

ASSIGNMENT 3 DevOps

IT_BE_41_Himanshu Shukla

Set up GitLab CI/CD pipeline.

What is CI/CD pipeline

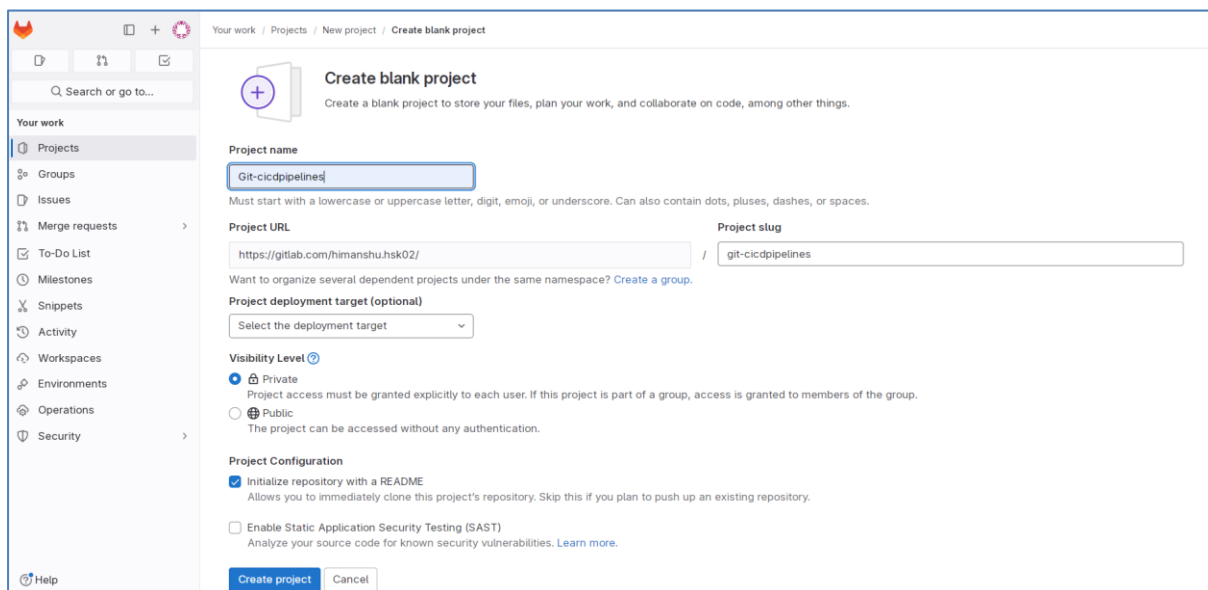
GitLab CI/CD (Continuous Integration/Continuous Delivery) is a set of practices and tools that enable developers to automate the process of integrating code changes and delivering them to production. GitLab is a web-based platform that provides version control using Git, along with CI/CD capabilities.

Here's a breakdown of the key components in GitLab CI/CD:

- **Repository:** This is where your source code is stored, and GitLab uses Git for version control.
- **CI/CD Pipeline:** A pipeline is a series of automated steps that are executed whenever changes are pushed to the repository. It typically includes stages like [build](#), [test](#), [deploy](#), and others, depending on your specific needs.
- **CI (Continuous Integration):** This involves automatically building and testing code changes to ensure that they integrate well with the existing codebase. This step helps catch integration issues early in the development process.
- **CD (Continuous Delivery/Continuous Deployment):** Continuous Delivery is the practice of automatically deploying code changes to a staging or pre-production environment after successful testing. Continuous Deployment takes it a step further by automatically deploying changes to the production environment.
- **YAML Configuration:** The pipeline configuration is defined in a file named `.gitlab-ci.yml` within the repository. This YAML file specifies the jobs, stages, and scripts to be executed during the CI/CD process.

