**Step 1: Fork the Repository**

* **Fork** the GitHub repository: <https://github.com/hshar/website.git> into your GitHub account.

**Step 2: Create the Dockerfile**

Create a Dockerfile in the root of your project repository.

#dockerfile

# Use Ubuntu as the base image

FROM ubuntu:latest

# Update and install Apache

RUN apt-get update && apt-get install -y apache2

# Copy the website code into the Apache directory

ADD . /var/www/html

# Expose port 80 to be mapped to host

EXPOSE 80

# Start Apache service in foreground

ENTRYPOINT ["apachectl", "-D", "FOREGROUND"]

**Step 3: Configure Git Workflow**

* **Create branches**:

git branch develop

git add Dockerfile

git commit -m “Dockerfile Added”

git push -all

**Step 4: Set Up Jenkins**

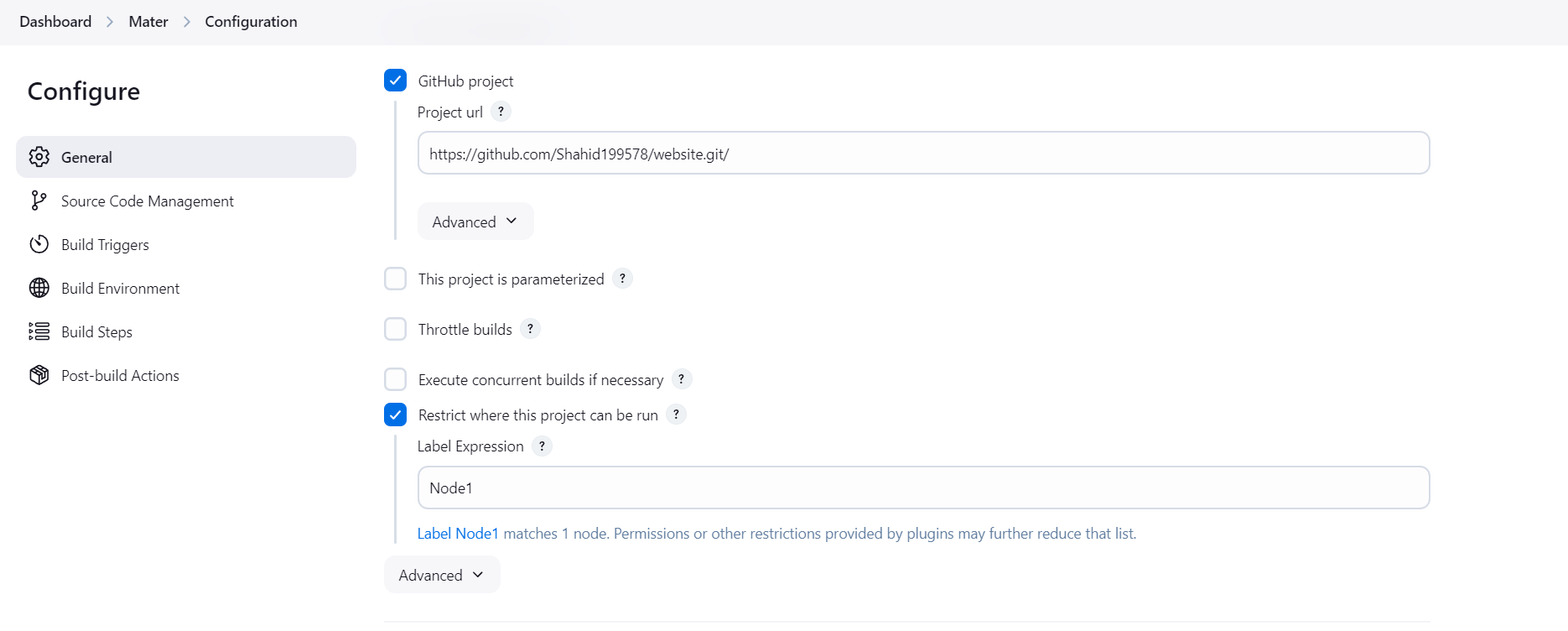
**Install Jenkins and Plugins**

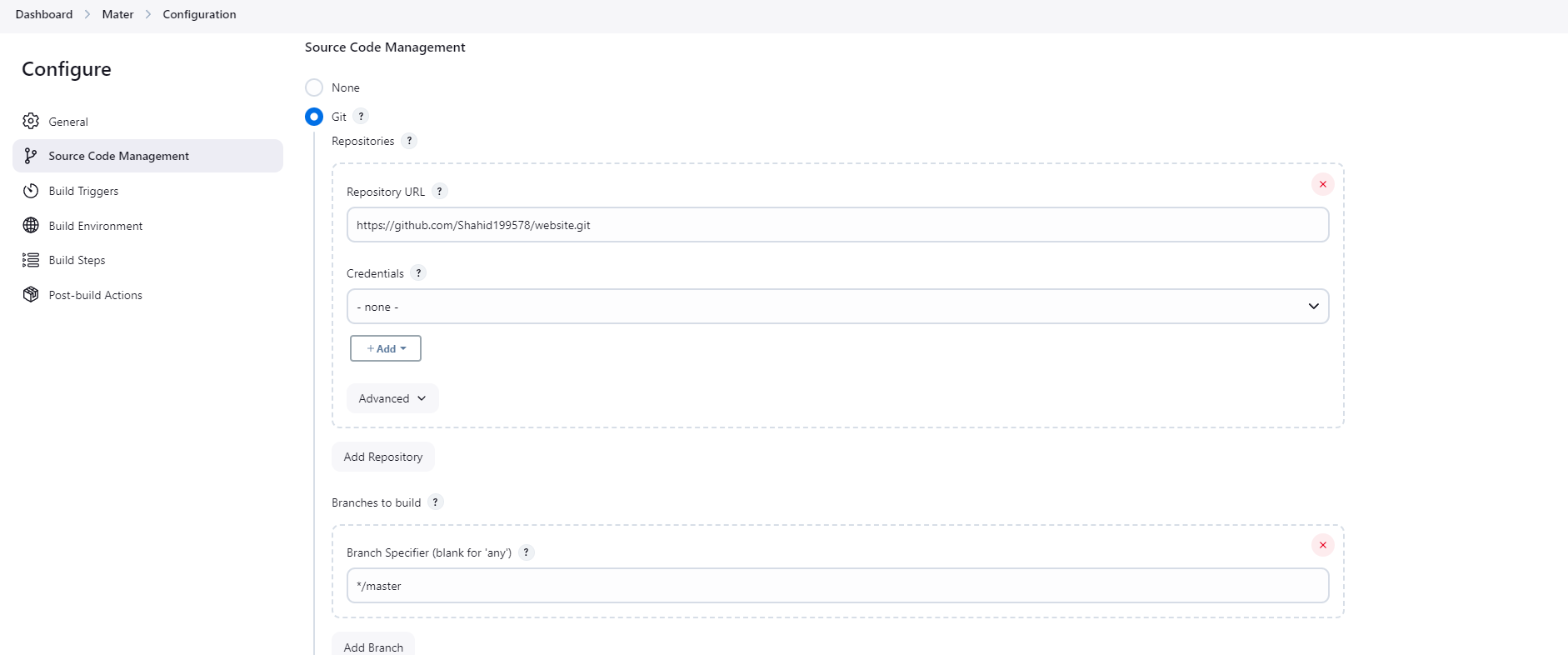
* Install Jenkins.
* Install necessary plugins:
  + **Docker Pipeline Plugin**
  + **Git Plugin**
  + **Pipeline Plugin**

**Step 5: Create Freestyle Jobs**

**Job 1: Master Branch Deployment**

1. **Create a Freestyle Job** in Jenkins named **"master"**.
2. **Source Code Management**:
   * Select **Git**.
   * Use your **forked repository** URL.
   * Specify the **master** branch.

