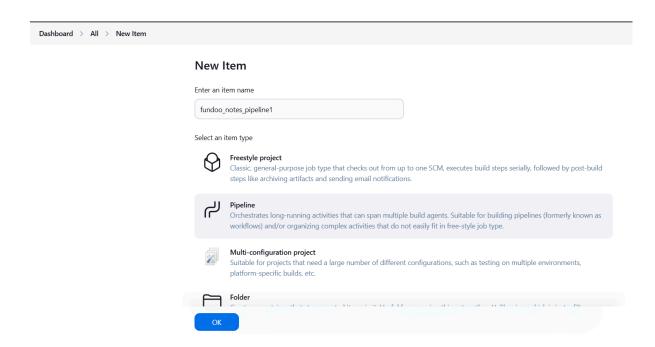
CI/CD pipeline for deploying a Django application using Jenkins

1) Prerequisites:

- Django application: Ensure your Django app is ready with a requirements.txt file and migrations in place.
- Jenkins: Installed and running.
- Source Code Repository: Host your code on GitHub, GitLab, or Bitbucket.
- **Server**: A server (e.g., AWS, DigitalOcean, or any on-premises machine) ready to host your Django app.
- Database: Ensure the database is accessible and configured.
- Python Environment: Python installed on the server, with a virtual environment ready.

2) Create New Job

- From the Jenkins dashboard, click on New Item.
- Enter a name for your job (e.g., DjangoAppPipeline).
- Select Pipeline and click OK.



3) Configure Pipeline Script

```
pipeline {
  agent any
  environment {
    WORKSPACE = "${env.WORKSPACE}"
    REMOTE HOST = '20.211.40.139'
    REMOTE_USER = 'Prathamesh'
    VENV_PATH = '/home/Prathamesh/myenv/bin/activate'
    APP DIR = '/home/Prathamesh/fundoo-notes'
    TMP DIR = '/tmp/fundoo-notes'
    GIT_REPO = 'https://github.com/dprathamesh1408/fundoo-notes.git'
    GIT BRANCH = 'dev'
  }
   stages {
    stage('Checkout Code from GitHub') {
      steps {
         script {
           echo "Cleaning workspace before checkout"
           cleanWs() // Clean the workspace
           echo "Cloning the latest code from your GitHub repository"
           sh """
              git clone --branch ${GIT_BRANCH} ${GIT_REPO} ${WORKSPACE}
         }
      }
    }
    stage('Sync Application to Backend Server') {
      steps {
         script {
           echo "Syncing the application to the backend/app server"
           sh """
              rsync -avz ${WORKSPACE}/
${REMOTE USER}@${REMOTE HOST}:${TMP DIR}
         }
      }
    }
    stage('Copy Files to Destination Directory') {
      steps {
           echo "Copying files to the destination directory on the app server"
           sh """
```

```
ssh ${REMOTE_USER}@${REMOTE_HOST} 'cp -rfv ${TMP_DIR}/*
${APP_DIR}/'
         }
      }
    }
    stage('Install Dependencies') {
      steps {
         script {
           echo "Installing dependencies on the app server"
             ssh ${REMOTE_USER}@${REMOTE_HOST} '
                source ${VENV_PATH} &&
                pip install -r ${APP DIR}/requirements.txt &&
                pip install django
         }
      }
    }
    stage('Run Migrations') {
      steps {
         script {
           echo "Running database migrations"
             ssh ${REMOTE_USER}@${REMOTE_HOST} '
                source ${VENV_PATH} &&
                python ${APP_DIR}/fundoo_notes/manage.py makemigrations &&
                python ${APP_DIR}/fundoo_notes/manage.py migrate
         }
      }
    }
    stage('Start Django Server') {
      steps {
         script {
           echo "Starting Django server on port 8000"
           sh """
             ssh ${REMOTE_USER}@${REMOTE_HOST} 'sudo systemctl restart
django_app.service'
         }
      }
    }
```

```
stage('Check Server Status') {
          steps {
              script {
                 echo "Checking the status of the Django server"
                     ssh ${REMOTE_USER}@${REMOTE_HOST} 'sudo systemctl status
django_app.service'
              }
          }
       }
   }
}
                                 Advanced 🗸
  Configure

    General

                                Pipeline
  Advanced Project Options
                                Definition
   Pipeline
                                 Pipeline script
                                                   echo "Cloning the latest code from your GitHub repository" sh """
                                                     git clone --branch ${GIT_BRANCH} ${GIT_REPO} ${WORKSPACE}
                                           Apply
```

4) Save and Build

- Click on the Save button at the bottom of the configuration page.
- To run your job, go back to the job page and click on Build Now.
- Monitor the build process by clicking on the build number in the build history.







✓ fundoo_notes_pipeline

Permalinks

- Last build (#10), 11 hr ago
- Last stable build (#10), 11 hr ago
- Last successful build (#10), 11 hr ago
- Last failed build (#9), 11 hr ago
- Last unsuccessful build (#9), 11 hr ago
- Last completed build (#10), 11 hr ago