🔧 Jenkins Job Setup: Assignment01 (Freestyle Project)

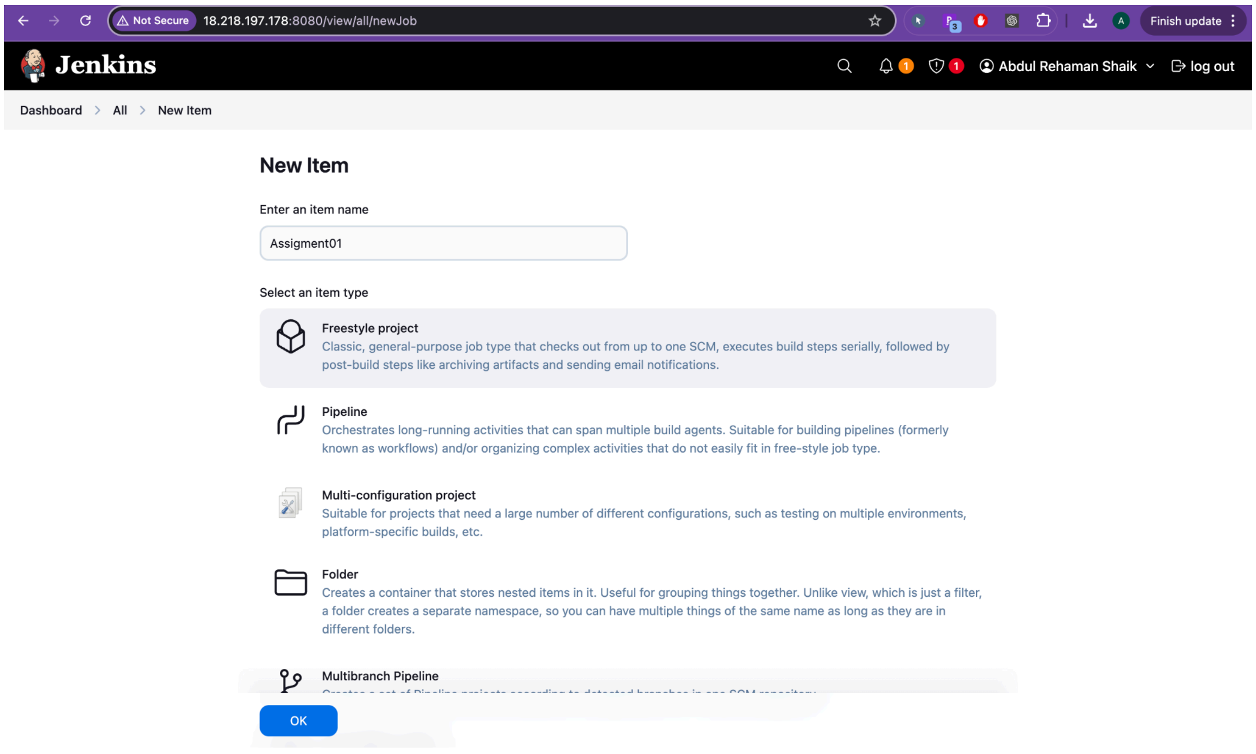
Step 1: Create a New Jenkins Job

📍 **Navigation:** `Dashboard → New Item`

📝 **Action:**

- Enter job name: `Assignment01`
- Select **Freestyle project**
- Click `OK`

💼 **Use Case:** You want to build and package a Java web application (WAR file) from a GitHub repository using Maven.