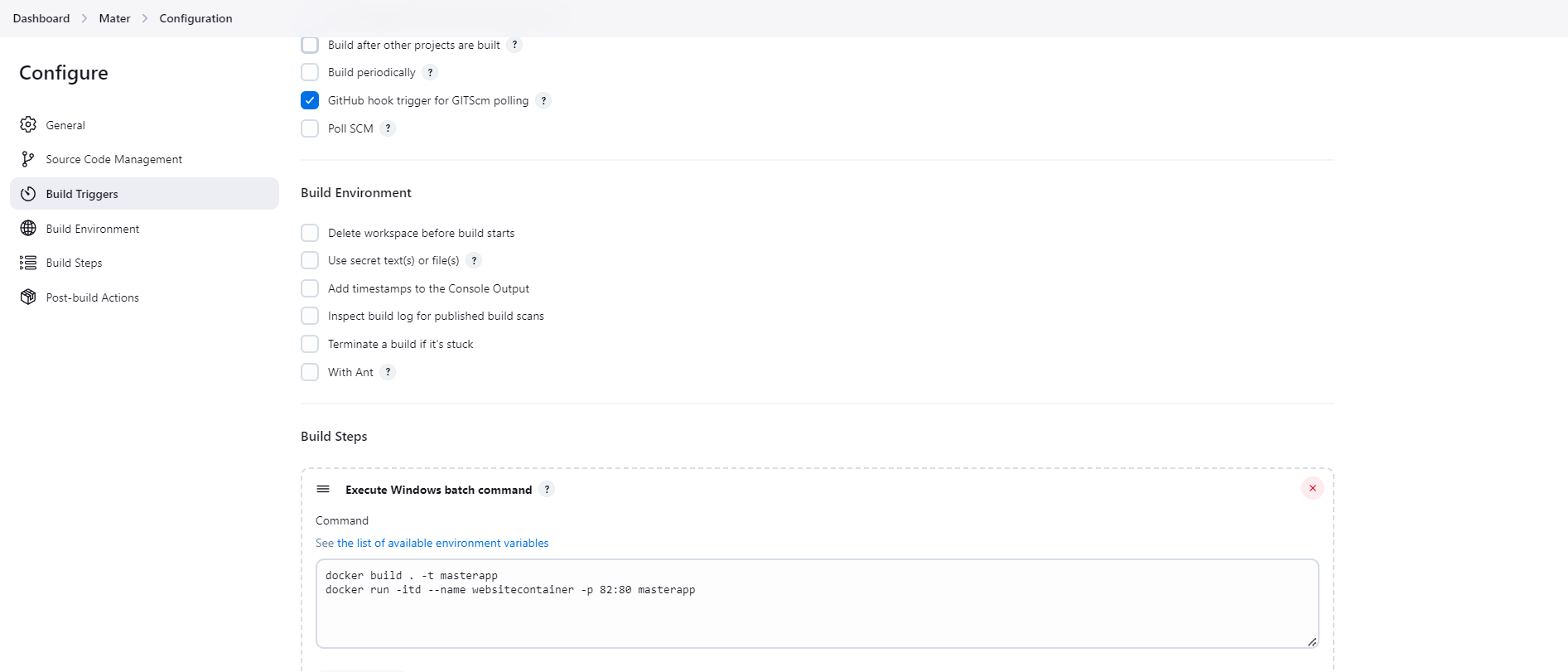




1. **Build Triggers**:
   * Check **"GitHub hook trigger for GITScm polling"** (ensure your GitHub webhook is set up).
2. **Build Steps**:
   * **Execute Shell Command** to build and run the Docker container:

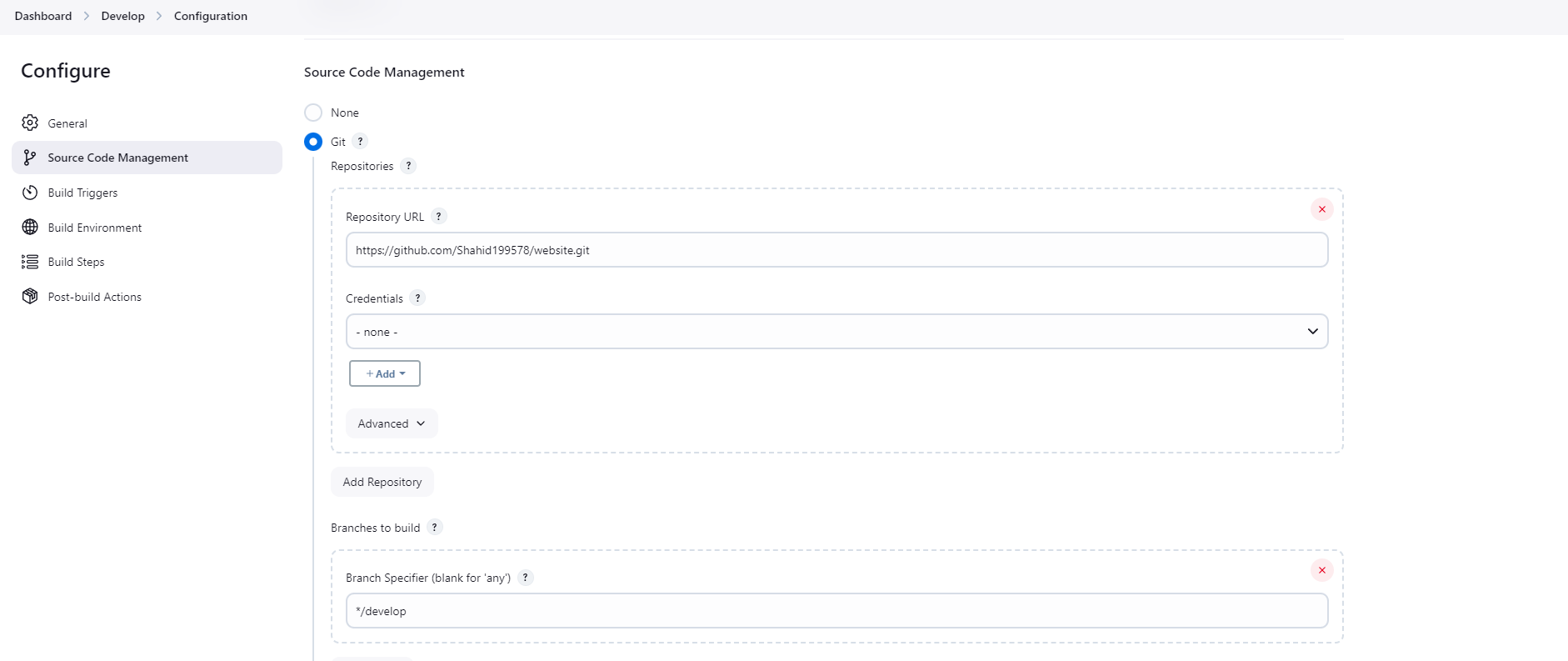
sudo docker build -t masterapp .

