

AWS Project With DevOps

Automated File Change Detection using Git and Jenkins Pipelines

Start the AWS lab and create an ec2 (ubuntu) instance .

Connect it using its key pair in command prompt,

Set hostname as Jenkins.

Update the instance using ‘apt **update**’.

Install docker - ‘apt install **docker.io** ’ and

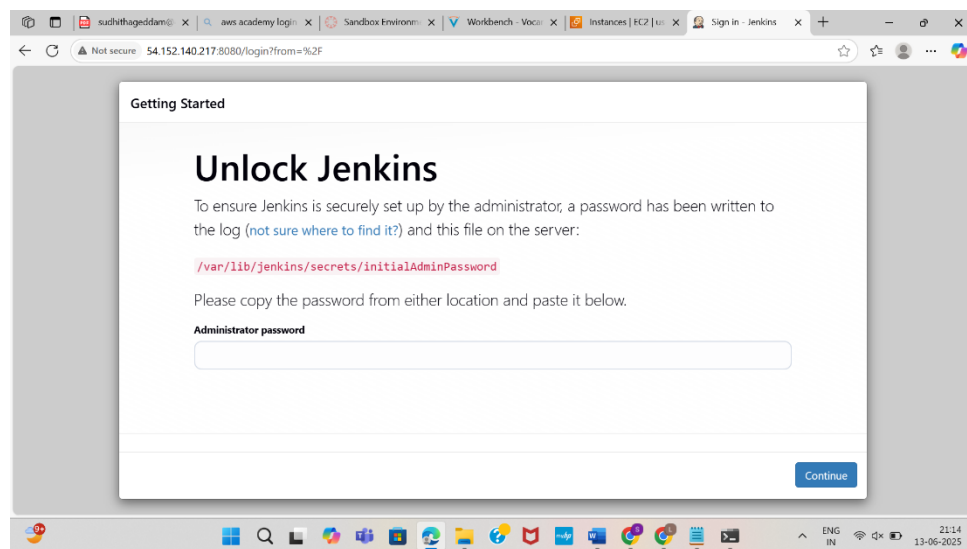
Install java version for Jenkins – ‘apt install **openjdk-17-jre** -y’

for Jenkins installation - jenkins.io (copy the Long Term Support release)

After Successful installation :

Allow ports - 8080 for Jenkins and any desired port for docker (let say 6789)

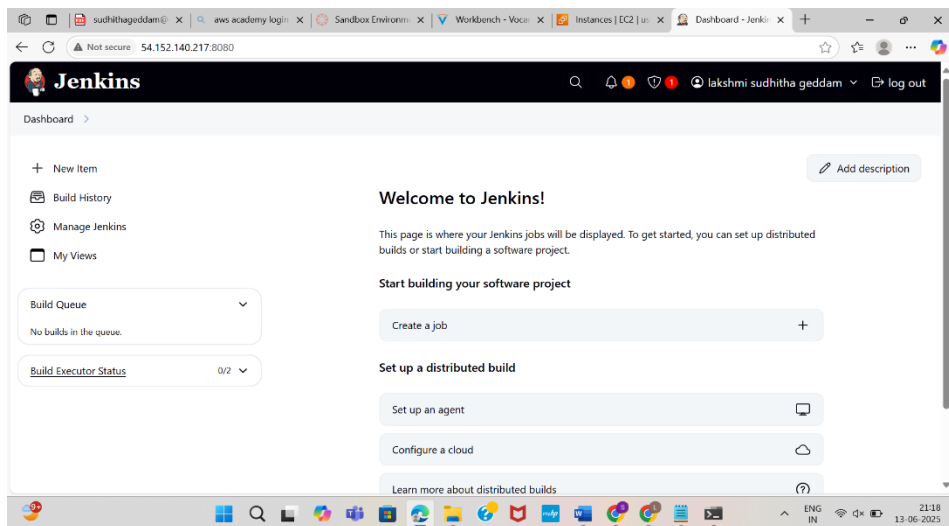
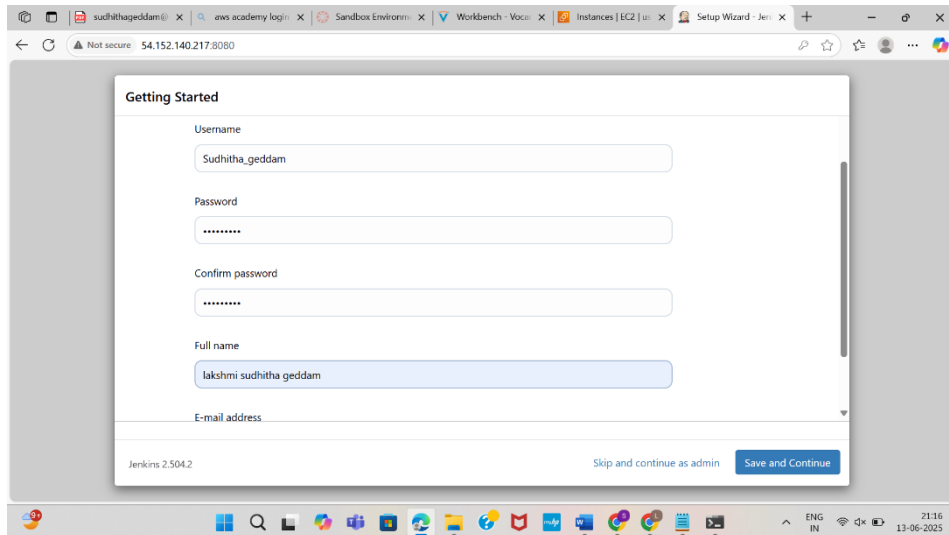
Now host the public IP – **Publicip:8080**