Not Secure 18.218.197.178:8080/view/all/newJob

Jenkins

Abdul Rehaman Shaik log out

Dashboard > All > New Item

New Item

Enter an item name

Assigment01

Select an item type

Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

Multibranch Pipeline

OK

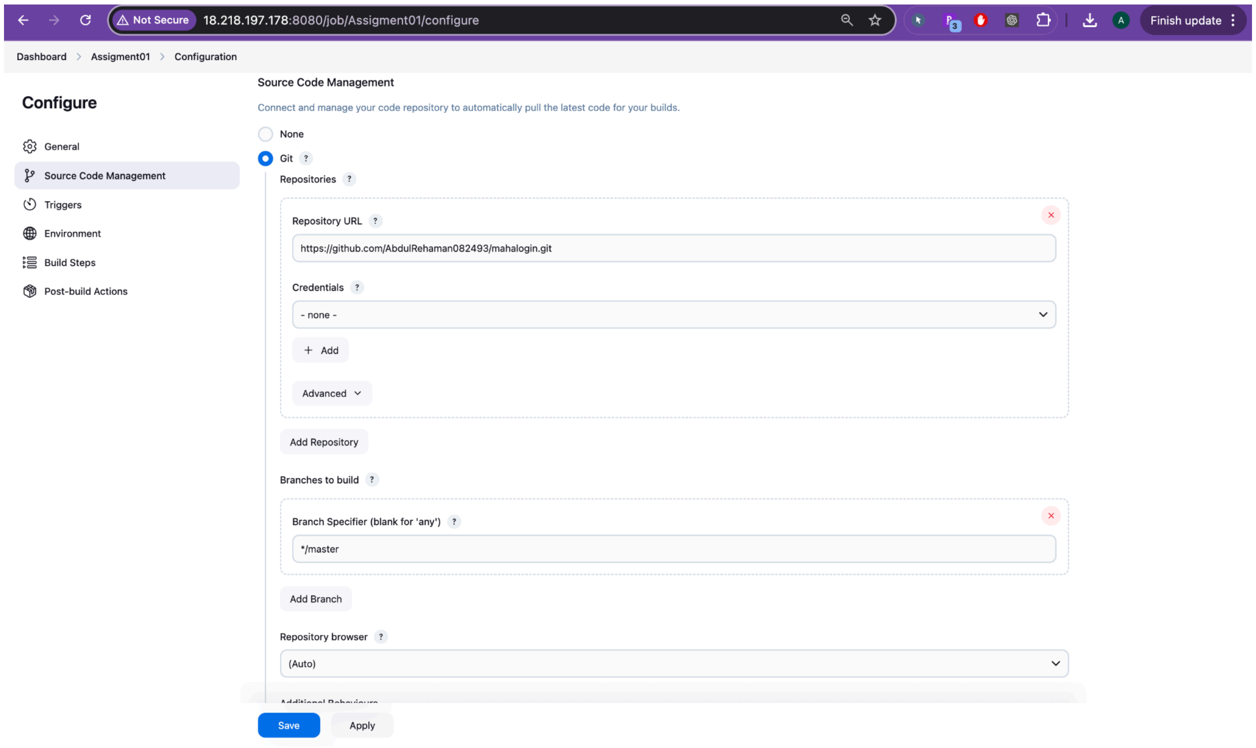
Step 2: Configure Source Code Management

📍 **Navigation:** `Configure → Source Code Management → Git`

📝 **Action:**

- **Repository URL:**
  `https://github.com/AbdulRehaman082493/mahalogin.git`
- **Credentials:** Left as `- none -` (public repo, so credentials not needed)
- **Branches to build:**
  `*/master`

💼 **Use Case:** You pull code from the `master` branch of a public GitHub repo. In a real team setup, this could be your main development or deployment branch.



Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

None [✓ Git]

Repositories

Repository URL: https://github.com/AbdulRehaman082493/mahalogin.git

Credentials: - none -

Branches to build

Branch Specifier (blank for 'any'): */master

Repository browser: (Auto)

