This article will learn how we can play Jenkins works with Oracle Database and understand Jenkins’s internal process/flow and its interpretation with the Oracle Database. This article will perform the complete setup of Oracle Database, including the installations and configuration.

**Continuous Integration**

Consider the developer commits the changes to the source code, which is shared in a central repository, for example, GITLAB. Simultaneously, continuous development is in progress where the developers try to change or add more code at regular intervals. In parallel, the Jenkin server tries to identify the changes in code from the central repository. Jenkins will pull those changes and tries to start preparing the new Build. If the Build fails/success, then the responsible team will be notified.

**DBA Version**

we consider must automate the oracle SQL code deployment in multiple environments. It is a challenge to execute SQL code at the time of code deployments within a small release window and sync with developers. If any steps fail during the execution, then Jenkins allows them to stop the process. We can also send out notifications in case of a build success or failure at any point in time. A DBA can use to automate deployment procedures. We decided to try this tool to script the deployments and validate it.

Diagram

Description automatically generated

**Products/Tools in Use**

For this article, we have collaborated on various tools based on the demand for this complete exercise. They are

1. Jenkins
2. GitLab
3. Pipeline script(groovy)
4. Shell Script
5. SQL Script
6. Oracle 19c

**GIT repository folder Structure.**

We decided to maintain SQL code in different folder structure to easy and sequential deployments.