For password :

Cat (paste the above red link)

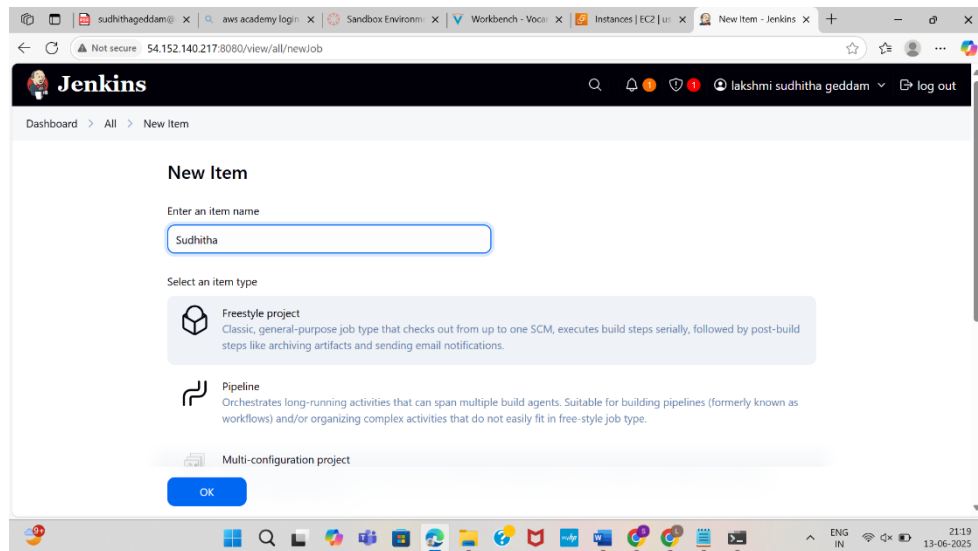
Create a user in Jenkins and install all plugins



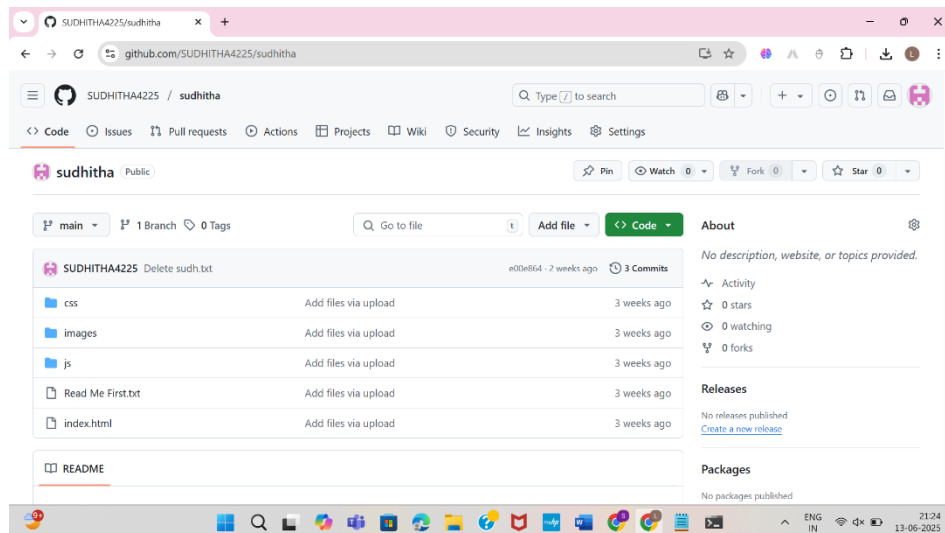
Before going to the Jenkins pipeline there will be an error occurred i.e,
There will be some security issues (Jenkins automation law)
For rectifying it:

- Go to manage Jenkins
- Look for security
- We can see a CSRF protection - crumb issuer
- Enable the proxy compatibility – apply and save.

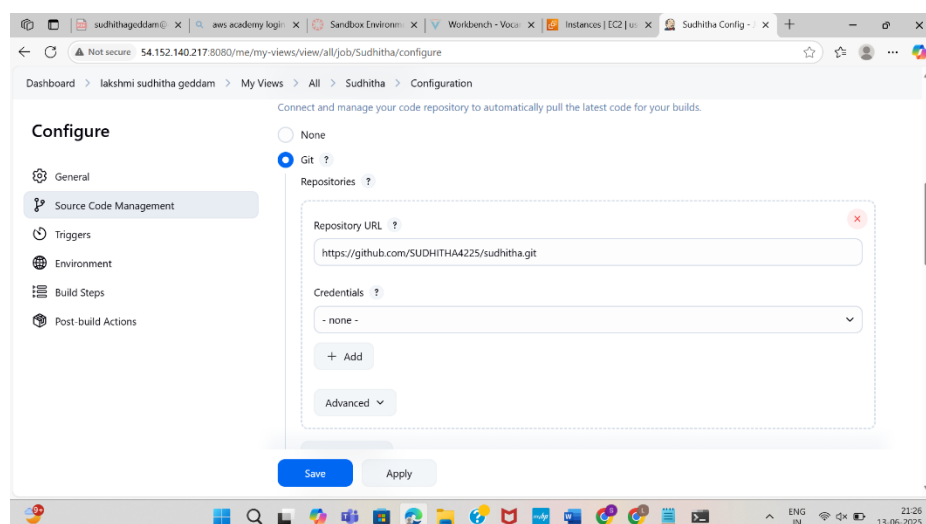
Now create new item with free style pipeline



