

Day 1

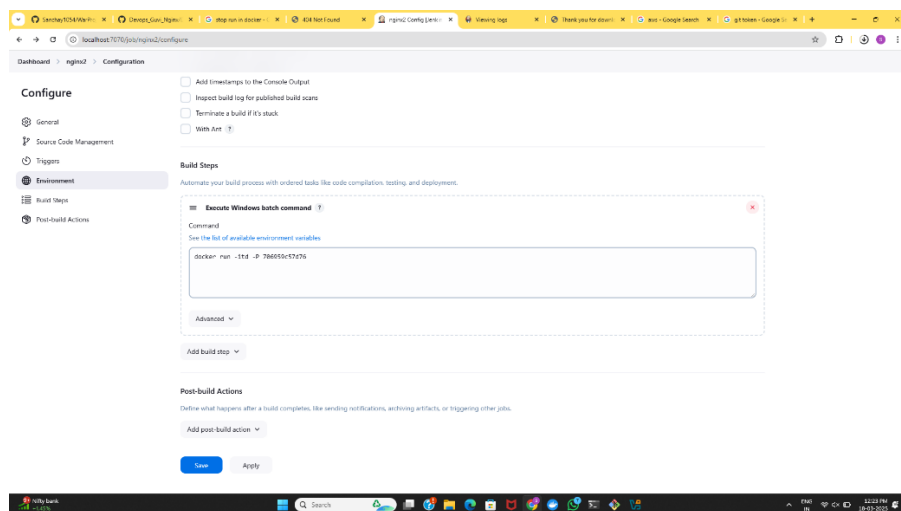
Date: 17.03.2025

Topics Covered: Installation of Maven, Docker, Jenkins and Nginx in Windows.

Jenkins

Running a Docker image from Jenkins:

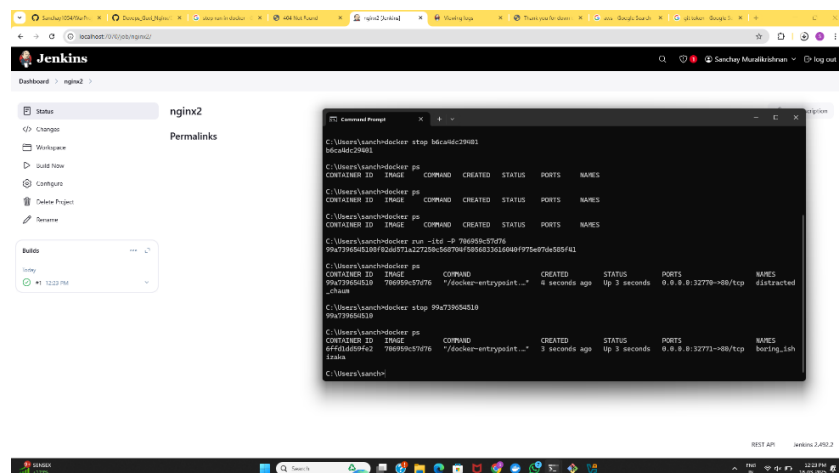
- Giving windows command and execute a docker image form Jenkins that exists in Docker
- Created a Freestyle project
- Configuring the details



Freestyle

Building and Running the Project:

Output

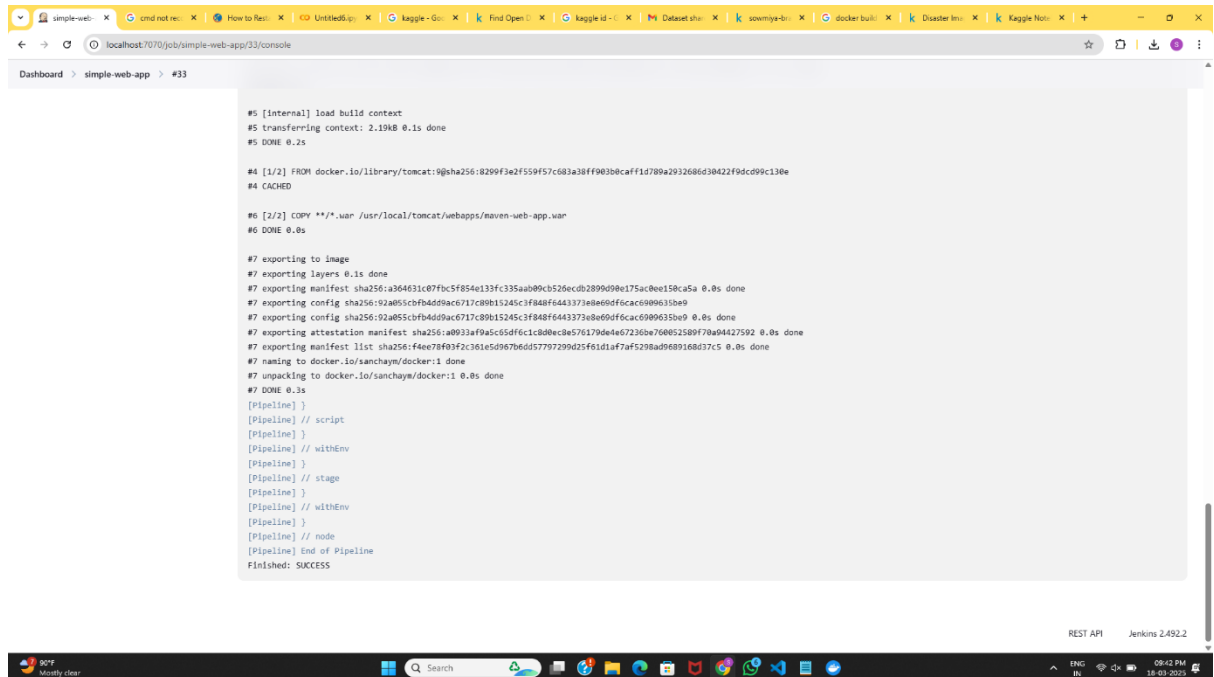


Build and run

Uploading a local Docker Image to Docker Hub from Jenkins:

Creating Docker image locally

- Creating a DockerFile for the maven war project
- Building it locally
- Checking the images
- Using bat windows script to push the image to Docker Hub
- Authenticated Docker Hub form Jenkins (script)



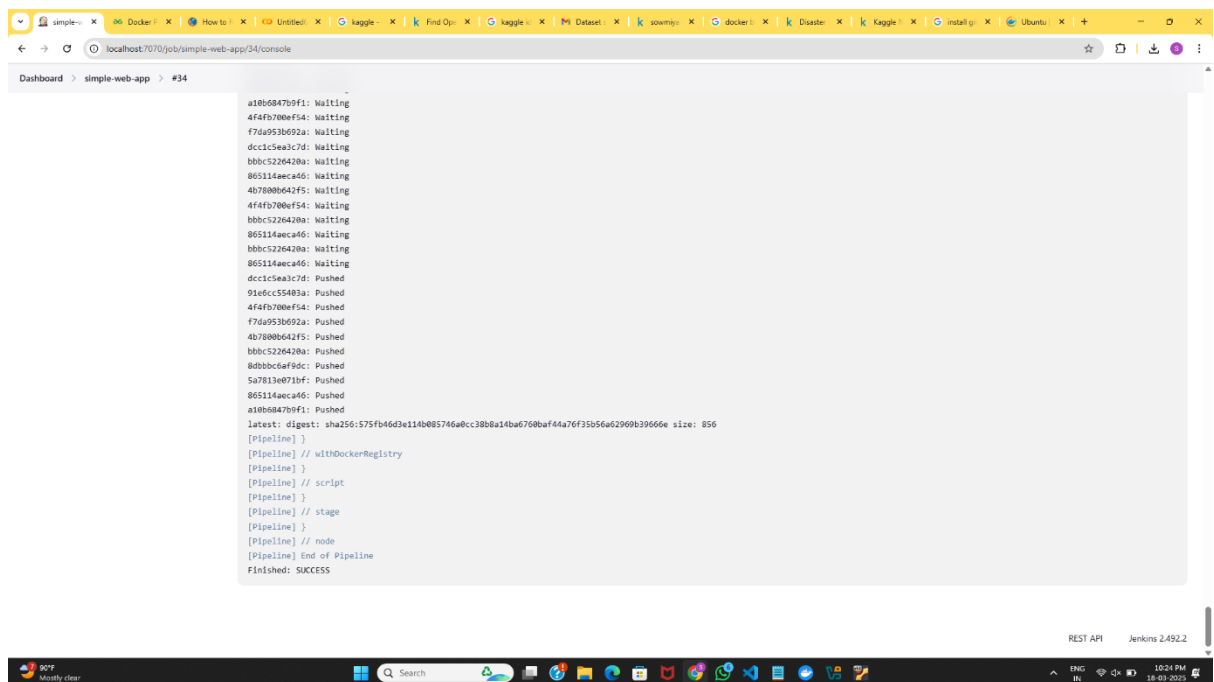
```
# [Internal] load build context
#5 transferring context: 2.19kB 0.1s done
#5 DONE 0.2s

#4 [1/2] FROM docker.io/library/tomcat:9@sha256:8259f3e2f559f57c683a38ff903b0caff1d789a2932686d38422f9dc09c138e
#4 CACHED

#6 [2/2] COPY **/*.war /usr/local/tomcat/webapps/maven-web-app.war
#6 DONE 0.0s

#7 exporting to image
#7 exporting layers 0.1s done
#7 exporting manifest sha256:a364631c07fbc5f854e133fc335a809cb526cd82090d90e175ac8e158ca5a 0.0s done
#7 exporting config sha256:92a055cbfb4dd9ac6717c80b15245c3f848f643373a8e60dfcac6909635ba9
#7 exporting config sha256:92a055cbfb4dd9ac6717c80b15245c3f848f643373a8e60dfcac6909635ba9 0.0s done
#7 exporting manifest list sha256:a0933af9a5c65df6c1c808c0e576179de4e67236be760852509f70a94427592 0.0s done
#7 exporting manifest list sha256:f4ee78f03f2c361e5d967b6dd57797209d25f61d1af7a5238ad9689168d37c5 0.0s done
#7 naming to docker.io/sanchaym/docker:1 done
#7 unpacking to docker.io/sanchaym/docker:1 0.0s done
#7 DONE 0.3s
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Authenticated Docker Hub



