CICD

- CI/CD is a method to frequently deliver applications to out clients by introducing automation
  into the stages of application development.

- Application development lifecycle involves following environments

`DEV → TEST → UAT → PROD`

- The main concepts attributed to CI/CD are continuous integration and continuous deployment.

- CI (continuous integration) means `build` , `test` and `merge` changes in application environment.

- CD (continuous deployment) means `automatic release` and `automatic deployment to production` .

- There are many software and platforms that allow us to establish CICD workflows (aka pipelines) such as `Jenkins` , `Gitlab` , `Codeship` etc.

- Many Cloud service providers also coming up with their own CICD platforms with cloud integration. Such as GCP offers `Google Cloud Build` . AWS has something called as `AWS CodePipeline` .

- For our demonstration purpose, we will use a popular CICD tool from GitHub called `GitHub Actions` V

Using `GitHub Actions` for project management (CICD)

- `GitHub Actions` can give you look and feel of CICD

- `GitHub Actions` is a continuous integration and continuous delivery (CI/CD) platform that allows you to automate your build, test, and deployment pipeline.

- GitHub provides Linux, Windows, and macOS virtual machines to run your workflows.

Events

An event is a specific activity in a repository that triggers a workflow run. For example, activity can originate from GitHub when someone creates a pull request, opens an issue, or pushes a commit to a repository.

Create an example workflow

- GitHub Actions uses YAML syntax to define the workflow. Each workflow is stored as a separate YAML file in your code repository, in a directory named `.github/workflows`.

- You can create an example workflow in your repository that automatically triggers a series of commands whenever code is pushed.

- **Reference** - https://docs.github.com/en/actions/learn-github-actions/understanding-github-actions#create-an-example-workflow

- **Understanding workflow file** -

Understanding GitHub Actions - GitHub Docs

GitHub Actions is a continuous integration and continuous delivery (CI/CD) platform that allows you to automate your build, test, and deployment pipeline. You can create workflows that build and test

https://docs.github.com/en/actions/learn-github-actions/understanding-github-actions#understanding-the-workflow-file

GitHub

- **Viewing the activity for a workflow run -**

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