Login to git-hub profile and open a repository

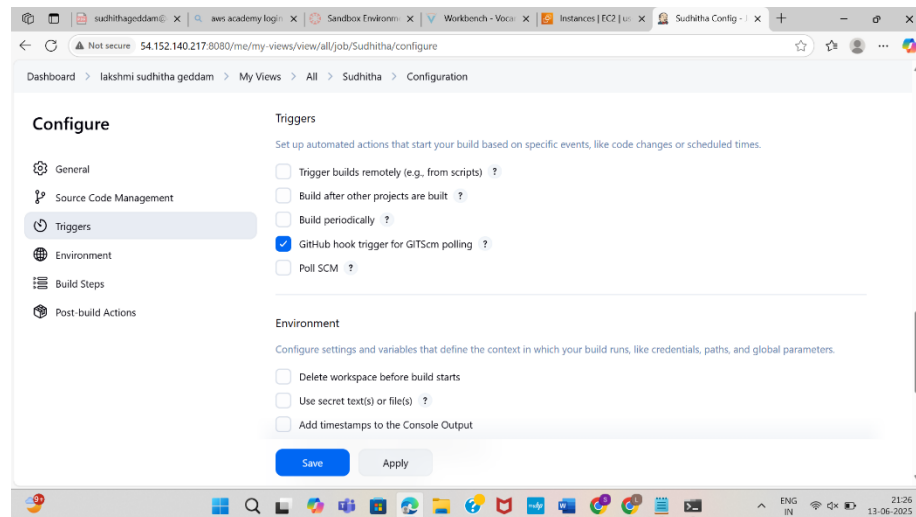


Copy the github code into the Jenkins git-repository



Change the Branch according to the github repository

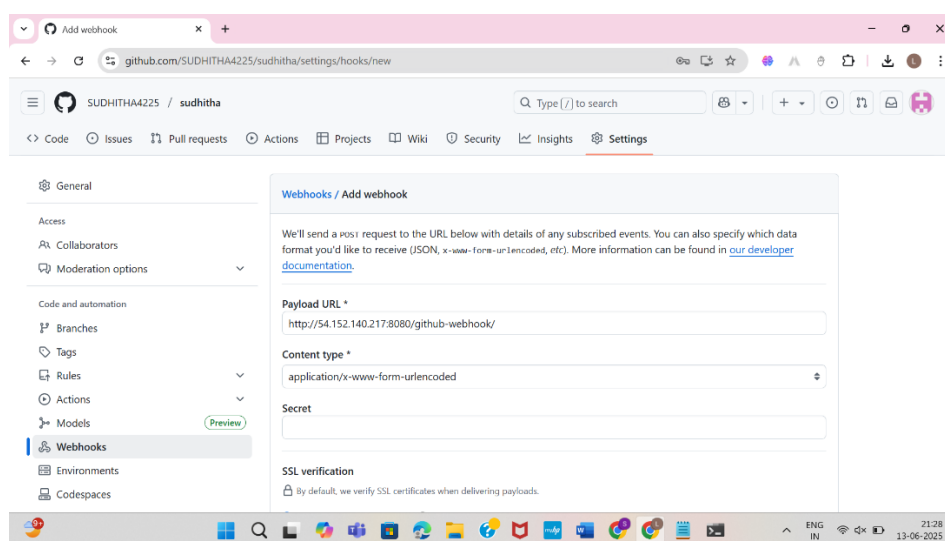
In triggers select the option called – GITHUB hook trigger for GITScm polling



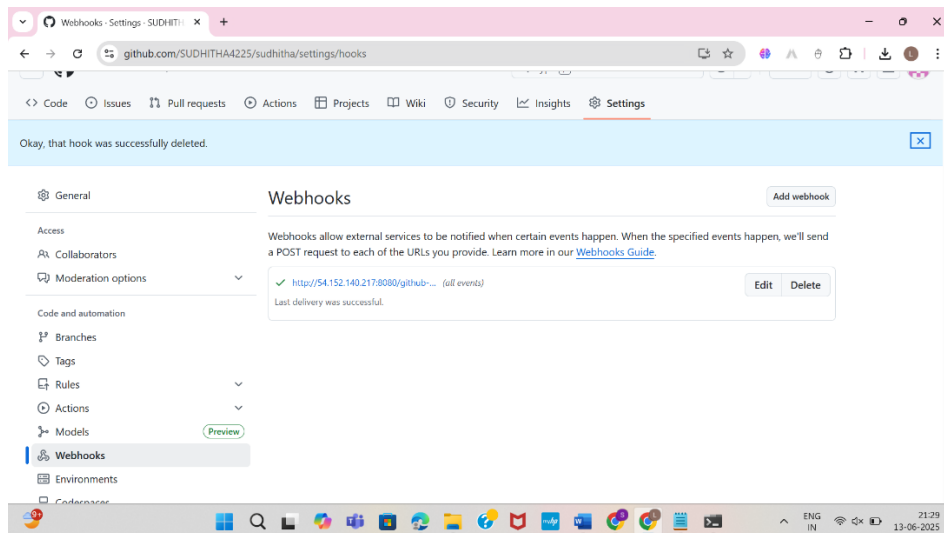
Apply and Save .

For Webhooks:

- Go the webhooks in github
- Add new webhook
- Paste the instance url in the palce of email – url/github-webhook/



