Report on Exploring Jenkins

# Introduction

We were asked to explore different CI/CD tools for our Jenkins project. Out of different tools I choose to explore Jenkins. I worked on GitHub Actions before, so I did have an idea of how this all works. Plus, I wanted to explore something new this time that’s why I choose Jenkins. Jenkins is basically a tool that runs on your local machine and use for automation. We can write a Jenkins script to automate our work.

# Methodology/Creating and Managing Jobs

There are different types of items that you can create in Jenkins, and you can use those items depending on the kind of project you are working on. I was working with a single GitHub repo that’s why I chose to go with creating a “Pipeline.” I think we can also choose to go with a “Free style project” as well but this was the simplest way I chose to go with. We can create different projects depending on the project we are working on.

In “Pipeline” job, what we going to do is, we are going to write a “Jenkinsfile” which will be a script file, could be a bash file or batch file depending on the scripting language you have in your local system. And we are going to put that file in our repo, so every time someone pushes something on repo it can build that.

# Overview of Jenkins

Jenkins is an open-source automation server widely employed in the realm of DevOps. It automates tasks associated with software development and deployment, serving as a backbone for Continuous Integration (CI) and Continuous Deployment (CD) processes. Key features encompass its extensibility through plugins, automation of repetitive tasks, distributed build capabilities, easy web-based configuration, robust monitoring, and strong security. With a thriving open-source community and support, Jenkins is instrumental in facilitating automated code integration, testing, and deployment workflows, contributing to improved software quality and faster releases in modern software development practices.

# References:

Download: <https://www.jenkins.io/download/>

Installation: <https://www.jenkins.io/doc/book/installing/windows/>

Docs: [https://www.jenkins.io/doc/](%20https:/www.jenkins.io/doc/)

Resource: [https://www.youtube.com/watch?v=nCKxl7Q\_20I&t=1054s](%20https:/www.youtube.com/watch?v=nCKxl7Q_20I&t=1054s)