `54.93.58.135:8080/job/Maswali_Pipeline/2/git/`. The Jenkins header includes the logo, a search bar, and the user name 'Joseph' with a 'log out' button. The breadcrumb trail is 'Dashboard > Maswali_Pipeline > #2 > Git Build Data'.

On the left sidebar, the following options are listed: Status, Changes, Console Output, Edit Build Information, Delete build '#2', **Git Build Data** (highlighted), and Previous Build.

The main content area is titled 'Git Build Data' and displays the following information:

- Revision:** 617dd9428cb1b8bea27dff17701fd87326d1976
- Repository:** <https://github.com/Joebabu1/Maswali.git>
- refs/remotes/origin/master

Below this, the 'Built Branches' section shows:

- refs/remotes/origin/master: Build #2 of Revision 617dd9428cb1b8bea27dff17701fd87326d1976 (refs/remotes/origin/master)