Now will set up the ci/cd pipeline

Create a blank project in gitlab account

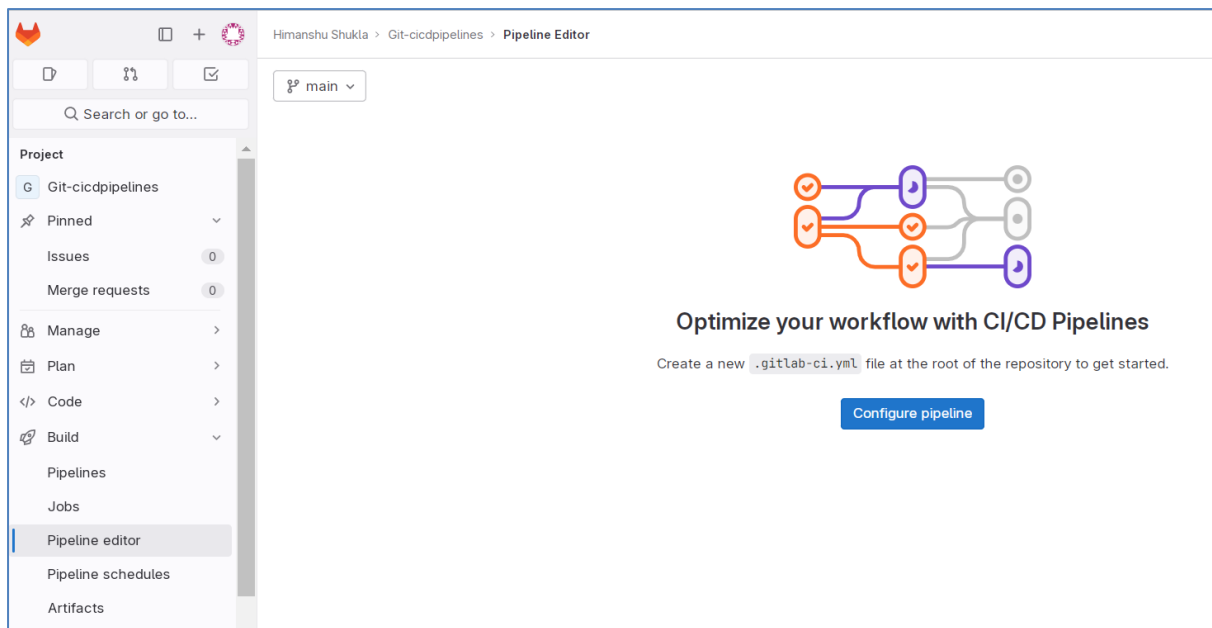


The screenshot shows the 'Create blank project' form in the GitLab web interface. The form is titled 'Create blank project' and includes a sub-header 'Create a blank project to store your files, plan your work, and collaborate on code, among other things.' The form fields and options are as follows:

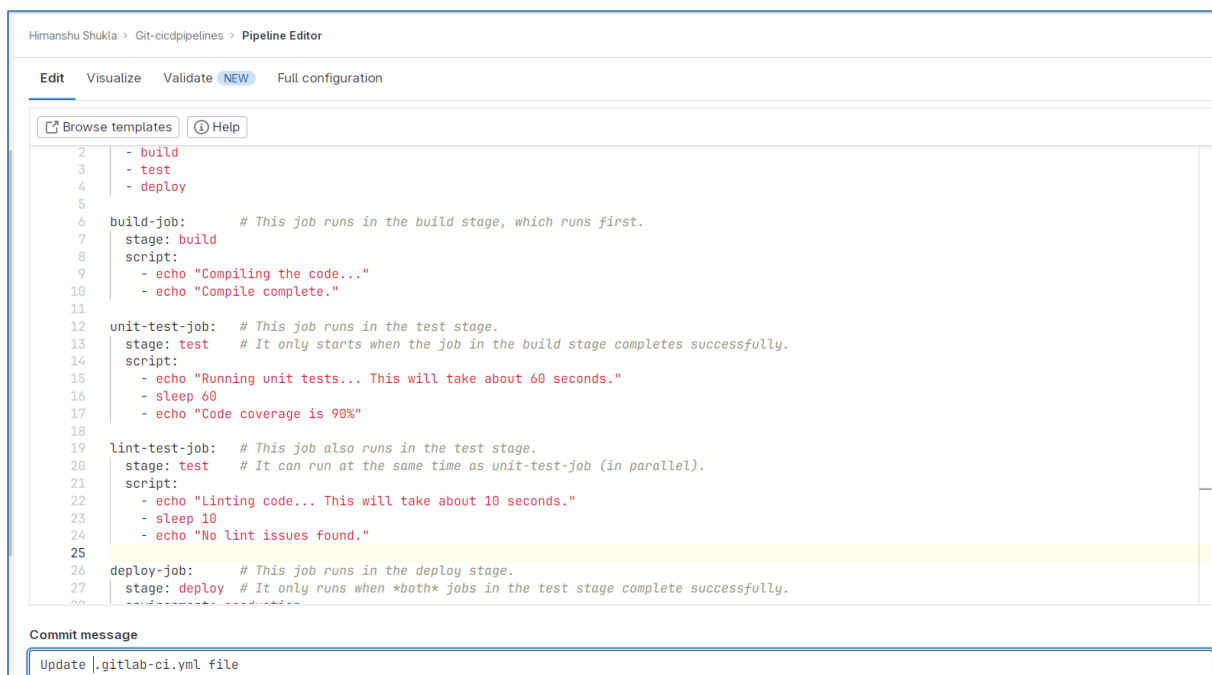
- Project name:** A text input field containing 'Git-cicdpipelines'.
- Project URL:** A text input field containing 'https://gitlab.com/himanshu.hsk02/'.
- Project slug:** A text input field containing 'git-cicdpipelines'.
- Project deployment target (optional):** A dropdown menu with the option 'Select the deployment target'.
- Visibility Level:** Two radio button options: 'Private' (selected) and 'Public'.
- Project Configuration:** A section with two checkboxes: 'Initialize repository with a README' (checked) and 'Enable Static Application Security Testing (SAST)' (unchecked).

