CI Pipeline

GitHub Actions:

GitHub Actions is GitHub's CI/Cd service. It's the mechanism used to run workflows from development to production systems. Actions are triggered by GitHub events (a pull request is submitted, an issue opened, a PR is merged, etc....) and can execute pretty much any command.

GitHub Workflows:

A workflow is made of one or more jobs, which are run inside their own virtual machine or container (a runner), that execute one or more steps. A step can be a shell script or an action, which is a reusable piece of code specially packaged for the GitHub CI ecosystem.

Workflow includes:

PR Labeler:

A GitHub Action that automatically applies labels to your PRs based on branch name patterns like feature/* or fix/*. Can be used in combination with Release Drafter to automatically categorize pull requests.

Release Drafter:

Drafts a GitHub release with the changes introduced by a newly created version tag.

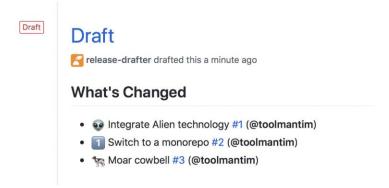
Once you've added Release Drafter to your repository, it must be enabled by adding a .github/release-drafter.yml configuration file to each repository. The configuration file must reside in your default branch, no other configurations will be accepted.

Example

For example, take the following .github/release-drafter.yml file in a repository:

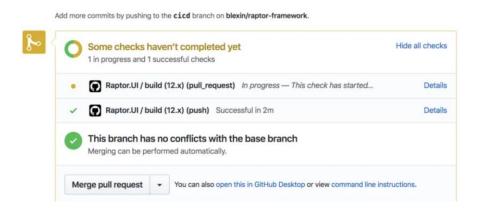
```
template: |
## What's Changed
$CHANGES
```

As pull requests are merged, a draft release is kept up-to-date listing the changes, ready to publish when you're ready.



PR Validator:

During the creation of a PR or after its closure, we set automation processes helping us to verify the correctness of the code compiling and the successful execution of tests. Example:pytest,Sonarcloud,Wiki-publish,Snyk....etc.



Branch Naming Checks:

It is a tool that checks whether the current branch of a git project matches a certain name pattern (specified as a regular expression). This tool is primarily used as a git hook to enforce teams naming conventions.

This Includes:

- Enforcing branch naming policy.
- Prefix commit messages with the branch name ticket.
- branch pattern: Example
 'feat|fix|docs|style|docs|refactor|perf|test|build|ci|chore|revert',

Change Log:

A changelog is a file that shares a chronologically ordered list of the changes you've made on your project. It's often organized by the version; the usual way is to create a file and start to enumerate all your changes.

CodeQL Analysis:

CodeQL is the code analysis engine developed by GitHub to automate security checks. You can analyze your code using CodeQL and display the results as code scanning alerts.

Build And Push:

This Includes:

- o Getting the image tag which is nothing but the Release Draft Tag
- Building the image with the tag
- o Snyk Vulnerability test for the images
- o Pushing the image to Azure Container Registry.

Monorepo Update:

The monorepo for this submodule is updated with the recent code changes.

Monorepo:

It is a git repository that contains all the modules that compose a software solution. This makes refactoring and code dependency management easier.

Submodules:

- Backend Repo
- Frontend Repo