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Creating A Jenkins pipeline for hosting a student app.

Code:

```
pipeline{
    agent {
      label 'agent1'
      }
    stages{
        stage('Pull a file from git')
        {
            steps{
                sh 'git clone https://github.com/Mayur2905/webapp.git'
            }
        }
        stage('Installing Apache2')
        {
            steps{
                sh "sudo apt-get update"
                sh "sudo apt-get install apache2 -y"
                sh "sudo systemctl start apache2"
            }
        }
        stage('Downloading Tomcat 8')
        {
            steps{
                sh 'sudo wget
https://dlcdn.apache.org/tomcat/tomcat-8/v8.5.99/bin/apache-tomcat-
8.5.99. tar.gz'
                sh 'sudo tar -xvf apache-tomcat-8.5.99.tar.gz'
            }
        }
        stage('Deploying war file')
        {
            steps{
                sh "sudo mv -r webapp/student.war
apache-tomcat-8.5.99/webapps"
            }
        }
        stage('Starting Apache 8')
```

```
    {
        steps{
            sh 'sudo ./apache-tomcat-8.5.99/bin/catalina.sh start'
        }
    }
  }
}
```

Code Overview:

## Overview

This pipeline is designed to pull a file from a Git repository, install Apache2, download and extract Apache Tomcat 8, deploy a WAR file to Tomcat, and start Apache Tomcat 8.

## Pipeline Structure

- ● Agent: The pipeline is configured to run on any available agent.
- ● Stages: The pipeline consists of several stages, each representing a distinct phase of the deployment process.

## Stages

Pull a file from git
- ● This stage clones the webapp repository (https://github.com/Mayur2905/webapp.git).

Installing Apache2
- ● This stage installs Apache2 web server by updating the package list, installing Apache2, and starting the Apache2 service.

Downloading Tomcat 8
- ● This stage downloads Apache Tomcat 8.5.99 from the official Apache website and extracts the downloaded archive.
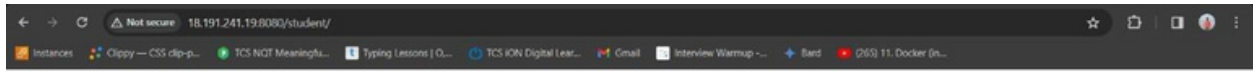
Deploying war file
- ● Thisstagemovesthestudent.warfilefromtheclonedwebapprepositorytothe webapps directory of Apache Tomcat 8.5.99, effectively deploying the WAR file.

Starting Apache Tomcat 8
- ● ThisstagestartsApacheTomcat8.5.99usingthecatalina.shscript.

Output:

# Student Registration Form

Student Name

Student Address

Student Age

Student Qualification

Student Percentage

Year Passed

register