GitHub Link: https://github.com/AbdulRehaman082493/mahalogin

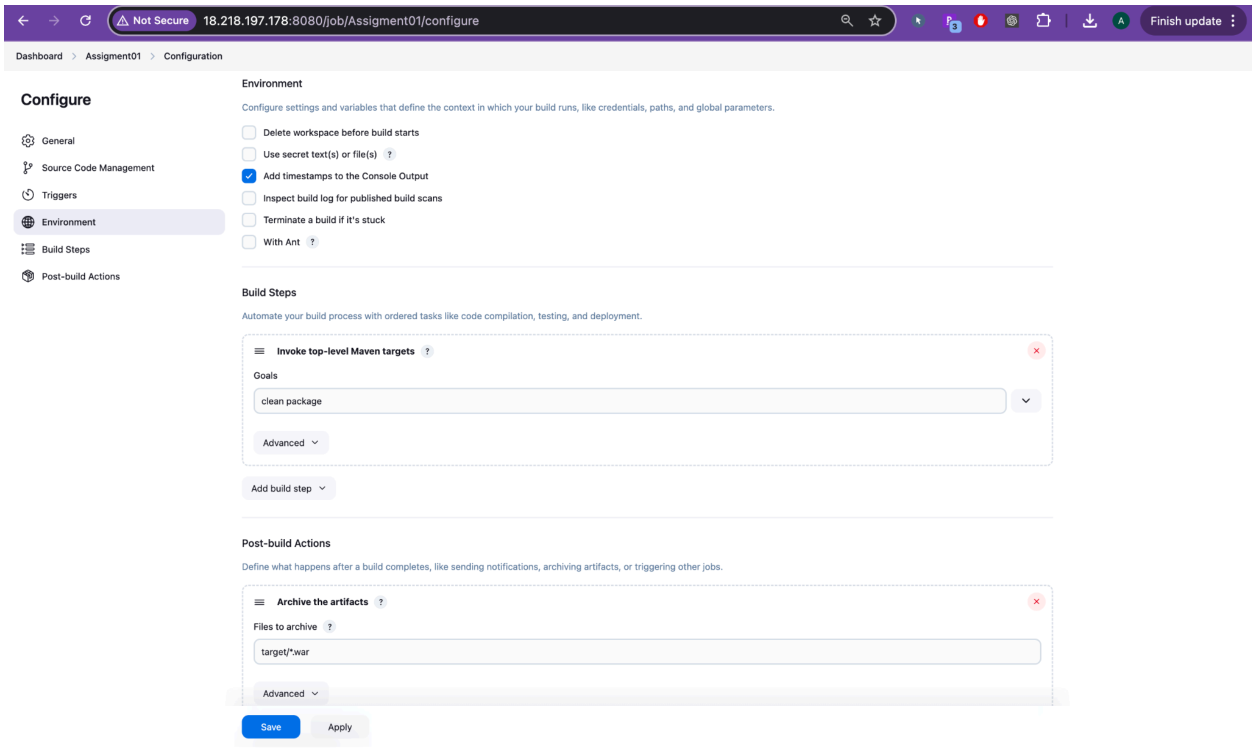
Step 3: Set Environment Settings

📍 **Navigation:** `Configure → Environment`

📝 **Action:**

- ✅ Checked: `Add timestamps to the Console Output`
  (Helps in log tracking during troubleshooting)

💼 **Use Case:** In real CI/CD pipelines, timestamps help trace delays or errors in build stages.



Environment

Configure settings and variables that define the context in which your build runs, like credentials, paths, and global parameters.

- [ ] Delete workspace before build starts
- [ ] Use secret text(s) or file(s)
- [x] Add timestamps to the Console Output
- [ ] Inspect build log for published build scans
- [ ] Terminate a build if it's stuck
- [ ] With Ant

Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Invoke top-level Maven targets

Goals: clean package

Advanced

Add build step

Post-build Actions

Define what happens after a build completes, like sending notifications, archiving artifacts, or triggering other jobs.

Archive the artifacts

Files to archive: target/*.war

Advanced

Step 4: Add Build Steps

📍 **Navigation:** `Configure → Build Steps → Invoke top-level Maven targets`

📝 **Action:**

- **Goal:**
  `clean package`
  This tells Maven to clean previous build artifacts and package the application (i.e.,

create the `.war` file).

💼 **Use Case:** Used in real projects to compile and package code before testing or deployment.

Step 5: Post-Build Action

📍 **Navigation:** `Configure → Post-build Actions → Archive the artifacts`

📝 **Action:**

- **Files to archive:**
  `target/*.war`
  This saves the generated `.war` file for further use (e.g., deploy to Tomcat or store in Nexus/Artifactory).

💼 **Use Case:** Storing artifacts is common in enterprise pipelines to track builds and support deployments.

Step 6: Trigger the Build

📍 **Navigation:** `Dashboard → Assignment01 → Build Now`

📝 **Action:** Click `Build Now` to manually trigger the first build.

💼 **Use Case:** Manually triggering a build is often used in early development stages or for on-demand testing.