At the bottom of the form, there are two buttons: 'Create project' and 'Cancel'.

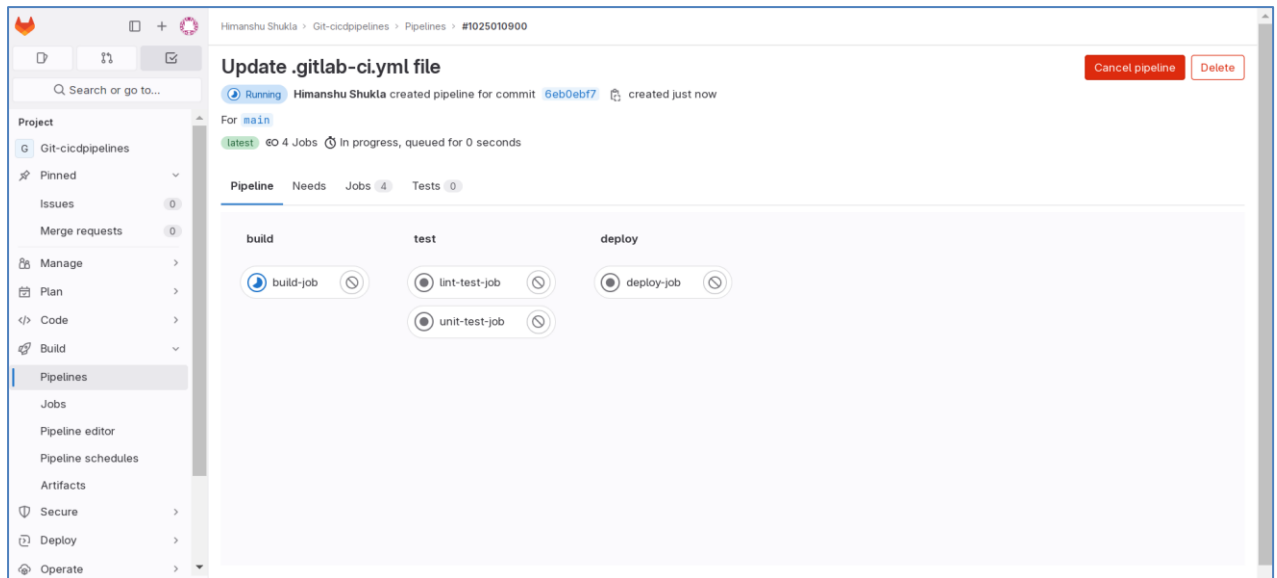
Open the pipeline editor



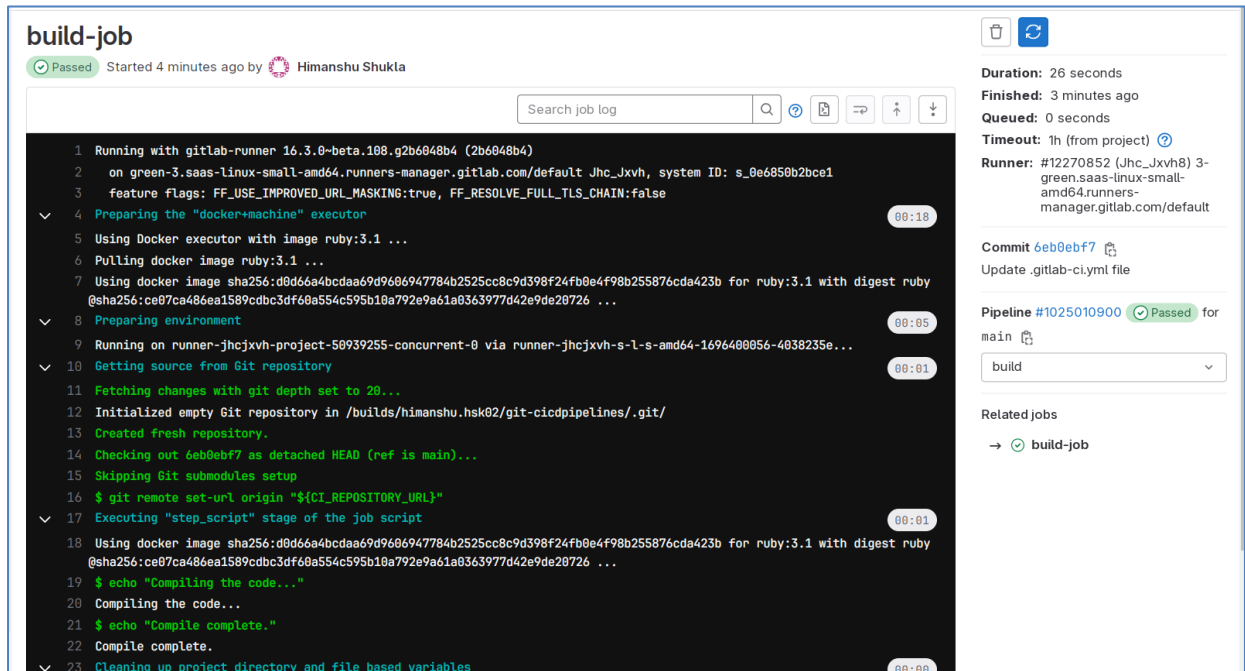
After the Config of pipeline an .yml file has been created where some dummy script has been written to set up the pipeline stages



Now all the stages are under checking for final continuous delivery after deployment



Now the build job has been successfully succeed likely the unit test and deploy job has been in process of CI(continuous integration)



Now all the jobs has been passed

Q Search or go to...

Project

Git-cicdpipelines

Pinned

Issues0

Merge requests0

Manage

Plan

Code

Build

Pipelines

Jobs

Pipeline editor

Pipeline schedules

Artifacts

Secure

Deploy

Himanshu Shukla > Git-cicdpipelines > Pipelines > #1025010900

Passed

Himanshu Shukla created pipeline for commit 6eb0ebf7 finished 3 minutes ago

For main

latest 4 Jobs 2.95 2 minutes 20 seconds, queued for 0 seconds

Pipeline