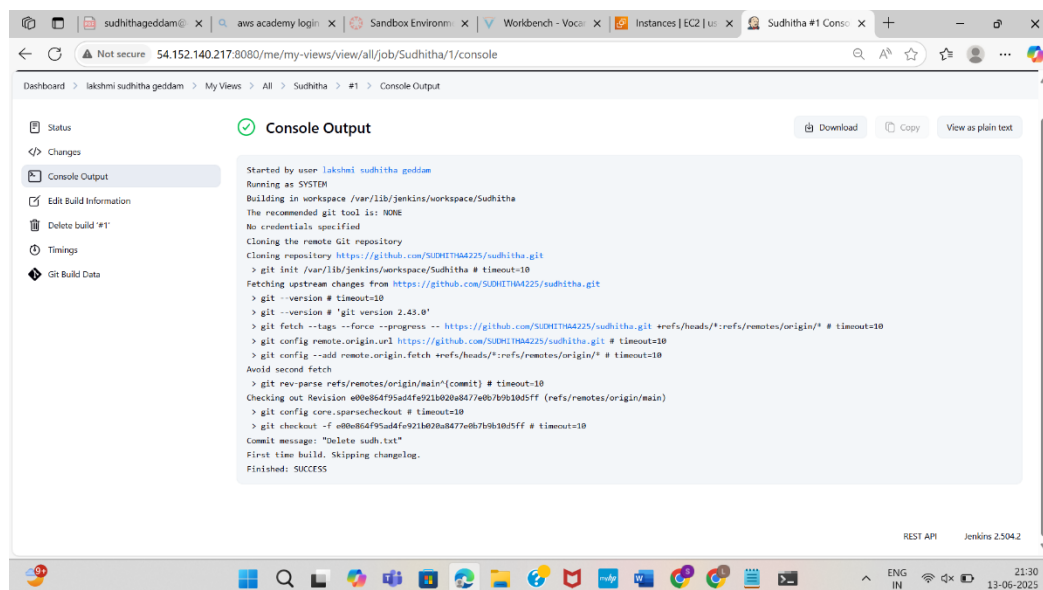
Add the webhook



In Jenkins click on build in

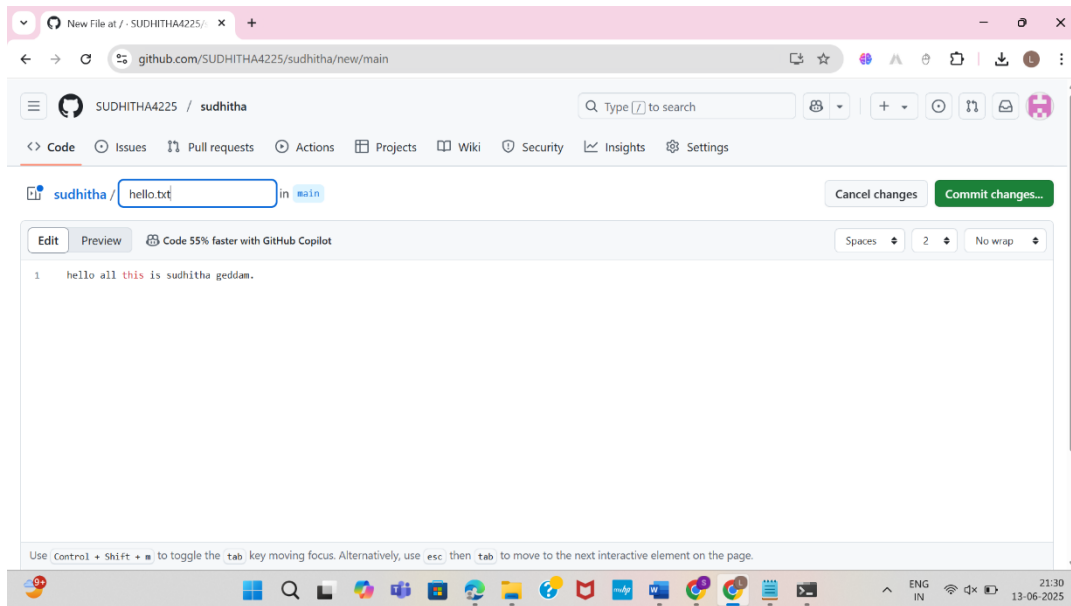
We can see the built 1 will be success

Go to console output for the details

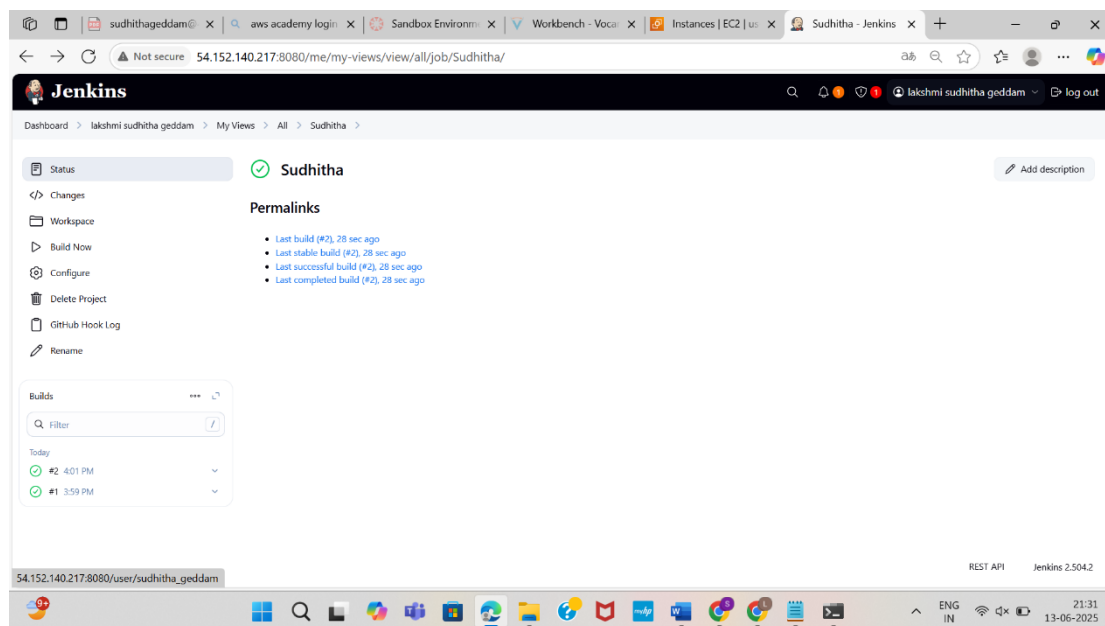