```
a18b6847b9f1: Waiting
4f4fb700ef54: Waiting
f7d0953b092a: Waiting
dc1c5ea3c7d: Waiting
bbbc5226420a: Waiting
86514aeca46: Waiting
4b700b0642f5: Waiting
4f4fb700ef54: Waiting
bbbc5226420a: Waiting
86514aeca46: Waiting
bbbc5226420a: Waiting
86514aeca46: Waiting
dc1c5ea3c7d: Pushed
916cc55403a: Pushed
4f4fb700ef54: Pushed
f7d0953b092a: Pushed
4b700b0642f5: Pushed
bbbc5226420a: Pushed
8dbbc6a6f9dc: Pushed
5a7813e071bf: Pushed
86514aeca46: Pushed
a18b6847b9f1: Pushed
latest: digest: sha256:575fb46d3e114b005746a0cc38b8a14ba6708baf44a76f3556a62060b39666e size: 856
[Pipeline] }
[Pipeline] // withDockerRegistry
[Pipeline] }
[Pipeline] // script
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Image pushed

Commands:

```
pipeline {  
    agent any  
    tools {maven 'mvn'}  
  
    stages {  
        stage('scm') {  
            steps {  
                git 'https://github.com/Sanchay1054/WarProject.git'  
            }  
        }  
        stage('build') {  
            steps {  
                bat "mvn clean"  
                bat "mvn install"  
            }  
        }  
        stage('build to images') {  
            steps {  
                script{  
                    bat 'docker build -t sanchaym/simplewebapp .'                }  
            }  
        }  
        stage('push to hub') {  
            steps {  
                script{  
                    withDockerRegistry(credentialsId: 'Docker', url: 'https://index.docker.io/v1/') {  
                        bat 'docker push sanchaym/simplewebapp'  
                    }  
                }  
            }  
        }  
    }  
}
```

Output:

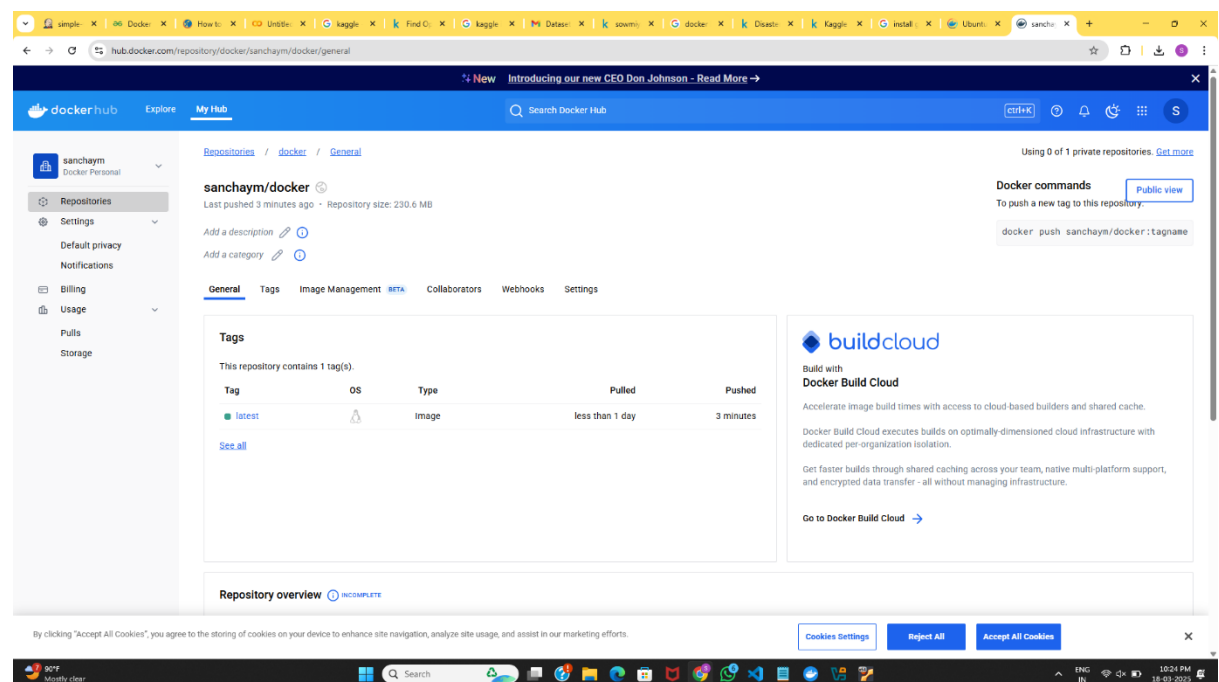
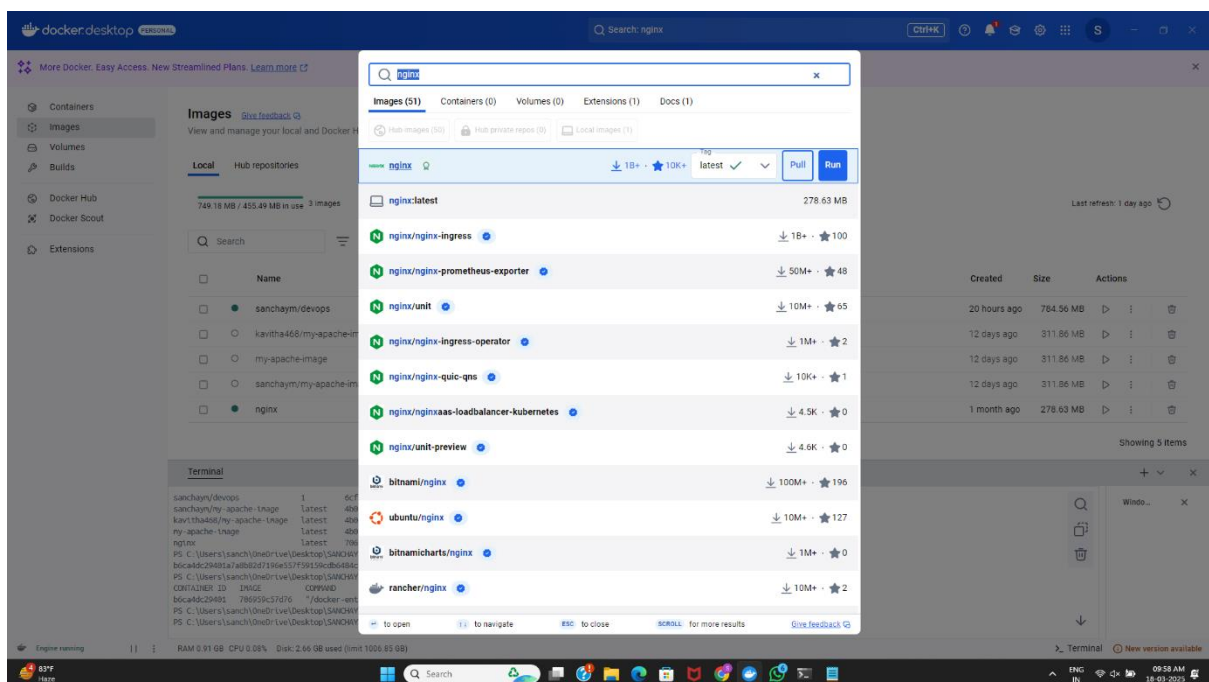


Image pushed to Docker Hub

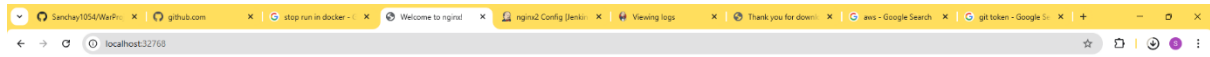
Nginx

Running Nginx local server

- Installing Nginx
- Downloading Nginx from Docker
- Starting the server



Installing Nginx image from Docker



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

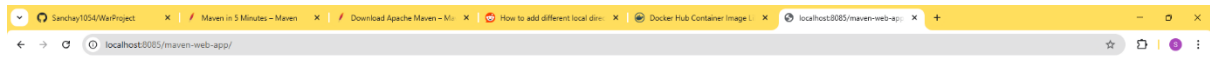
Thank you for using nginx.



Starting Nginx server

- Running the war project from Nginx

Output



Hello World!



Output War Project

Maven

Creating a maven project

- Installation of maven locally
- Creating new maven war project
- Testing and it
- Validation and installation of packages