Step 7: Check Console Output

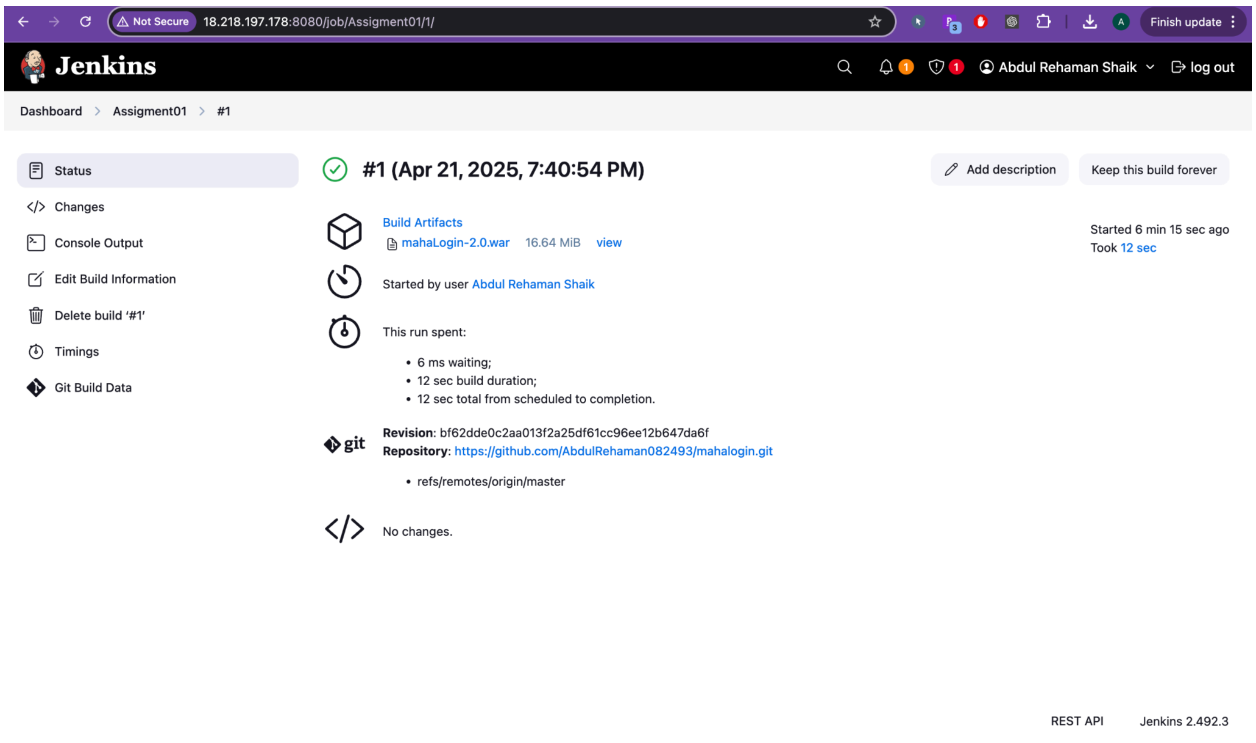
📍 **Navigation:** `Assignment01 → #1 → Console Output`

📝 What Happened:

- Git cloned the repo successfully.
- Maven executed `clean package`.
- Build logs and progress are shown.
- WAR file is generated and archived.

✅ Build Result: SUCCESS

💼 **Use Case:** In a real-world CI pipeline, logs help confirm that the code compiled correctly and artifacts were generated.



#1 (Apr 21, 2025, 7:40:54 PM)

Build Artifacts
mahaLogin-2.0.war 16.64 MiB view

Started 6 min 15 sec ago
Took 12 sec

Started by user Abdul Rehaman Shaik

This run spent:

- 6 ms waiting;
- 12 sec build duration;
- 12 sec total from scheduled to completion.

Revision: bf62dde0c2aa013f2a25df61cc96ee12b647da6f
Repository: https://github.com/AbdulRehaman082493/mahalogin.git

- refs/remotes/origin/master

No changes.

🎨 Jenkins Build Status Colors

Color	Meaning	Details
🟢 **Blue** or ✅ Green (some themes)	**Success**	Build completed without errors
🔴 **Red**	**Failed**	Build failed due to code issues, test failure, etc.
🟡 **Yellow** or 🟠 Orange	**Unstable**	Build succeeded, but with issues (e.g., failing tests)
⚪ **Grey** or ⚫ Black	**Not built**	Job was never built, or build was skipped
🔄 **Light Blue** or 🔵 Blue (animated)	**Running**	Build is in progress

> 🔄 Note: Jenkins originally used **blue for success**, but many themes and plugins now show **green** instead.

🌤️ Jenkins Weather Report Icons (Job Health Trends)

These icons are based on the **build success percentage over time** (usually last 5 builds):

Icon	Label	Success %	Meaning
☀️ Sun	**Sunny**	100%	All recent builds were successful – healthy job
🌤️ Sun with Cloud	**Mostly Sunny**	~80–99%	Mostly good, occasional failure
☁️ Cloudy	**Cloudy**	~60–79%	Frequent issues, needs attention
🌧️ Rain Cloud	**Rainy**	~0–59%	Many failures – unhealthy job
🌪️ No icon (Stormy)	**Worst Case**	0%	All builds failed recently