Needs

Jobs4

Tests0

Status	Job	Stage	Coverage
<div>Passed</div> <div>00:00:26</div> <div>3 minutes ago</div>	<div>#5218646301: deploy-job</div> <div>main 6eb0ebf7</div>	deploy	
<div>Passed</div> <div>00:00:36</div> <div>5 minutes ago</div>	<div>#5218646300: lint-test-job</div> <div>main 6eb0ebf7</div>	test	
<div>Passed</div> <div>00:01:26</div> <div>4 minutes ago</div>	<div>#5218646299: unit-test-job</div> <div>main 6eb0ebf7</div>	test	
<div>Passed</div> <div>00:00:26</div> <div>5 minutes ago</div>	<div>#5218646297: build-job</div> <div>main 6eb0ebf7</div>	build	

Finally the set up for CI/CD pipeline has been done

All1FinishedBranchesTags

Clear runner caches

CI lint

Run pipeline

Filter pipelines

Q

Show Pipeline ID

Status	Pipeline	Created by	Stages
<div>Passed</div> <div>00:02:20</div> <div>9 minutes ago</div>	<div>Update .gitlab-ci.yml file</div> <div>#1025010900</div> <div>main 6eb0ebf7</div> <div>latest</div>	<div></div>	<div><div>✓</div><div>✓</div><div>✓</div></div> <div></div>