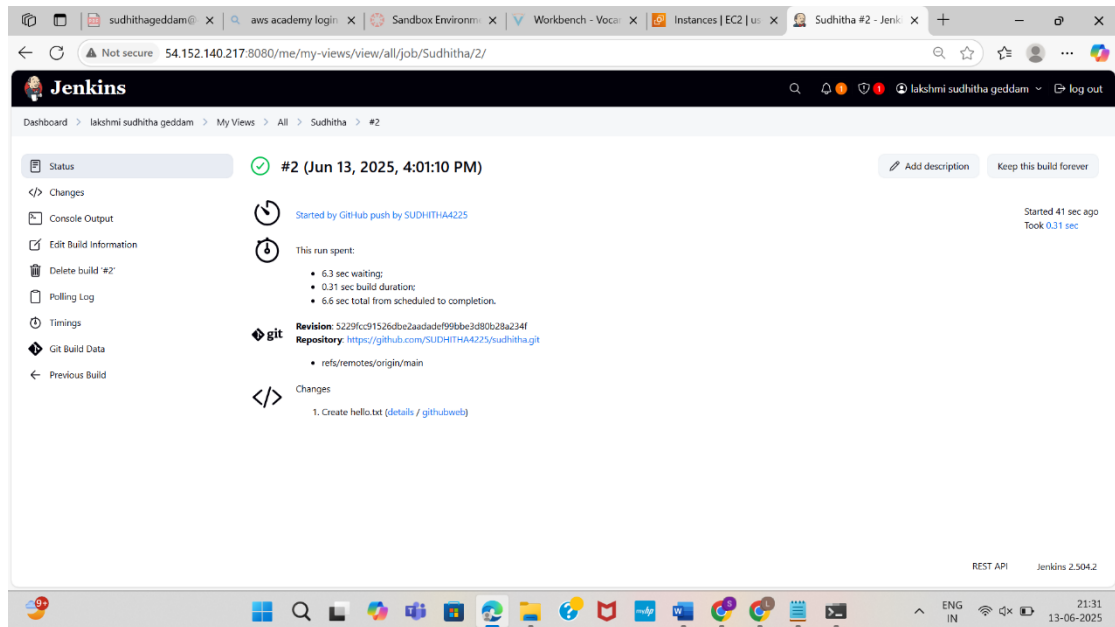
For identifying more git status

- Create any sample text file in the github repository .



After creating a sample file in github now go to Jenkins we can see another build is done automatically .

