

JENKINS DECALRATIVE PIPELINE

PIPELINES:

Jenkins Pipeline is a combination of plugins that supports integration and implementation of continuous delivery pipelines.

A Pipeline is a group of events interlinked with each other in a sequence.

There are two types of Jenkins pipeline syntax used for defining your JenkinsFile

1. Declarative
2. Scripted

NEW ITEM — > NAME — > PIPELINE — > SAVE

DECLARATIVE

```
pipeline {  
  agent any  
  stages {  
    stage('Hello') {  
      steps {  
        echo 'Hello World'  
      }  
    }  
  }  
}
```

```
}  
  
}
```

Declarative pipeline :

They are a relevantly new feature in Jenkins. They are quite easy to write and understand. The structure may seem to be a bit complex, but overall, it contains only a couple of basic sections. The "pipeline" block is the main block that contains the entire declaration of a pipeline.

Pipeline :

It is the outer main block that defines the entire build process.

Agent:

It defines the machine that will handle this pipeline. Jenkins provides the ability to perform distributed builds by delegating them to agent nodes. Doing this allows you to execute several projects with only one instance of the Jenkins server, while the workload is distributed to its agents.

Stages :

A sequence of one or more stage directives, the stages section is where the bulk of the "work" described by a Pipeline will be located. At a minimum it is recommended that stages contain at least one stage directive for each discrete part of the continuous delivery process, such as Build, Test, and Deploy.

Stage:

All of the real work done by a Pipeline are wrapped in one or more stage directives.

Steps :

Defines a series of steps to be executed in a given stage directive.

MULTISTAGE PIPELINES:

```
pipeline {
```

```
    agent any
```

```
    stages {
```

```
stage('Hello') {  
    steps {  
        echo 'Hello World'  
    }  
}  
  
stage('Test') {  
    steps {  
        echo 'Hello World test'  
    }  
}  
  
stage('Deploy') {  
    steps {  
        echo 'Hello World deploy'  
    }  
}  
}
```

PIPELINE AS A CODE:

YOU CAN RUN COMMANDS HERE

```
pipeline {  
    agent any  
    stages {  
        stage('CMD') {  
            steps {  
                sh 'touch file1'  
            }  
        }  
    }  
}
```

```
        sh 'pwd'
    }
}
}
}
```

MULTIPLE COMMANDS OVER SINGLE LINE:

```
pipeline {
    agent any
    stages {
        stage('CMD') {
            steps {
                sh ""
                touch file2
                pwd
                date
                whoami
                ""
            }
        }
    }
}
```

ENVIRONMENT VARIABLES:

```
pipeline {  
    agent any  
    stages {  
        stage('ENV') {  
            steps {  
                echo "This is my pipeline"  
            }  
        }  
    }  
}
```

```
pipeline {  
    agent any  
    environment {  
        name = 'raham'  
    }  
    stages {  
        stage('ENV') {  
            steps {  
                echo "i am $name"  
            }  
        }  
    }  
}
```

```
pipeline {  
    agent any
```

```
environment {  
    name = 'raham'  
}  
stages {  
    stage('ENV1') {  
        steps {  
            sh 'echo "${BUILD_ID}''  
            sh 'echo "${name}''  
        }  
    }  
    stage('ENV2') {  
        environment {  
            name = 'shaik'  
        }  
        steps {  
            sh 'echo "${BUILD_ID}''  
            sh 'echo "${name}''  
        }  
    }  
}  
}
```