sudo docker run -itd --name websitecontainer -p 82:80 masterapp



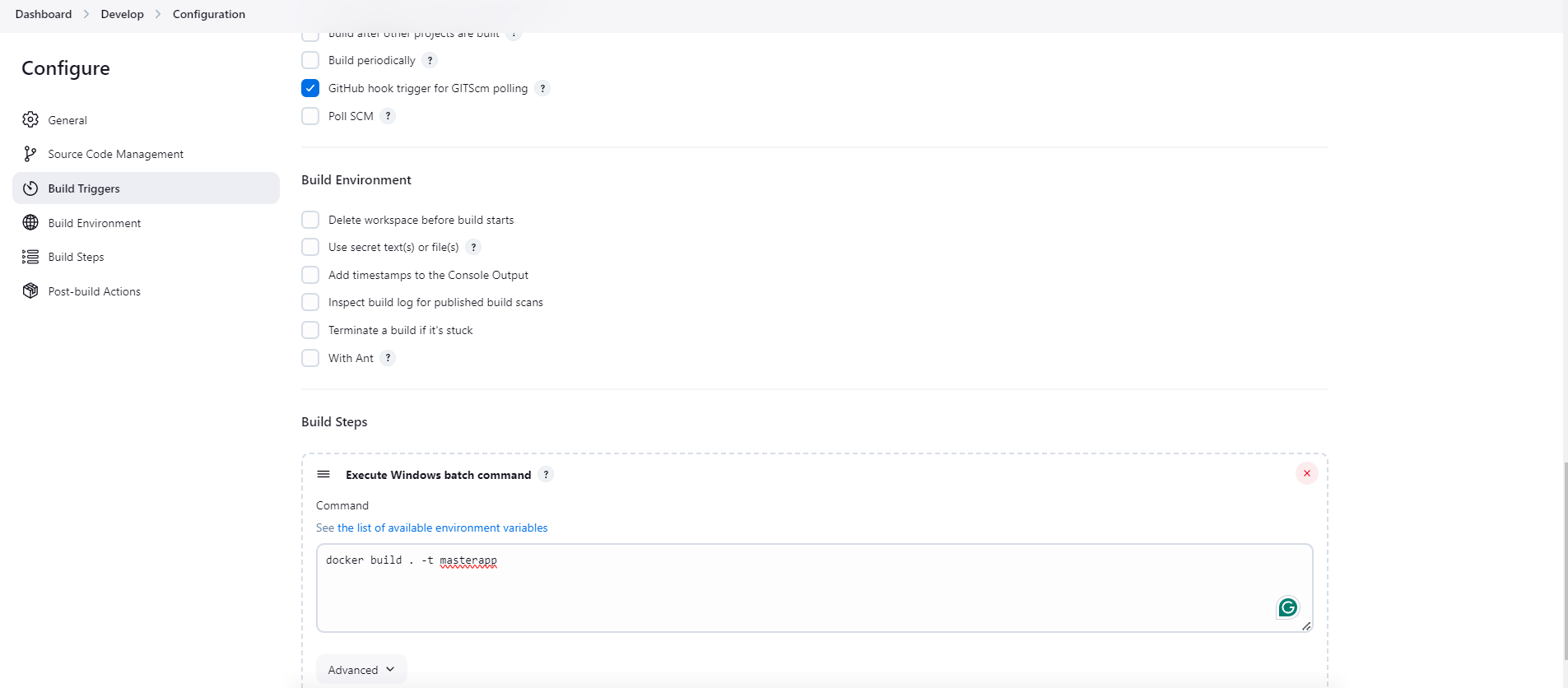
**Job 2: Develop Branch Build Only**

1. **Create another Freestyle Job** in Jenkins named **"develop"**.
2. **Source Code Management**:
   * Select **Git**.
   * Use your **forked repository** URL.
   * Specify the **develop** branch.



1. **Build Triggers**:
   * Check **"GitHub hook trigger for GITScm polling"** (ensure your GitHub webhook is set up).
2. **Build Steps**:
   * **Execute Shell Command** to build the Docker container without publishing:

sudo docker build -t developapp .



**Step 6: Configure Webhooks in GitHub**

* In your forked repository on GitHub, go to **Settings > Webhooks**.
* **Add webhook** with the Jenkins URL (e.g., http://<Jenkins\_IP>:8080/github-webhook/).
  + This will trigger builds automatically on code commits.

**Step 7: Verify the Setup**

* Push commits to the master and develop branches and ensure Jenkins triggers the appropriate jobs.
* Verify that when a commit is made to master, the website is published on port 82.

This configuration ensures the implementation of a CI/CD pipeline for building and deploying the application using Docker and Jenkins as requested.