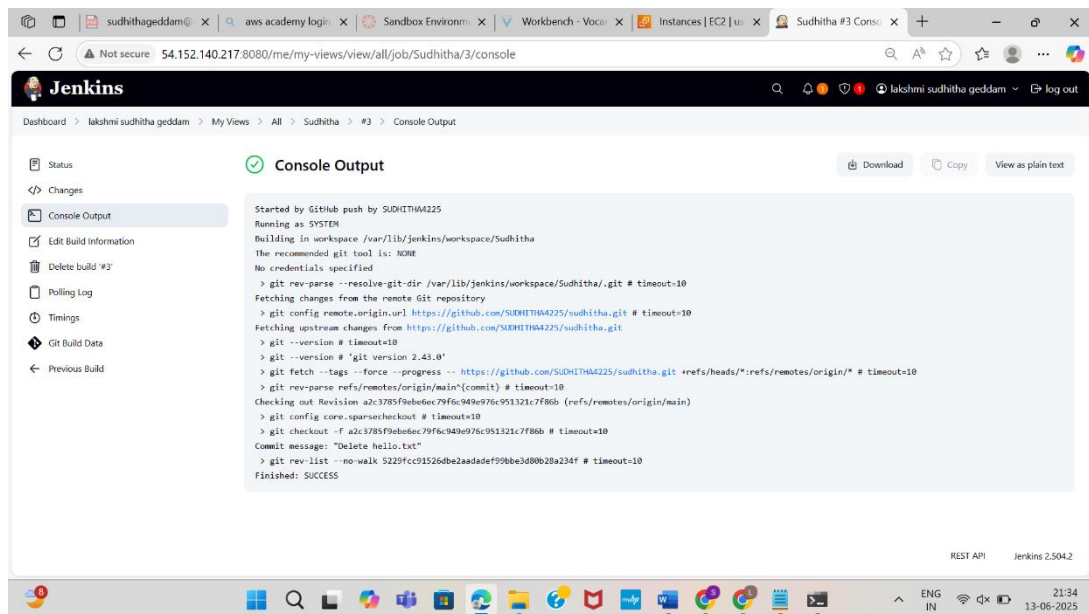




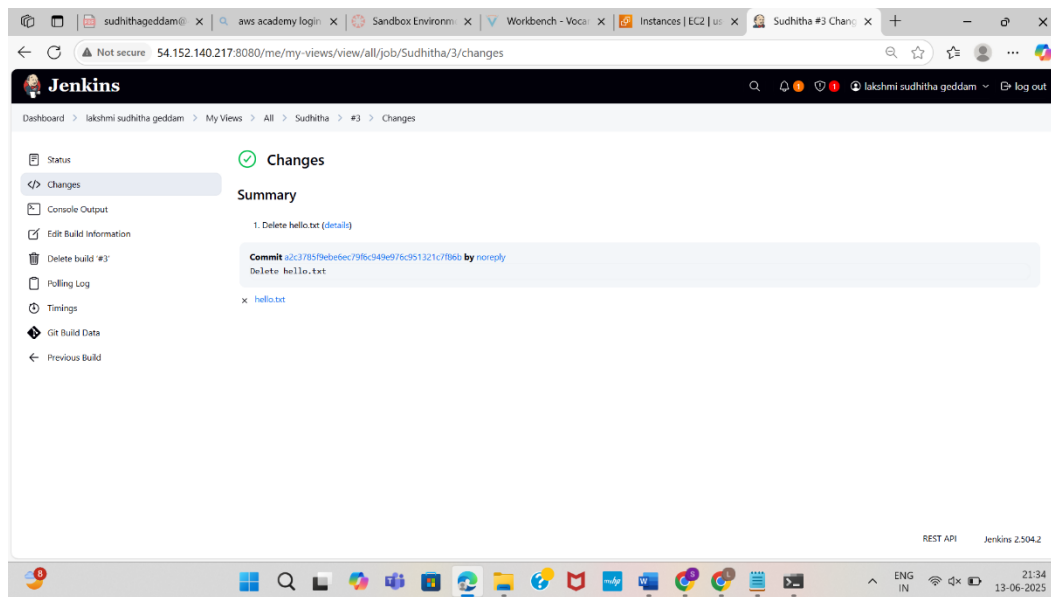
For an another trail:

Delete any file in the github repository

Again check in Jenkins bulid is done automatically



For total changes wee can look into the changes



Conclusion:

Implemented an automated CI pipeline with Git and Jenkins, enabling real-time file change detection and deployment. The integration of webhooks and pipelines streamlined builds, improving speed, efficiency, and reliability while reducing manual effort.

----- Thank You -----

