

# Pipelines in Jenkins

Jenkins Pipelines are a powerful way to automate the software development lifecycle by defining CI/CD workflows as code. They allow you to automate tasks like building, testing, and deploying applications in a structured, repeatable, and scalable manner. Pipelines provide visualization of the workflow stages, support complex scenarios with branching and parallel execution, integrate easily with other tools, and enhance consistency, reliability, and speed in the delivery process, reducing manual errors and increasing efficiency.

## Creating a simple pipeline

To create a simple pipeline go to the repository directory and create a text file named "Jenkinsfile". Inside the file copy and paste the below groovy script. This is a simple groovy script which prints some statements in each stage of the build.

```
pipeline {
    agent any

    stages {
        stage('Build') {
            steps {
                echo 'Building the Application...'
            }
        }
        stage('Test') {
            steps {
                echo 'Testing the Application ...'
            }
        }
        stage('Deploy') {
            steps {
                echo 'Deploying the Application...'
            }
        }
    }
}
```

Now check status of jenkins using the following command.

```
$ sudo systemctl status jenkins
```

if it is active then go to jenkins running url (default is localhost:8080). if it is not active run the following command and start jenkins.

```
$ sudo systemctl start jenkins
```

- After logging in go to Dashboard/ new item and create a multibranch pipeline.
- Click add source and paste the git url. (use this if you don't have one:  
<https://github.com/ransika99lalco/my-app.git>)
- Build configuration should look like below:

## Build Configuration

### Mode

by Jenkinsfile

Script Path ?

Jenkinsfile

- Click save and run build. In the stages, you should see something like this.




- When you click on each stage you can see the print statements being printed as below.

## < **Build #6**


Success 22 hr ago in 13 sec

 Checkout SCM

 **Build**


 Test


 Deploy


 Check React Version


 Post Actions


### Stage 'Build'

 Started 22 hr ago

 Queued 0 ms

 Took 0.22 sec

 Success

 [View as plain text](#)



**Building the Application...**

Print Message

Revision #5

Created 19 September 2024 05:07:20

Updated 25 September 2024 06:31:31